



National Energy
Board

Office national
de l'énergie

Reasons for Decision

Manitoba Hydro

EH-001-2017

November 2018

Canada

National Energy Board

Reasons for Decision

In the Matter of

Manitoba Hydro

Application dated 16 December 2016 for the
Manitoba-Minnesota Transmission Project

EH-001-2017

November 2018

Canada

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Glossary of Terms, Abbreviations, and Units

AC	Alternating Current. An electrical power system that has voltage and current reversing every half-cycle. Systems in North America operate at 60 cycles per second.
Applicant	Manitoba Hydro
Application	The Application submitted to the Board by Manitoba Hydro on 16 December 2016 for the proposed Project.
Board	National Energy Board
CEAA 2012	<i>Canadian Environmental Assessment Act, 2012</i> , S.C. 2012, c. 19
CEPP	Construction Environmental Protection Plan
Certificate	Certificate of Public Convenience and Necessity granted under section 58.16 of the <i>National Energy Board Act</i>
commencement of construction	The start of construction activities for the Project, including the clearing of vegetation, ground-breaking and other forms of right-of-way preparation that may have an impact on the environment (activities associated with normal surveying do not constitute the commencement of construction).
Commenter	A person who is directly affected and /or has relevant information or expertise regarding the Project and who has been approved by the Board to provide a Letter of Comment.
Company	Manitoba Hydro
CSA	Canadian Standards Association
ECCC	Environment and Climate Change Canada
EIE	Enhanced Indigenous Engagement
EIS	Environmental Impact Statement
Electricity Filing Manual	<i>National Energy Board Electricity Filing Manual</i> (May 2015).
EMF	Electric and Magnetic Fields
EPP	Environmental Protection Plan
EPRI-GTC	Electric Power Research Institute and Georgia Transmission Corporation

ERP	Emergency Response Plan
ESS	Environmentally Sensitive Sites
for approval	When a condition requires a filing with the Board “for approval”, Manitoba Hydro must not commence the indicated action or activity until the Board issues its written approval of the filing.
FNMEP	First Nations and Métis Engagement Process
General Order	NEB General Order MO-036-2012
GHG	Greenhouse Gases
GNTL	Great Northern Transmission Line
Governor in Council	The Cabinet of the Federal Government of Canada
Hearing Order	Order issued by the Board on 21 December 2017 setting out the process in relation to the hearing for the assessment of the Application, including: hearing time limit; how the public may participate; hearing events, steps, and deadlines; and procedures and guidance.
IEC	International Electrotechnical Commission
IESO	The Independent Electricity System Operator
including	Use of this term, or any variant of it, is not intended to limit the elements to just those listed. Rather, it implies minimum requirements with the potential for augmentation, as appropriate.
Information Request	A written question to the Applicant or an Intervenor in relation to its evidence, asked by the Board, or filed by an Intervenor or the Applicant during the written portion of the hearing, to which a response must be subsequently filed.
Intervenor	A party (e.g., individual(s), company or group) who has applied to participate in the EH-001-2017 hearing and has been granted standing by the Board to participate as an Intervenor having rights and obligations in the proceedings as set out in the Hearing Order.
IPL	International Power Line. Facilities constructed or operated for the purpose of transmitting electricity from or to a place in Canada to or from a place outside Canada.
IVMP	Integrated Vegetation Management Plan
Keeyask	Keeyask Generating Station

LIC	Landowner Information Centre
MHEX	Manitoba Hydro Export interface of the Manitoba Hydro transmission system interconnection to the U.S. transmission system through Manitoba Hydro's four IPLs.
MISO	Midcontinent Independent System Operator, Inc.
MMF	Manitoba Métis Federation
MMTP	Manitoba-Minnesota Transmission Project
MSD	Manitoba Sustainable Development, formerly Manitoba Conservation and Water Stewardship
NEB	National Energy Board
NEB Act	<i>National Energy Board Act</i> , R.S.C. 1985, c. N-7
NERC	North American Electric Reliability Corporation
NFAT	Needs For and Alternatives To
NPV	Net Present Value
NRCan	Natural Resources Canada
OTE	Oral Traditional Evidence
Participant	An individual, company, or group who has applied to participate in the hearing and who has been granted standing to participate by the Board. The term participant includes the Applicant, Intervenors, and Commenters in the hearing.
Parties	Includes the Applicant and Intervenors, but does not include Commenters.
PEP	Project-specific Public Engagement Process
PFP	Participant Funding Program
post-construction	The time once construction is complete, following final clean-up through to the completion of reclamation activities. Activities that take place during post-construction include monitoring to evaluate the success of reclamation activities, compliance with commitments, and the stabilization of the disturbed lands.

Procedural Update	Directions made during the hearing process by the Board in regard to matters and procedures in the hearing process
Process Advisor	National Energy Board staff assigned to provide assistance to the public, landowners, Indigenous communities, and Participants to help them understand the hearing process, the different roles of the hearing participants, and how to participate in a hearing in relation to an application before the National Energy Board.
Project	Manitoba-Minnesota Transmission Project
Public record	The NEB’s public record of a hearing available to the public through the NEB’s website. Records specific to the EH-001-2017 hearing are found at: Application for the Manitoba-Minnesota Transmission Project – EH-001-2017
Reasons for Decision	Sets out the Board’s decision whether to issue a Certificate for all or any portion of the international power line, the findings of the Board, and all the terms and conditions the Board considers necessary or desirable in the public interest to which any Certificate would be subject, pursuant to section 58.16 of the NEB Act. If the Reasons for Decision decide that a Certificate should be issued, such is subject to approval of the Governor in Council.
ROW	The Right-Of-Way is the strip of land for which a company has obtained, or plans to obtain, rights for the construction and operation of a pipeline or power line.
SARA	<i>Species at Risk Act</i> , S.C. 2002, c. 29
TLE	Treaty Land Entitlements
TLRU	Traditional land and Resource Use
U.S.	United States of America
VC	Valued Components

List of Intervenors

AWZ	Animakee Wa Zhing #37 First Nation
AON	Anishinaabeg of Naongashiing
BON	Brokenhead Ojibway Nation
CAC Manitoba	Consumers' Association of Canada – Manitoba Branch
CAEPLA	Canadian Association of Energy and Pipeline Landowner Associations
COC Winnipeg	Council of Canadians – Winnipeg Chapter
IIFN	Iskatewizaagegan No. #39 Independent First Nation
MMF	Manitoba Métis Federation
MWL	Manitoba Wildlands
	May, Ms. Louise
NRCan	Natural Resources Canada
NWA	Northwest Angle #33 First Nation
Peguis	Peguis First Nation
RRAFN	Roseau River Anishinabe First Nation
Sagkeeng	Sagkeeng First Nation
Shoal Lake #40	Shoal Lake #40 First Nation
SSC	Southeast Stakeholders Coalition
SCO	Southern Chiefs Organization Inc.
Wa Ni Ska Tan	Wa Ni Ska Tan

List of Units

CAD	Canadian Dollars
km	kilometre
kV	Kilovolt – One thousand volts
kWh	Kilowatt-hour
m	metre
MVA	Mega Volt Amp
MW	Megawatt – One thousand watts
TWh	Terawatt hour
USD	United States Dollars

Recital and Appearances

IN THE MATTER OF the *National Energy Board Act*, R.S.C. 1985, c.N-7 (NEB Act) as amended and the regulations made thereunder; and the *Canadian Environmental Assessment Act, 2012*, S.C. 2012, c.19;

IN THE MATTER OF an Application dated 16 December 2016 by Manitoba Hydro, for a permit pursuant to section 58.11 of the NEB Act to construct and operate the Manitoba-Minnesota Transmission Project, which includes a 500 kV international power line (IPL) from the Dorsey Converter Station near Rosser, Manitoba to the border of the United States; and other approvals for related changes to other IPLs under File OF-Fac-IPL-M180-2015-01 02;

IN THE MATTER OF Order in Council 2017-1693 issued by the Governor in Council on 15 December 2017, designating the project as an IPL that is to be constructed and operated under and in accordance with a certificate issued under section 58.16 of the NEB Act; and,

IN THE MATTER OF Hearing Order EH-001-2017 dated 21 December 2017.

HEARD in Winnipeg, Manitoba on 4-8 and 18-22 June 2018;

BEFORE:

A. Scott	Presiding Member
M. Lytle	Member
K. Chaulk	Member

Appearances

B. Hunter
S. Johnson
S. Paul
J. Mayor

Participant

Manitoba Hydro

Witnesses

W. Bailey
M. Bratland
D. Cormie
S. Coughlin
M. Gahbauer
B. Ireland
D. Jacobson
J. Matthewson
G. Penner
D. Zebrowski

P. Corrin	Animakee Wa Zhing #37 First Nation
-----------	------------------------------------

D. Major
V. Powassin

Appearances

J. Goudy

K. Dilay
D. Morrison
B. Williams

J. Madden
A. Winterburn

P. Cramer

P. Corrin

D. Valdron

M. Urschatz

K. Kempton
C. Shefman

K. Toyne

J. Beddome
S. Hunter

J. Wheeler

C. Gagné
M. Yuzda

Participant

Canadian Association of Energy and
Pipeline Landowner Associations

Consumers' Association of Canada –
Manitoba Branch

Manitoba Métis Federation

Manitoba Wildlands

Northwest Angle #33 First Nation

Peguis First Nation

Roseau River Anishinabe First Nation

Sagkeeng First Nation

Southeast Stakeholders Coalition

Southern Chiefs' Organization Inc.

Wa Ni Ska Tan

National Energy Board

Witnesses

D. Core
E. Fehr-Lenz
J. Kohler
R. Nychuk
R. Wiens
T. Wiens

D. Woodford

K. Sandy-Kasprick

C. Whittaker

P. Kulchyski

Oral Traditional Evidence

Animakee Wa Zhing #37 First Nation	Chief V. Powassin
Anishinaabeg of Naongashiing	A. Handorgan
Brokenhead Ojibway Nation	Chief D. Smith Elder D. Chief-Abigosis Elder R. Kent Elder G. Smith
Northwest Angle #33 First Nation	Chief K. Sandy-Kasprick
Peguis First Nation	Chief G. Hudson Elder R. Christie Elder E. Cochrane R. Flett G. Parisian N. Sinclair M. Sutherland J. Whelan
Sagkeeng First Nation	Chief D. Henderson
Shoal Lake #40 First Nation	Elder J. Redsky
Southern Chiefs' Organization Inc.	T. Catcheway D. Courchene D. Daniels
Wa Ni Ska Tan	Elder J. McKinney T. Bird L. Dysart C. Kobliski G. McKay T. Monias R. Neckoway D. Scott

Written Argument

Animakee Wa Zhing #37

Council of Canadians – Winnipeg Chapter

Manitoba Métis Federation

Manitoba Wildlands

Northwest Angle #33 First Nation

Shoal Lake #40 First Nation

Southeast Stakeholders Coalition

Southern Chiefs' Organization Inc.

Chapter 1

Introduction and Disposition

The National Energy Board (NEB or Board) has considered the evidence and submissions made by all Participants in the EH-001-2017 proceeding. The Board's views and conclusions on the matters that fall within the scope of the requested authorizations are contained in the following chapters, and constitute the Board's Reasons for Decision (Reasons) concerning Manitoba Hydro's Application for the Manitoba-Minnesota Transmission Project (MMTP or the Project).

Manitoba Hydro is a Crown corporation that owns, operates, and maintains electricity generation, transmission and distribution facilities in the province of Manitoba. In this proceeding, Manitoba Hydro applied, pursuant to section 58.11 of the *National Energy Board Act* (NEB Act), to construct and operate the Project, which involves the construction of a new international power line, modifications to existing international and intraprovincial transmission lines and other associated transmission facilities. On 15 December 2017, the Governor in Council designated the Project under section 58.15 as an international power line to be constructed and operate in accordance with a certificate issued under section 58.16. Further detail on the Project is provided in Chapter 3, Overview.

As also described in Chapter 3, the Project has been the subject of provincial assessment. This includes the Manitoba Public Utilities Board's "Needs For and Alternatives To" review and the Manitoba Clean Environment Commission's public hearing. The Board has been cognizant of its responsibility not to duplicate or impede the efforts of the provincial agencies.

This chapter provides the Board's overall decision on the Application, remarks on certain topics of concern to parties to the hearing, and recommendations to other government bodies that are not directly linked to the Project, but were raised in the course of the hearing.

The Board's Disposition

It is the Board's view that, having regard to all considerations that appear to it to be directly related to the line and relevant, the Project is and will be required by the present and future public convenience and necessity. The Board recommends that the Governor in Council approve the Board's issuance of a certificate pursuant to s. 58.16 of the NEB Act.

After the conclusion of the oral process, but before the present decision was given, Member Chaulk became incapacitated. Pursuant to paragraph 16(2)(b) of the NEB Act, the remaining Members give this decision, which is unanimous, as if Member Chaulk were present and participating in the decision.

In coming to this decision, the Board considered the public interest. The Board has previously defined the public interest as being inclusive of all Canadians and refers to a balance of economic, environmental and social interests that change as society's values and preferences evolve over time. As a regulator, the Board must estimate the overall public good a project may create and its potential negative aspects, weigh its various impacts, and make a decision.

1.1 Adequacy of Crown consultation and accommodation

In determining the public interest, the Board noted the comments of the Supreme Court of Canada in the *Chippewas of the Thames*¹ case, which recognized that “the constitutional dimension of the duty to consult gives rise to a special public interest” and that a “decision to authorize a project cannot be in the public interest if the Crown’s duty to consult has not been met.”

As such, the Board considered whether adequate Crown consultation had occurred in relation to the Project. The Board is of the view that the consultation process for this Project was adequate, as further described in Chapter 8, Indigenous Matters. In understanding and assessing the adequacy of consultation, the Board is informed by the following government of Canada statement:²

In the *Haida* and *Taku River* decisions in 2004, and the *Mikisew Cree* decision in 2005, the Supreme Court of Canada (SCC) held that the Crown has a duty to consult and, where appropriate, accommodate when the Crown contemplates conduct that might adversely impact potential or established Aboriginal or Treaty Rights. This duty has been applied to an array of Crown actions and in relation to a variety of potential or established Aboriginal or Treaty Rights.

In these decisions, the SCC determined that the duty to consult stems from the honour of the Crown and the Crown's unique relationship with Indigenous Peoples. The Court explained that it will look at how the Crown manages its relationships with Indigenous communities and how it conducts itself when making decisions that may adversely impact the rights recognized and affirmed by section 35. In the more recent decisions of *Rio Tinto* and *Little Salmon Carmacks* the Court has further explained that the duty to consult is a constitutional duty that invokes the honour of the Crown and that it must be met. The context will inform what is required to meet the duty and demonstrate honourable dealings.

The duty to consult and, where appropriate, accommodate is part of a process of fair dealing and reconciliation that begins with the assertion of sovereignty by the Crown and continues beyond formal claims resolution through to the application and implementation of Treaties. The Crown's efforts to consult and, where appropriate accommodate Indigenous communities whose potential or established or Treaty Rights may be adversely affected should be consistent with the overarching objectives of reconciliation.

Reconciliation has two main objectives: 1) the reconciliation between the Crown and Indigenous Peoples; and; 2) the reconciliation by the Crown of Indigenous and other societal

¹ *Chippewas of the Thames First Nation v. Enbridge Pipelines Inc.*, 2017 SCC 41 at paragraph 59.

² “Aboriginal Consultation and Accommodation - Updated Guidelines for Federal Officials to Fulfill the Duty to Consult - March 2011” http://www.aadnc-aandc.gc.ca/eng/1100100014664/1100100014675#chp1_2.

interests. Consultation and accommodation play a key role in the fulfillment of these two objectives.

The Board recognizes that there may be a need for flexibility in each individual circumstance, but when consultation with Indigenous Peoples is assessed, the Board may consider whether:

- There was full disclosure of project details to all parties to enable participation and avoid sharp dealing or the appearance of sharp dealing;
- There was a two way exchange of data and information to identify issues;
- The processes to be followed in Crown consultation were defined to ensure appropriate recourse to raise concerns, issues, potential impacts and possible mitigation;
- The mitigation steps accommodated Indigenous concerns regarding their section 35 rights sufficiently; and,
- Any additional concerns or requested actions that could be addressed by the Crown beyond the consultation for the project itself were appropriately articulated.

Although engagement between the project proponent and the affected Indigenous parties cannot discharge Crown consultation, such engagement is assessed and referenced during the process of Crown consultation to ensure that affected parties have been given adequate information and data to make informed decisions about how the proposed project impacts their rights and interests and to allow the proponent to make adjustments to the project based on feedback from the affected parties.

The Board's hearing process itself is a significant part of the consultative process, as Indigenous communities presented their concerns directly to the Board. The Board is cognizant of some Intervenor's concerns that the Crown's letter to Indigenous Peoples regarding its reliance on the Board's process to satisfy the duty to consult was received too late in the process (having been sent 29 April 2018). In the *Chippewas of the Thames* case, the Supreme Court also recognized that there are circumstances where late notice by the Crown has no material impact on the adequacy of consultation. In the present circumstances, the Indigenous Intervenor's actively participated in the Board's process, despite the late notice from the Crown. As a result, the Board is not persuaded that the late notice in this case affects the adequacy of Crown consultation.

1.2 Cumulative impacts on Section 35 Indigenous rights

The Board heard from several Intervenor's that the adjudication of large energy infrastructure projects feels like "death by a thousand cuts" wherein each new project adds another "cut" with no apparent opportunity to mitigate the ongoing cumulative impacts of these cuts. The Board uses the term "cumulative impacts" in this context to distinguish it from "cumulative effects" which is a term used for environmental assessment. It was argued that the historic Treaties and agreements signed by the Crown and affected Indigenous parties speak clearly of rights being ceded in exchange for land. If the land quantum upon which Indigenous peoples practice traditional land and resource use is subject, due to industrial, agricultural and urban development, to diminution in the manner of a "thousand cuts" then, it was argued, the ability of the Crown to fulfil its Treaty obligations is impaired.

In their final argument, Peguis First Nation (Peguis) made the interesting observation that “the perfect is the enemy of the good” and suggested that the narrow focus of the law may, in fact, prevent the adoption of good solutions in a quixotic search for the perfect.³ To paraphrase their argument, it is a case of “missing the forest for the leaves – much less the trees.” Thomas Jefferson, in describing the work of the U.S. Congress made a similar observation,⁴

They [Franklin and Washington] laid their shoulders to the great points, knowing that the little ones would follow of themselves. If the present Congress errs in too much talking, how can it be otherwise in a body to which the people send 150 lawyers, whose trade it is to question everything, yield nothing, and talk by the hour? That 150 lawyers should do business together ought not to be expected.

The point that Peguis and Mr. Jefferson are making is that, by focusing on the “leaves” or each “cut” in isolation of the others, a larger understanding of the impacts of the accumulating individual project decisions is being missed.

In their final argument, Manitoba Métis Federation made an important qualifying distinction regarding the location of the land to be used in future negotiations.⁵

The Project dissects the heart and soul of its traditional territory, known as the Métis Nation Homeland. The valleys of the Red and Assiniboine Rivers and the lands stretching from Winnipeg to the American border is where the Métis—as a distinct Indigenous People—were born. It is their *place*.

This place is home to their origin story, traditional lands, unique language, culture, and way of life. It is where they originally forged their nation-to-nation relationship with Canada in 1870, which brought the province of Manitoba into confederation and created one of the enduring constitutional compacts this country is built on. This *place* is irreplaceable for the Manitoba Métis Community.

The proponent argued that the loss of Crown land associated with the proposed Project was very small in comparison with the total acreage of land available to the provincial Crown and that the land was still available for traditional use. However, the Project is located in an area of the province in which Crown land of the type and quality sufficient to be considered in future negotiations is in relatively short supply. The Board would find the proponent’s argument more compelling were the Project located in an area of the province in which Crown land is abundant and the loss of Crown land relative to this abundance was small.

³ Hearing transcript, paragraphs 7830 – 7841.

⁴ Jefferson, Thomas, Autobiography, <http://libertyonline.hypermall.com/Jefferson/Autobiography.html#governor>.

⁵ A92669-2 Manitoba Métis Federation – Manitoba Minnesota Transmission Project Written Closing Arguments -- A6F5E6.

In evaluating the right of the Crown to reduce the amount of land available to practice Treaty Rights and enter into other negotiations, the Board does well to accommodate impacts on Indigenous rights by following the Hippocratic policy of “*primum non nocere*” or, “first, do no harm”; that is, do no harm to the honour of the Crown by impeding its ability to fulfill its obligations. In other words, the proponent must establish a plan to offset or compensate the loss of Crown lands available for traditional use by Indigenous Peoples. This view is supported by the Board’s imposition of Condition 22. If there are ongoing negotiations between the Crown and Indigenous Peoples outside the current application, in which these lands are the subject of discussion, there may be no need for the proponent to go beyond advising the Board of this.

1.3 Jurisdictional Context

In considering the jurisdiction of the Board to regulate international power lines, it is instructive to consider the history of the electricity provision of the NEB Act against the context of relevant constitutional provisions. Section 92A, the resource amendment to the Constitution Act 1867, came into force on April 17, 1982. It was the only element of the constitutional patriation package that directly altered the balance of federal-provincial legislative powers.

Section 92A of the Constitution Act 1867 provides in part:

Laws respecting non-renewable natural resources, forestry resources and electrical energy

(1) In each province, the legislature *may exclusively make laws* in relation to.....

c) development, conservation and management of sites and facilities in the province for the generation and production of electrical energy.

Export from provinces of resources

(2) In each province, the legislature may make laws in relation to the export from the province to another part of Canada of the primary production from non-renewable natural resources and forestry resources in the province and the production from facilities in the province for the generation of electrical energy, but such laws may not authorize or provide for discrimination in prices or in supplies exported to another part of Canada.

Authority of Parliament

(3) Nothing in subsection (2) derogates from the authority of Parliament to enact laws in relation to the matters referred to in that subsection and, where such a law of Parliament and a law of a province conflict, the law of Parliament prevails to the extent of the conflict. ...

Existing powers or rights

(6) Nothing in subsections (1) to (5) derogates from any powers or rights that a legislature or government of a province had immediately before the coming into force of this section [emphasis added].

Prior to the 1982 amendment, regulation of interprovincial and international marketing was the exclusive preserve of Parliament under its trade and commerce power in subsection 91(2) of the

Constitution. After the 1982 amendment, provinces have concurrent legislative powers in relation to the export of electricity production to other parts of Canada - but notably not in relation to the export of electricity production from Canada.

Section 92A has been recognized to create overlapping jurisdiction that reflects the complex competing interests of federal and provincial governments in resource development and management in Canada. (See: The Resource Amendment (Section 92A) and the Political Economy of Canadian Federalism; Robert D. Cairns, Marsha A. Chandler, William D. Moull, Osgoode Law Review, Volume 23, (2) p.253 – 274.)

The NEB Act was amended in 1990 to accommodate the overlapping jurisdiction it now shares with the provinces. Those amendments, it may be argued, were an attempt to respect, to the extent possible, provincial sovereignty but preserve to the federal government effective jurisdiction over the international export of natural resources.

Portions of an International Power lines can for example, be subject to provincial law to the extent that the power line is “within of the province.”

Application of provincial laws

58.2 The laws from time to time in force in a province in relation to lines for the transmission of electricity from a place in the province to another place in that province apply in respect of those portions of international power lines that are *within that province* [emphasis added].

The physical point on a power line where Board jurisdiction over international power lines begins, as opposed to that considered to be “within that province,” is not defined in the Act, nor is criteria provided to assist in making that decision. Likewise, there is scant guidance provided in the Board’s Electricity Filing Manual as to where and when Board jurisdiction begins. A general rule of practice has evolved over the years that the Board assumes jurisdiction over international power lines from the last power substation before an international border crossing.

In many cases, this approach limited the geographic jurisdiction of the Board to relatively few kilometres or even, on some occasions, to a few metres. The practice has continued for decades and there has been no challenge from provinces or proponents as to the reasonableness of the approach. Indeed, the proponent in this case also appears to have accepted the appropriateness of this practice and has brought forward this Application apparently on that understanding.

In the case at hand, however, the last substation before the Canada-U.S. border is located hundreds of kilometres from the border, which has resulted in a much longer portion of the power line being considered to be an international power line for the purposes of the NEB Act. Consequently and correspondingly, that portion of the Project considered within the exclusive jurisdiction of the province of Manitoba is limited.

Nothing turns on this point in this decision. The Board has dealt with the Application as brought. Proponents of future projects may, however, want to consider what portions of a power line should properly be considered “within the province,” in a given Application. To the extent a power line is considered international and not within the province, there is the opportunity for

“overlapping” jurisdiction and consequently, the potential for duplication of regulatory processes and oversight, adding potential undue regulatory burden and associated cost.

A case might be made in any given Application, given the history of section 92A of the Constitution Act 1867, and the consequential amendments to the NEB Act, that federal regulation should be over only those physical portions of a power line considered necessary to federal jurisdiction. A substation may be such an appropriate point, but there may well be other significant physical structures located closer to the Canada-U.S. border.

A handwritten signature in black ink, appearing to read "A. Scott".

A. Scott
Presiding Member

A handwritten signature in black ink, appearing to read "M. Lytle".

M. Lytle
Member

Calgary, Alberta
October, 2018

Chapter 2

Recommendations to GIC and other Agencies

The Board assessed the Project under the *Canadian Environmental Assessment Act, 2012* and the *National Energy Board Act* (NEB Act). On 15 December 2017, the Governor in Council (GIC) ordered that this Project be designated “an international power line that is to be constructed and operated under and in accordance with a certificate issued under section 58.16,” pursuant to s. 58.15(1)(a) of the NEB Act. Section 58.16 provides, in part:

58.16 (1) The Board may, subject to section 24 *and to the approval of the Governor in Council*, issue a certificate in respect of

- (a) an international power line in relation to which an order made under section 58.15 is in force, ...

if the Board is satisfied that the line is and will be required by the present and future public convenience and necessity.

(2) In deciding whether to issue a certificate, the Board shall have regard to all considerations that appear to it to be directly related to the line and relevant [emphasis added].

This provision can be contrasted with paragraph 52(1)(a), the provision that establishes the Board’s role in the issuance of a certificate for pipelines.

52 (1) If the Board is of the opinion that an application for a certificate in respect of a pipeline is complete, it shall prepare and submit to the Minister, and make public, a report setting out

- (a) *its recommendation* as to whether or not the certificate should be issued for all or any portion of the pipeline, taking into account whether the pipeline is and will be required by the present and future public convenience and necessity, and the reasons for that recommendation [emphasis added]; ...

The Board is of the view that, despite the differences in the two provisions, there is great similarity in relation to the Crown’s duty to consult. In both cases, the Board must assess its own procedural processes, the impacts of projects on Indigenous interests, including rights, and the resulting degree of impairment, if any, on section 35 rights. As GIC is required under section 58.16 to approve or reject the Board’s decision to issue the certificate, the GIC has an independent responsibility to evaluate the adequacy of Crown consultation.

The views, concerns, and issues heard by the Board during the hearing that were directly related to the Project are discussed in this Decision, particularly in Chapter 8, and summarized in Appendix II. The Board concludes that there are no significant impacts after mitigation relating to this Project.

The Board is mindful of the recent Federal Court of Appeal decision in *Tsleil-Waututh Nation v. Canada*⁶ and the expectations outlined in that decision regarding the duty to consult and the respective roles of the Board and the GIC. In this case, we have considered issues that are within the scope and incidental to the Project, and determined that the duty to consult has been satisfied, as set out in Chapter 8, Indigenous Matters.

However, the Board did hear considerable evidence from certain Indigenous Intervenors regarding matters that, while outside the scope of this Project and not affected by the Project, were of great concern to those Intervenors. The Board feels that, in light of the deep concern expressed by those Indigenous Intervenors, it would be remiss if these issues and concerns were not identified to governments and government agencies. Following, therefore, are the Board's suggestions to GIC and other agencies about issues that are outside the scope of the Project and not incidental to the Project, but are, nevertheless, worthy of consideration.

Board Suggestions

1. The federal and provincial Crowns should consider developing, in consultation with interested stakeholders, the terms of reference and funding for a study of regional, multi-sectoral environmental and cumulative impacts. The study may use third party and government resources to solicit widespread input from affected parties in order to develop a regional evaluation of the aggregate cumulative effects of development on the environment and human capital. This study will be useful in giving policy direction to future infrastructure, industrial and agricultural development projects.
2. The federal and provincial Crowns, together with the appropriate water boards, should assess the impact on communities and wild rice producers affected by the fluctuating water levels of Lake-of-the-Woods.
3. The Panel recommends that the NEB change its practice regarding permit applications under section 58.11 of the NEB Act. Where Crown consultation is required, the Board should, by default, recommend a certificate process under section 58.16 of the NEB Act to the Minister, unless the specific circumstances make it clearly inappropriate to do so. This should be communicated to industry. Such a practice may mitigate against unnecessary delays in the NEB process. Additionally, this approach would not affect the continuation of provincial regulation after a project is approved.

⁶ 2018 FCA 153 [Tsleil-Waututh Nation].

Chapter 3

Overview

This chapter summarizes the National Energy Board's (the Board's) assessment and public process for the Manitoba-Minnesota Transmission Project (MMTP or Project). The Board considered all of the issues raised and evidence submitted on the public record for the process, and the Board's views on the issues and evidence are contained in the subsequent chapters.

3.1 The Project

On 16 December 2016, Manitoba Hydro filed a Project Application with the Board under sections 45(1) and 58.11 of the *National Energy Board Act* (NEB Act) to construct and operate the Project. The Project involves the construction of a new international power line (IPL), modifications to existing international and intraprovincial transmission lines and other associated transmission facilities. Specifically, the Project involves:

1. New Dorsey IPL: Pursuant to section 58.11 of the NEB Act, a permit to construct and operate a 500 kV alternating current (AC) IPL extending from Manitoba Hydro's Dorsey Converter Station in Manitoba to a point on the international boundary south of Piney, Manitoba. The applied-for new IPL consists of 213 kilometres (km) of new transmission line consisting of approximately 121 km of new right-of-way.
2. Alterations to Glenboro IPL: Pursuant to Condition 13 of Permit EP-196, the addition of two phase-shifting transformers to the terminal facilities of the IPL and relocating a segment of the IPL.
3. Alterations to Riel IPL: Pursuant to Condition 8 of Certificate EC-III-16, relocation of a segment of the IPL and, pursuant to subsection 45(1) of the NEB Act, amendments to the plan, profile and book of reference showing the proposed alteration.

Manitoba Hydro said that the proposed modifications to the Riel IPL and Glenboro IPL are incidental to the construction of the proposed Dorsey IPL and are therefore included in the "designated project" as set out in the *Canadian Environmental Assessment Act, 2012* (CEAA 2012). Manitoba Hydro said that, although the Project includes modifications to the Dorsey Converter Station and Glenboro South Station, Manitoba Hydro does not consider the stations themselves to be part of the Project.

Together, these facilities are known as the Project or Manitoba-Minnesota Transmission Project, the purpose of which is to increase import and export transfer capability limits across the Manitoba to U.S. interface (MHEX). The proposed new Dorsey IPL would connect with a new U.S. transmission line known as the Great Northern Transmission Line that is under development by Minnesota Power and a subsidiary of Manitoba Hydro, 6690271 Manitoba Ltd. The Great Northern Transmission Line is a 500 kV AC transmission line extending from the

international boundary crossover point of the new proposed Dorsey IPL to the Iron Range Substation near Grand Rapids, Minnesota.

Figure 1.1, Project Overview Map, illustrates the portion of the Project located in Canada.

Figure 3-1: Project Location Map

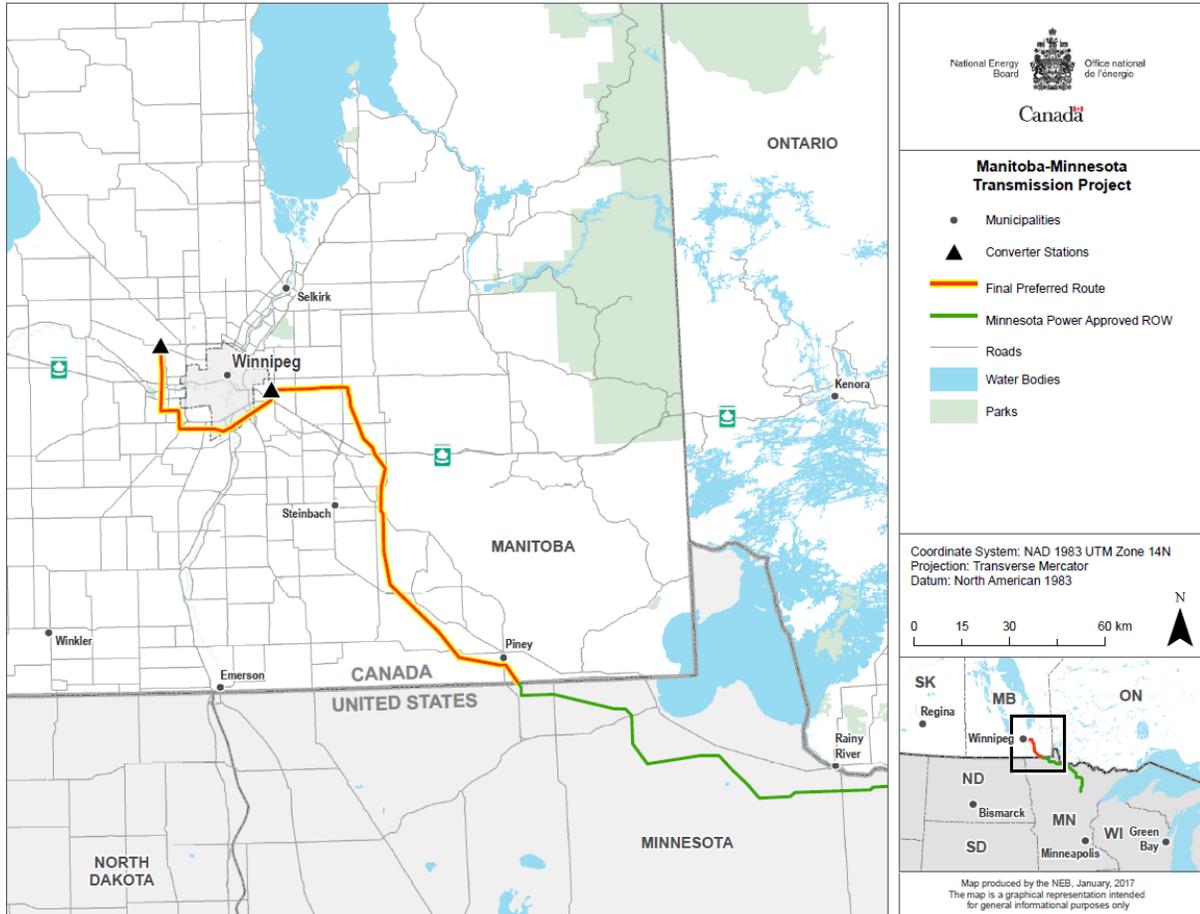


Table 3.1: Routing Characteristics

New right-of-way	121 km
New right-of-way – Provincial Crown land	36 km
New right-of-way – privately owned land	85 km
Existing right-of-way	92 Km
Final Preferred Route (combined new and existing rights-of-way)	213 km or 3,084.33 ha
Final Preferred Route - Provincial Crown Land	804.63 ha
Final Preferred Route- Privately owned land	703.21 ha
Final Preferred Route – owned or under easement by Manitoba Hydro	1576.49 ha
Forest area being cleared	550 ha
Wetlands intersected	457.7 ha
Watercourse crossings	75

3.2 Province of Manitoba Process

Manitoba Hydro submitted a regulatory application for the Project at the provincial level in the form of a proposal to Manitoba Conservation and Water Stewardship (now Manitoba Sustainable Development) pursuant to the provisions of Manitoba’s *The Environment Act*.

On 31 December 2015, the Manitoba Minister of Conservation and Water Stewardship requested that the Manitoba Clean Environment Commission (CEC) hold a public hearing on the proposed Project. The CEC’s Report on their public hearing with respect to the Project was filed with the Board on 12 October 2017, and formed part of the Board’s record.

The Board sought to avoid duplication of measures taken by the applicant and by the Province of Manitoba in respect of the applied-for Project. The Board accomplished this by incorporating, in its record, the record created in the CEC hearing, and the report produced by the CEC as a result of that record. Moreover, the Board focused its assessment on the matters set out in the CEAA 2012 and the NEB Act, as required.

3.3 National Energy Board Process

Manitoba Hydro submitted its Project application for a permit under section 58.11 of the NEB Act. Under that section, the Board is prohibited from holding a public hearing for the issuance of a permit. The Board began to assess the Project with a permit process combined with an environmental assessment process under the CEAA 2012. On 27 June 2017, the Board provided the public with an opportunity to participate in the environmental assessment of the Project under the CEAA 2012.

On 31 October 2017, based on new information, the Board recommended to the Minister of Natural Resources Canada (NRCan), pursuant to subsection 58.14 (1) of the NEB Act, that the Project be designated by order of the Governor in Council (GIC) under section 58.15 of the NEB Act as an IPL to be constructed and operated under a certificate of public convenience and necessity (certificate). As indicated in its letter, the Board considered that the certificate process allows more procedural flexibility, including the ability to understand and come to a determination on the potential impact of the Project on Indigenous interests. As well, the Board considered it necessary to rely on the certificate process to ensure that the Board's duties in Indigenous consultation are discharged properly and to ensure that the Board had adequate remedial powers to address Indigenous concerns that may arise in the circumstances of this application.

On 15 December 2017, GIC, on the recommendation of the Minister of Natural Resources Canada pursuant to paragraph 58.15(1)(a) of the NEB Act, designated the Dorsey IPL proposed in Manitoba Hydro's application regarding the Manitoba-Minnesota Transmission Project as an IPL that is to be constructed and operated under and in accordance with a certificate issued under section 58.16 of the Act.⁷ The Board initiated a hearing process once the Order in Council was issued. The Order was filed on the Board's record on 20 March 2018.

3.3.1 NEB Hearing Order and Hearing Process

On 21 December 2017, Board released its Notice of Hearing. Included in the Hearing Order and letter were the following:

- Directions to Manitoba Hydro to provide notice of the Project hearing in various publications;
- The Board decision that the Project application provided by Manitoba Hydro was complete;
- The Board decision to grant Intervenor status for the hearing to all parties who registered to participate in the CEAA 2012/Permit process which closed 16 August 2017;
- Steps for other interested people to apply to participate as Intervenor or commenter in the certificate hearing;
- The Board's List of Issues for EH-001-2017 (provided in Appendix I for reference); and,
- The certificate hearing process which included a written portion for information requests, evidence, and argument, as well as an oral portion for Oral Traditional Evidence, cross examination and argument.

As set out in Hearing Order EH-001-2017, the Board established both written and oral components in this proceeding. The Board heard Oral Traditional Evidence in Winnipeg, MB,

⁷ Privy Council Order No. 2017-1693.

during the week of 3 June 2018. The Board held the oral cross-examination and oral argument in Winnipeg during the week of 18 June 2018. Overall, the Board heard from the Applicant, 17 Intervenors⁸ and two Letter of Comment writers.

3.3.2 Participant Funding

The Board administers a Participant Funding Program (PFP), which provides financial assistance to individuals, Indigenous communities, landowners, and non-industry not-for-profit groups to facilitate public participation in certain project hearings and environmental assessments of designated projects.

On 16 March 2017, the Board announced \$250,000 to assist individuals and groups with their participation in the environmental assessment (and later the hearing) for the Project. The PFP received 16 applications requesting \$1,197,967. After reviewing the applications, the PFP recommended awarding to all applicants. The Executive Vice President, Regulatory, approved the recommendation. Indigenous communities account for 72% of the funding awarded.

3.3.3 Oral Traditional Evidence

The Board understands that Indigenous Peoples have an oral tradition for sharing lessons and knowledge from generation to generation and that this information cannot always be shared adequately in writing. The Board finds it valuable for its consideration of applications to gather Oral Traditional Evidence (OTE) during its proceedings from interested Indigenous Intervenors.

Chapter 8 provides information about Indigenous matters, including information heard during OTE sessions.

3.3.4 Environmental Assessment

The applied-for new Dorsey IPL exceeds 345 kV and requires more than 75 kilometres of new right-of-way. Thus, the Project falls within the *Regulations Designating Physical Activities* SOR/2012-147 under the CEAA 2012. As such the Project required an environmental assessment as set out in the CEAA 2012. The Board was the responsible authority under the CEAA 2012, and conducted this environmental assessment. More details are found in Chapter 9, Environmental Assessment.

Some Intervenors argued that the Board should include upstream generating facilities in its assessment of the Project. In determining whether the upstream generating facilities should be part of the “designated project” under the CEAA 2012, the Board considered the definition of “designated project” in section 2 of the CEAA 2012, which includes physical activity that is incidental to the designated project. The Board considered the following five criteria in the

⁸ Town of St Anne and Louise May were granted Intervenor status but did not participate in the hearing process.

Canadian Environmental Assessment Agency's "Guide to Preparing a Description of a Designated Project under the [CEAA 2012]" and offers commentary under each of the criteria.

- i. The nature of the proposed activities and whether they are subordinate or complementary to the designated project.

As further described in Chapter 5, there is sufficient generating capacity in current and approved upstream generating facilities to supply the Project. No generating facilities are dependent on the Project being built or are planned as a consequence of the Project. As a result, there are no changes to generating facilities that could be considered subordinate or complementary to the Project.

- ii. Whether the activity is within the care and control of the proponent.

The upstream generating facilities are owned and operated by the proponent, Manitoba Hydro.

- iii. If the activity is to be undertaken by a third party, the nature of the relationship between the proponent and the third party.

This is not applicable in these circumstances.

- iv. Whether the activity is solely for the benefit of the proponent or is available for other proponents as well.

No evidence nor argument was submitted on this point. The upstream facilities generate electricity that is available for all consumers of electricity in Manitoba, as well as for export to other provinces or internationally via the Project or other existing export power lines.

- v. The federal and/or provincial regulatory requirements for the activity.

Generating facilities are provincially regulated. The electricity industry in Manitoba is largely regulated through *The Manitoba Hydro Act*. The Public Utilities Board of Manitoba regulates rates and reliability, and certain authorizations are required through *The Environment Act* of Manitoba.

In considering these criteria, the Board particularly notes in (i) that there are no generating facilities dependent on the Project or are planned as a consequence of the Project; and in (v) that the generating facilities are provincially regulated. In short, even if the Project were not to proceed, there would be no change to the generating facilities or reservoir capacity, which are assessed and regulated by provincial entities. No additional upstream generation is liable to happen as a consequence of the Project. As such, the upstream generating facilities were not included as part of the definition of "designated project" under the CEAA 2012. The Factors and Scope of the Factors for the Environmental Assessment pursuant to the CEAA 2012 is described in sections 3.1, The Project, and 9.4, Project Details.

The Board also considered the potential environmental effects of the Project on species listed in the *Species at Risk Act*. This analysis is in section 9.6.4.3, Species at Risk.

3.3.5 Public Interest Determination

The public interest is inclusive of all Canadians and refers to a balance of economic, environmental, and social interests that changes as society's values and preferences evolve over time in respect of IPLs applied for under section 58.16 of the NEB Act. The Board assesses the overall public good a project may create and its potential negative aspects, weighs its various impacts, and makes its decision.

In making its decision regarding public convenience and necessity, the Board has regard to all considerations that appear to it to be directly related to the IPL and are relevant. The Board relies on the facts that are established to its satisfaction through the hearing process for the assessment of a project, and conducts its proceeding consistent with the principles of natural justice.

In its assessment of Manitoba Hydro's application for the MMTP, the Board considered whether the Project is in the overall Canadian public interest. In its determination of whether the Project is in the Canadian public interest, the Board considered the List of Issues in Appendix I.

The Board based its determination on findings of fact, and carefully assessed and weighed all of the evidence filed⁹ and arguments submitted by participants in the proceeding, exercising its discretion in balancing the interests of a diverse public.

3.3.6 Lifecycle Approach

The Board takes a lifecycle approach to regulation, holding its regulated companies accountable so that Canadians and the environment are protected throughout the lifecycle of each project. The lifecycle includes the following phases: planning and pre-application, application assessment and public hearing, construction and post-construction, operations and maintenance, and eventual abandonment.

Manitoba Sustainable Development (MSD) is designated under section 58.17 of the NEB Act as the provincial regulatory agency. However, should the GIC approve the issuance of a Certificate, and Manitoba Hydro proceeds with the Project, the Board will have some oversight to regulate the certificated Project facilities and components, primarily during construction.

The Board and the Province of Manitoba are independent regulators who are making independent decisions on the MMTP. The Province of Manitoba may impose conditions in its License (if granted) and enforce them independently. Details of the Province of Manitoba's

⁹ All of the evidence filed for the proceeding, and that the Board considered can be found on the Board's website here: [2016-12-16 - Application for the Manitoba-Minnesota Transmission Project - EH-001-2017 \(https://apps.neb-one.gc.ca/REGDOCS/Item/View/3116766\)](https://apps.neb-one.gc.ca/REGDOCS/Item/View/3116766).

regulatory oversight can be found on its Registry. The Board does expect overlap with the Province of Manitoba on certain topics, and encourages Manitoba Hydro to file consistent plans, programs, and procedures if the timing imposed in the condition allows.

3.3.7 Conditions

Under the NEB Act, the Board has the authority to set out conditions that it considers necessary or desirable in the public interest. The purpose of such conditions is to mitigate potential risks and effects associated with a project so that the project can be designed, constructed, operated, and abandoned in a safe manner that protects the public and the environment.

On 14 February 2018, the Board released 23 possible conditions for the Project, for information purposes, to provide all participants with information about how potential concerns could be addressed. The Board carefully considered all comments it received from Manitoba Hydro, Intervenor, and any information in Letters of Comment and made changes where appropriate before finalizing and setting out the terms and conditions it would impose if the Board's decision on the Project is approved by the GIC. The Board is of the view that many of the comments received on the draft conditions were sufficiently captured in the Board's conditions as drafted, or were addressed by Manitoba Hydro's standard mitigation measures in its Construction Environmental Protection Plan (CEPP) and its associated management plans, in its post-construction monitoring program, or in the commitments it made during Project planning, and the provincial and NEB hearing processes.

The Board also notes that many of the comments received were addressed by the CEC licensing recommendations. Wherever possible, the Board made efforts to not duplicate CEC conditions or to allow for a single filing to satisfy both Board and CEC conditions.

The Board imposes 28 conditions to be attached to the legal instruments required for the Project which are set out in Appendix III, Certificate Conditions. The Board considers these 28 conditions necessary or desirable in the public interest. These conditions relate to the List of Issues in Appendix I as well as other relevant and related issues brought forward within the evidence filed during the proceeding.

These conditions are discussed throughout the chapters that follow.

The Board notes that any commitments made by Manitoba Hydro in its Application or in its related submissions during the proceeding have also become regulatory requirements. To be satisfied that Manitoba Hydro complies with all of its commitments for this Project, the Board imposes **Condition 15** requiring Manitoba Hydro to file a Commitments Tracking Table for the Project.

The Board also finds that the following overarching conditions are necessary or desirable:

- **Condition 1** – requiring compliance with all conditions;
- **Condition 2** – providing an expiry date of the Certificate;
- **Condition 3** – requiring that all commitments made in the proceeding be implemented;

- **Condition 4** – requiring that the Project be constructed, operated, and abandoned in accordance with the standards and other information referred to in the Application and proceedings; and,
- **Condition 28** – requiring annual reports regarding Manitoba Hydro’s continued operation of the Project.

If Manitoba Hydro decides to proceed with the Project, it will be required to comply with all the terms and conditions attached to the various legal instruments required set out for the Project and any commitments it made during the proceeding.

The Board will monitor and enforce compliance with these terms and conditions throughout the lifecycle of the Project through audits, inspections, and other compliance and enforcement tools, as applicable under the NEB Act.

The Board will maintain its Project-specific website until the conditions in the associated Orders are satisfied. Documents filed by Manitoba Hydro in relation to condition compliance and related Board correspondence will be available on this Project-specific website:

www.neb-one.gc.ca/pplctnflng/mjrpp/mntbmnnst/index-eng.html

Chapter 4

Facilities, Safety and Emergency Response Matters

4.1 Engineering Design and Construction

The Board has considered all of the evidence relating to engineering matters, including that provided by Manitoba Hydro in its application and in its responses to the Board's information requests. The Board assesses whether the facilities are appropriately designed, with consideration for the safety of the public and security of the proposed facilities. The Board is of the view that the overall design of the Project makes use of sound engineering practices. This chapter includes summaries of these issues, the applicable requirements and the Board's views of how to comply with those requirements through appropriate conditions.

4.1.1 Overview

The Project is generally described in Chapter 3. The purpose of the Project is to increase import and export transfer capability limits across the Manitoba to U.S. interface (MHEX), which is the Manitoba Hydro transmission system interconnection to the U.S. transmission system through four IPLs. The Project includes construction of the Dorsey International Power Line (IPL) and alterations to each of the existing Glenboro IPL and Riel IPL.

Alterations to the Glenboro IPL include the addition of two series connected 300 MVA phase shifting transformers at Glenboro station. The alterations are required to prevent overloading on another facility caused by increased flows over the Manitoba-U.S. interface once the Dorsey IPL is in service. In order to accommodate the alterations, transmission lines G37C and G82R must also be altered.

Manitoba Hydro proposes alterations to the Riel IPL (500 kV) to accommodate the proposed route of the Dorsey IPL without the construction of two 500 kV crossovers that would otherwise be required to enable the Dorsey IPL to cross over the Riel IPL. Manitoba Hydro proposes to modify the existing section of the Riel IPL between Tower 5 to Tower 63.

The construction of the new Dorsey IPL and the changes to the Riel IPL and Line G82R of the Glenboro IPL are scheduled concurrently with a commissioning date of 29 May 2020. Manitoba Hydro did not provide a schedule for alteration to line G37C of the Glenboro IPL.

Three types of transmission towers will be used for the Project: tangent towers, angle towers and dead-end towers. In general, the new right-of-way required for the Dorsey IPL will range from 80 m in width, in areas where self-supporting steel lattice towers are used, to 100 m in width in areas where guyed steel lattice towers are used. Each phase of the transmission towers will support one set of triple conductor bundles suspended from insulators.

4.1.2 Impact to Bulk Power System

i Power Transfer Capability

The existing long-term power transfer capability of the MHEX, including a 75 MW reliability margin, is 2175 MW (summer and winter) for exports and 775 MW (summer and winter) for imports. With the proposed Dorsey IPL in place, the export power transfer capability is expected to increase by 883 MW to 3058 MW (summer and winter) and the import transfer capability is expected to increase by 698 MW to 1473 MW (summer and winter). Manitoba Hydro said that the import transfer capability increase beyond 1473 MW is limited by a constraint in the U.S.

The power transfer capability of the Dorsey IPL will be limited by the Iron Range Station transformer rating of 1200 MVA. The summer and winter System Operating Limit for the Dorsey IPL is 1200 MVA.

The addition of phase shifters to the Glenboro IPL will impact the transfer capability of the Glenboro IPL, but not that of the MHEX. The facility rating of the Glenboro IPL will decrease from 390 MVA in summer to 300 MVA after the MMTP is in service. This alteration is required in order to mitigate pre-contingency overloads on the Riel IPL resulting from increased power flows over the MHEX once the Dorsey IPL is in service, as identified in Manitoba Hydro's Preliminary Report on Group Facilities Study.

The relocation of a segment of the Riel IPL will not impact the transfer capability of the Riel IPL or the MHEX. The facility rating of the Riel IPL is 1732 MVA before and after the MMTP is in service.

ii Reliability

The Project has been designed in accordance with applicable North American Electric Reliability Corporation (NERC) reliability standards, which apply within the reliability framework legislated in the province of Manitoba and within the scope of the requirements pursuant to the NEB General Order MO-036-2012 (General Order) regarding reliability. Note that the General Order was originally imposed on specific IPLs and, in order to be applicable to the Project, it must be imposed through a condition.

An assessment of the impact of the Dorsey IPL on neighbouring U.S. systems has been performed by the Midcontinent Independent System Operator, Inc. (MISO). Manitoba Hydro states that the "MH-U.S. Transmission Service Request Sensitivity Analysis" issued by MISO confirms that there will be no harm to reliability in the MISO-administered region.

Manitoba Hydro conducted system impact studies to evaluate the effect of the Project on the reliability of the Manitoba-Saskatchewan and the Manitoba-Ontario interconnected systems. The results of these assessments indicate that the Project has no material negative impact on either Saskatchewan system reliability or the Ontario system reliability. On 23 April 2015, the Independent Electricity System Operator (IESO) issued a letter stating its agreement with Manitoba Hydro's assessment and conclusion that the Project has no negative impact on the existing Ontario system. On 14 May 2015, Hydro One issued a letter stating its agreement with Manitoba Hydro's conclusion that the Project has no material negative impact on the existing

Ontario system reliability. On 13 May 2015, SaskPower issued a letter stating its satisfaction that Manitoba Hydro has adequately assessed the impacts of the Project on SaskPower, and that SaskPower will support the Project application.

4.1.3 Canadian Standards Association and other Standards

Manitoba Hydro said the Canadian Standards Association (CSA) Standards C22.3 No.1-15 will be adhered to for the MMTP (which include the new Dorsey IPL, the altered Riel IPL and the altered Glenboro IPL).

The clearances for the portion of the Dorsey IPL that consists of an existing segment of the Riel IPL will conform to the requirements in the version of the standard in place at the date of construction in 1977, which was version CSA C22.3 No.1-1976. Manitoba Hydro has confirmed that the existing portion of the Riel IPL that will be used as part of the Dorsey IPL is capable of meeting the minimum required ground clearances of CSA C22.3 No.1-15.

Manitoba Hydro will follow Can/CSA 12.3 No.608-10 for structural and mechanical design, ASCE 10 “Design of Latticed Steel Transmission Structures” for transmission tower structural design, and Institute of Electrical and Electronics Engineers 691 “Guide for Transmission Structure Foundation Design and Testing” for foundations.

In its response to the Board’s Information Request, Manitoba Hydro listed the applicable codes and standards that will be used to establish the grounding, bonding, signage, personnel safety and protection, touch and step potentials, fence grounding, high voltage installation and cabling requirements for all substation work associated with the Project. Manitoba Hydro also provided a list of standards developed by other standards development authorities (e.g. American National Standards Institute and Institute of Electrical and Electronics Engineers) with which it will comply for the construction and operation of the Project.

According to Manitoba Hydro, the above mentioned standards meet or exceed the requirements specified in CSA C22.1-15.

Views of the Board

The Board is of view that the overall design of the proposed Project (which includes the new Dorsey IPL, the altered Riel IPL, and the altered Glenboro IPL) makes use of sound engineering practices in respect of layout, tower design, and line and equipment selection.

The Board imposes **Condition 27** requiring Manitoba Hydro to design and construct the towers and conductors in accordance with the specifications and other information referred to in its Application. Further, to assist the Board and all interested individuals and groups in tracking compliance, the Board imposes conditions requiring Manitoba Hydro to report on condition compliance (**Condition 24**) and to file as-built drawings (**Condition 25**).

Additionally, the Board imposes **Condition 6** requiring Manitoba Hydro to seek approval from the Board for any proposed modification to MMTP electrical system before any modification is made.

The Board is aware that an import transfer capability beyond 1473 MW may only be achieved upon mitigation of a constraint in the U.S. While Manitoba Hydro has provided the power flow studies under various operating conditions, it has not provided confirmation that IESO and SaskPower have reviewed the impact of both steady state and transient conditions under all combinations of system outages. In order to ensure that none of the reviewed MMTP operating scenarios will impose unacceptable operating conditions upon the neighbouring Canadian transmission systems, the Board imposes **Condition 13** which limits import and export of power, and requires Manitoba Hydro to file confirmation that IESO and SaskPower have reviewed the impact of both steady state and transient operation, and confirmation that none of the reviewed operating scenarios will impose unacceptable operating conditions upon their electric systems.

Recognizing the importance of the reliability of the integrated North American system, the Board imposes **Condition 12** requiring Manitoba Hydro to comply with the Board's General Order on Reliability MO-036-2012 for the Project. In addition, the condition would require Manitoba Hydro to file with the Board any operational deviation from the General Order and details of any event involving electrical contact with the energized IPL or due to other abnormal system conditions.

The Board is satisfied that Manitoba Hydro will comply with the CSA and other relevant standards which govern the integrity of the design, construction and operation of overhead transmission lines and substations. In order to verify that Manitoba Hydro designs, constructs and operates the Project in accordance with the standards referred to in its Application, the Board imposes **Condition 5**.

Finally, in order to confirm that the Project is in compliance with Manitoba Hydro's operations and maintenance manuals, the Board imposes **Condition 19** requiring Manitoba Hydro to file the manuals with the Board 60 days prior to the commencement of operations.

4.2 Safety

Manitoba Hydro said that applicable codes and standards for the construction and safe operation of the facility will be used to establish the grounding, bonding, signage, personnel safety and protection, touch and step potentials, fence grounding, high voltage installation and cabling requirements for all substation work associated with the proposed Project, and that the Project will "meet or exceed the requirements specified in CSA C22.1-15".

Views of the Board

Given that a 500 kV line has a strong electromagnetic field, Manitoba Hydro must take precautionary measures in the design and construction of the Project to attenuate any unsafe electrical conditions. Manitoba Hydro has said it will adhere to or exceed the CSA Standard C22.1-15. In order to verify that the design, construction and operation of the Project is in accordance with the standards referred to in its Application, the Board imposes **Condition 5**.

The safety of employees, contractors, the public, and the environment are of paramount importance. The Board imposes **Condition 8** requiring Manitoba Hydro to file Construction Safety Manuals prior to the commencement of construction. Construction Safety Manuals for the Project must include construction procedures, activities, and public related safety issues for all the construction activities that will take place for the Project.

In addition, the Board imposes **Condition 18** requiring Manitoba Hydro to Submit Operations Safety Manuals - Engineering prior to the commencement of Operations. Operations Safety Manuals for the Project must address routine operation procedures, activities, public safety issues that might be encountered during the operation of the IPL, and an outline of the safety training program to be implemented for the operation of the Project.

4.2.1 Emergency Response Plan

Manitoba Hydro said that contractors will develop Emergency Preparedness and Response plans prior to construction that will provide for emergency preparation and response in accordance with legislation, accidents, medical emergencies, explosions and fire. Further protection measures will be prescribed for the provision of emergency response planning, responsibilities, training, exercises and procedures and that regular inspections would be conducted by inspectors.

Manitoba Hydro also said that the Project has been designed to comply with applicable reliability standards of the NERC related to design, construction and operation, including safety and emergency response; and that Manitoba Hydro would, in accordance with the Board's General Order MO-036-2012, comply with the NERC standards.

Anishinaabeg of Naongashiing and Brokenhead Ojibway Nation said they wanted Manitoba Hydro to document how Indigenous communities will be involved in emergency response and preparedness procedures and provide associated timeline commitments for communication and engagement.

In response to this concern, among others, Manitoba Hydro committed to fund a joint monitoring committee with Indigenous Communities and organizations called the MMTP Monitoring Committee.

Views of the Board

The Board is of the view that emergency response plans are an important product of the emergency management program which is in turn a component of the management system. The Board is also of the view that information contained in emergency response plans can contribute to the protection of the environment and the safety of the public adjacent to international and inter-provincial power lines. The Board imposes **Condition 14** requiring Manitoba Hydro to submit a Construction Emergency Response Plan.

Chapter 5

Economic and Financial Matters

To determine if there is an economic need for a project, the Board assesses the likelihood that the international power line (IPL) would be used at a reasonable level over its economic life and would contribute to Canadians benefiting from efficient energy infrastructure. The Board assesses information relating to the supply, demand and load conditions of the markets at the origin and terminus points of the proposed IPL and any other markets that the proposed IPL would service, as well as any other benefits of the proposed IPL.

The Board also considers the financial viability of a project and the company's ability to finance the construction, ongoing operation and maintenance, and abandonment of the IPL.

5.1 Supply

Manitoba Hydro owns and operates 15 hydro-electric generating stations and two thermal plants with a total system capacity of 5675 megawatts (MW). Manitoba Hydro is currently developing the Keeyask generating station (Keeyask), which will add 695 MW of generating capacity as soon as 2020. Once Keeyask is placed into service, there will be firm power surplus to the needs of domestic customers until domestic load increases to require Keeyask. Manitoba Hydro views this as an abundant source of supply for the proposed IPL. By design, hydroelectric generation provides surplus energy in all flow conditions other than the lowest recorded flow period. Manitoba Hydro can also access supply through its interconnections with the systems of Canadian generation owners and the systems of Midcontinent Independent System Operator, Inc. (MISO) members.

Some parties, including Shoal Lake #40 First Nation, Animakee Wa Zhing #37 First Nation, and Northwest Angle #33 First Nation, expressed concerns that required storage to supply the electricity needed for export would result in altered seasonal water levels in the Winnipeg River or Lake of the Woods watershed.

Manitoba Hydro said the issue of water levels is not within the scope of the NEB's mandate respecting a transmission line in Southern Manitoba. However, Manitoba Hydro confirmed that water levels on Lake of the Woods will not be impacted by the Project. Further, Manitoba Hydro noted that the Lake of the Woods Control Board controls the water level in Lake of the Woods, not Manitoba Hydro.

Manitoba Hydro intends to use the Project to import electricity for its off-peak domestic load from MISO and export electricity to MISO the next day during on-peak hours. To do this, Manitoba Hydro will store power by maintaining and increasing water levels at various generating stations. Manitoba Hydro stated that when it builds a generating station, it gets an interim licence from the Province of Manitoba under the *Water Power Act*. In that licence the operating parameters of the generating station are laid out, which includes maximum water

levels, minimum water levels, rates of change on flow, and all the parameters necessary that are the basis of the design and the environmental assessment. Manitoba Hydro said it operates its generating stations to those parameters.

The Manitoba Branch of the Consumers Association of Canada (CAC Manitoba) argued that there are concerns about Manitoba Hydro's integrated system, including the decision to build Keeyask and to export the surplus power.

Views of the Board

The Board is satisfied that Manitoba Hydro demonstrated sufficient generating capacity from its current and approved generating stations to supply the Project with electricity. Further, the Board is satisfied that the Project can access additional supply through its interconnections with other jurisdictions and, by using these imports to service domestic load, can store water at its hydro generating stations to generate additional electricity supply when needed.

The Board heard concerns raised with regards to the impact of the Project on water levels in Lake of the Woods and Winnipeg River. Concerns focused on the socio-economic and environmental impacts of water level fluctuations were ruled out of scope in the Board's Ruling 4. The Board is satisfied that Manitoba Hydro demonstrated that it has the appropriate authority to operate its current and approved generating stations within the designated parameters, such that it can store and generate sufficient supply for the Project.

While the Board heard concerns from parties about the appropriateness of building Keeyask, other regulatory bodies were tasked with determining the appropriateness of Manitoba Hydro's capital expenditure programs on Keeyask.

5.2 Markets

Manitoba Hydro's existing IPLs are interconnected with a regional power market in the United States operated by the MISO. MISO is a regional transmission organization that administers wholesale electricity markets, open access transmission service, reliability coordination and long-term transmission planning for its region. The Project will connect into the MISO market area. MISO forecasts a system-wide average load growth rate of 0.8 per cent for the period from 2015 to 2025 supporting the availability of export markets that would be facilitated by the Project.

Manitoba Hydro also discussed how Manitoba is a winter peaking region while in the United States, MISO is a summer peaking region. The seasonal load diversity between Manitoba and the United States allows for MISO to share their surplus capacity with Manitoba in the winter and Manitoba to share their surplus capacity with MISO in the summer.

Manitoba Hydro will use the Project to sell surplus capacity and energy into the export market under long-term contracts or using MISO's day-ahead and real-time energy markets. Manitoba Hydro has contracts for 383 MW of power with Minnesota power. These contracts are discussed in section 5.3.1.

According to Manitoba Hydro, the MISO markets are favourable for additional hydroelectric generation, due to upcoming retirements of coal generation and increased renewable portfolio standards for renewables. In 2014, coal generation was the most common fuel type of generation capacity in the MISO market, composing 46 per cent of the 143,610 MW of generation capacity. Even with uncertain federal requirements regarding renewables, Minnesota continues to advance the retirement of coal units and the development of renewable generating resources. Minnesota currently has a renewable portfolio standard that requires utilities to supply 26.5 per cent of retail electricity sales from renewable generating facilities by 2025 and a greenhouse gas (GHG) emissions goal to reduce emissions below the 2005 level by 30 per cent in 2025 and by 80 per cent in 2050.

Manitoba Hydro said that Minnesota Power has capacity deficits in the post 2020 period even given the 250 MW of capacity supply from Manitoba Hydro. Minnesota Power's contracted purchases of capacity and renewable energy from Manitoba Hydro are an important part of its plans to diversify its resource portfolio and reduce carbon emissions from its existing coal fired generation.

Views of the Board

The Board is satisfied that there is an adequate market available for the Project.

5.3 Need for Facilities

Manitoba Hydro described the Project as including the new 500 kilovolt (kV) Dorsey IPL, which would increase its export power transfer capability by 883 MW. Manitoba Hydro said the Project is needed for three reasons:

1. **Contracts:** executed agreements between Manitoba Hydro and a U.S. counterparty for the export and import of electricity;
2. **Additional Export and Import Sales:** provides benefits to Manitoba electricity customers derived from the export sales of Manitoba Hydro's surplus electricity using MISO's day-ahead and real-time energy markets and taking advantage of imports from the U.S. when economically beneficial; and,
3. **Reliability:** the need for additional transfer capability to import electricity to maintain reliability of service to Manitoba customers during times of drought or during emergencies.

5.3.1 Contracts

The availability of surplus power from Keeyask, once it is in service, provides Manitoba Hydro with export sale opportunities. Manitoba Hydro has entered into contracts totaling 383 MW for the long term sale of electricity with Minnesota Power, a division of ALLETE, Inc. The 250 MW System Power Sale Agreement is for a term of 15 years and the 133 MW Energy Sale Agreement is for a term of 20 years. These contracts require one or both of the parties to construct a new transmission interconnection to provide additional firm transmission capacity

between Manitoba Hydro's Balancing Authority Area and Minnesota Power's local Balancing Authority Area within MISO.

5.3.2 Additional Export and Import Sales

Manitoba Hydro said that the export sale revenue generated through construction of the Dorsey IPL will serve to reduce Manitoba Hydro's revenue requirement that must be recovered through domestic rates, and will assist Manitoba Hydro in keeping rates affordable for provincial customers. On average, since 2006, Manitoba Hydro has exported approximately 11 TWh of surplus electricity annually from its existing hydro generating system. Revenues from these exports have reduced electricity rates in Manitoba by 28 per cent. However, in most of these years, Manitoba Hydro's existing export capability has been insufficient to allow Manitoba Hydro to export all of its surplus generation. As a result, export revenues were foregone because of insufficient export market transmission access.

Manitoba Hydro said that the Project is required to allow it to better capture the value of surplus energy production in favourable water years through increased export revenues.

Manitoba Hydro identified energy price risk as a risk facing the Project because the revenue stream from exports is subject to market energy price volatility. While MISO market prices for energy have fallen in recent years, Manitoba Hydro expects that the construction of the Dorsey IPL will reduce transmission losses and price congestion between the pricing node on the Canada-U.S. border and MISO's pricing node for the Minneapolis area, resulting in lower prices for imports to Manitoba and higher prices for exports to the MISO.

Manitoba Hydro also noted that the Project will allow it to import electricity from MISO when it is more economic than using Manitoba generation. As a result of the Project's import capacity, Manitoba Hydro will be able to purchase more electricity at a lower cost during periods of low water and will be able to defer the need for additional generating resources by six years, the savings will reduce Manitoba Hydro's future operating and capital costs.

A number of parties raised concerns about export sales.

Some parties argued for increased domestic use of electricity, rather than exports. The Council of Canadians – Winnipeg Chapter (COC Winnipeg) argued that the primary purpose of the Project would be to increase electricity exports. Rather than exporting electricity using the Project, COC Winnipeg recommended that Manitoba Hydro use surplus electricity within Manitoba and within Canada to serve climate mitigation targets. Manitoba Wildlands submitted that Manitoba Hydro did not address alternatives to exporting surplus electricity into the American market, such as developing local markets.

Manitoba Wildlands submitted a report by Dennis Woodford, titled "The Manitoba Minnesota Transmission Project is Not Needed." In the report, Mr. Woodford stated that existing U.S. export capacity of 1,950 MW is adequate to accommodate Manitoba Hydro's maximum firm contracts, after Keeyask comes on-line, at only 1,525 MW. Mr. Woodford concluded that the Project is not required for firm export contracts. Manitoba Wildlands recommended that the approval of the Project be delayed because Manitobans are being asked to pay increasing

hydroelectric rates in order to subsidize the low and unprofitable electricity export prices received in return.

In response to these concerns, Manitoba Hydro noted that Keeyask is being built to serve Manitoba load demand over the long run. Since the provincial Public Utilities Board's Needs For and Alternatives To (NFAT) consideration of Keeyask and the Project, the load forecast for Manitoba has been lowered and the date for which power from Keeyask is needed to serve Manitoba load has been deferred. Once Keeyask is placed into service, Manitoba Hydro will have difficulty maximizing the value of the additional energy from Keeyask without the Project, especially in median or better water flow years. In these circumstances, the existing export capability will be insufficient to handle Keeyask energy 75 per cent of the time.

Further, Manitoba Hydro stated that domestic electrification was not relevant to the Application or to the List of Issues for this proceeding.

5.3.3 Economic Impacts of Reliability

Impacts with respect to reliability on the bulk power system are discussed in section 4.1.2.

Manitoba Hydro identified the need for additional transfer capability to import electricity to maintain reliability of service to Manitoba customers during times of drought or during emergencies. Over its economic lifespan of 80 years, the Project will serve this purpose. The Project will also reduce the need for contingency reserves and create an alternate transmission path during certain extreme transmission outages. Manitoba Hydro estimated that the reliability benefits for Manitoba Hydro ratepayers over the life of the Project have a present value of between \$72 and \$98 million in 2016 dollars.

Manitoba Wildlands asserted that Manitoba Hydro uses the benefit of reliability as a “scare tactic” to justify major transmission projects. According to Manitoba Wildlands, the most significant and profitable way to justify an interconnection transmission project based on reliability is when it is used to share generation reserves, allowing each jurisdiction to be able to operate with reduced reserves. Manitoba Wildlands argued that this is not the case for the MMTP line since there is excess generation coming on line in Manitoba, not a reduction.

Views of the Board

The Board finds that there is an economic need for the Project. The Board is of the view that adequate supply, markets, and contracts are in place to reasonably expect that the Project will be used and useful over its economic life and that the use of the line for both exports and imports will contribute to creating financial value for Manitoba Hydro and Manitobans. This benefit is discussed in greater detail in Section 5.4.

The Board is of the view that the Project will improve reliability of the integrated system and Manitoba ratepayers will benefit from the reliable provision of electricity. Reliability and the impacts of the Project on the bulk power system are more fully addressed in section 4.1.2.

The Board considered Manitoba Wildlands' argument that the Project is not needed to meet Manitoba Hydro's existing export obligations. The Board is of the view that the Project, and Manitoba Hydro's existing interconnections, are not intended for the sole purpose of meeting Manitoba Hydro's firm long-term contracts. The Board is persuaded that the Project also provides flexibility for Manitoba Hydro in balancing its supply with lower cost imports, maximizing value of surplus generation, and enhancing reliability of service for Manitobans.

The Board considered recommendations from Intervenors suggesting that the Board require Manitoba Hydro to further study the domestic use of surplus electricity as opposed to exports. Some Intervenors also suggested that the Project should not go forward; but rather, the capital investment could be spent in Manitoba to promote electrification and to meet Manitoba's and Canada's GHG emission reduction targets. The Board is not able to enforce any such condition or redirection of capital funds intended for the construction of the Project. The Board also notes that the Public Utilities Board held an NFAT process that would have been a more appropriate forum for raising visions for possible alternative uses of electricity or capital.

5.4 Economic Feasibility

In Manitoba Hydro's view there is a compelling business case to support the Project. Manitoba Hydro filed two reports supporting the economic feasibility of the Project. The first was a Net Present Value (NPV) analysis conducted for the Public Utilities Board in 2014 (2014 NPV Analysis). The second was an internal report titled 500KV Interconnection Evaluation completed in 2016 (2016 500 kV Report).

In these reports, Manitoba Hydro included the costs of constructing and operating MMTP. Manitoba Hydro said that MMTP has an approved budget of \$453 million, and expects annual operating and maintenance costs for the transmission line to average \$136,000 over the first 15 years of operation. Manitoba Hydro also included the costs related to the Great Northern Transmission Line (GNTL) that it, through a wholly-owned subsidiary of Manitoba Hydro, has an obligation to pay. Manitoba said that it is responsible for 54 per cent of the capital costs incurred by Minnesota Power to construct the GNTL; the most recent public cost estimate for GNTL was between 560 and 710 million USD. During the first 15 years of operations, Manitoba Hydro estimated that it will pay, on average, \$42.8 million each year to reimburse Minnesota Power for its additional 17.7 per cent capital investment in GNTL, and to cover 49 per cent of Minnesota Power's operating costs for GNTL.

In the 2014 NPV Analysis, Manitoba Hydro compared two development plans to determine the incremental economic benefit of the MMTP. One included the Project, the GNTL and all associated contracts and the other did not include these projects. The development plan that included the Project had a NPV of \$385 million (in 2014 dollars) higher than the alternative development plan.

Manitoba Hydro said the economic benefit of \$385 million in the 2014 NPV Analysis would be reduced to zero under the following conditions, holding all else equal:

- A capital costs increase of 52 per cent;

- Using a discount rate of 9.29 per cent instead of 5.40 per cent; or,
- Variable expenses increase by 150 per cent.

Manitoba Hydro updated the above capital cost figures following the 2014 NPV Analysis and provided the revised numbers to the Board.

In the 2016 500 kV Report, Manitoba Hydro identified additional strategic benefits to the Province of Manitoba, separate from, and incremental to any benefits to Manitoba Hydro. These benefits were derived from water rental fees, provincial guarantee fees, and taxes paid to Manitoba. Manitoba Hydro estimated these benefits to have a present value of \$196 million.

While the NPV was redacted in the 2016 500 kV Report, Manitoba Hydro concluded that, based on the anticipated economic benefits and updated capital costs, there is a positive business case associated with constructing the Project.

Manitoba Hydro identified a number of financial risks associated with the Project in the 2016 500 kV Report. These included the following:

- Transmission construction risk – includes schedule creep, construction cost escalation, and unforeseen complications requiring alternative construction techniques.
- Permitting risk – construction delays and increased costs may be unavoidable for the Project if delays occur in obtaining outstanding required permits.
- Energy price risk – revenue streams from exports are subject to market energy price volatility, leaving Manitoba Hydro with long-term fiscal uncertainty.
- Transmission rights risk – for capacity on GNTL held by Minnesota Power and Wisconsin Public Service to be extended upon the expiry of contracts with Manitoba Hydro, new contracts would need to be executed. If not, the transmission service would be released for competition under the Tariff which would occur between 2035 and 2040.
- Risk of preference for Canadian expansion – if future circumstances were to favour Manitoba Hydro expansion into Canadian markets over MISO, many of the benefits associated with the 500 kV interconnection would either diminish or never materialize.
- Income tax risk – if 6690271 Manitoba Ltd. capital payments to Minnesota Power are found to be subject to US income tax, 6690271 Manitoba Ltd. will have to compensate Minnesota Power for those taxes. This risk can occur for up to 10 years after the In-Service Date.

Some parties filed evidence disputing the economic feasibility of the Project.

Mr. Woodford's report for Manitoba Wildlands, "The Manitoba Minnesota Transmission Project is Not Needed," stated that Manitoba Hydro would export excess electricity at an average of 4 cents/kilowatt-hour (kWh) but that electricity would be generated from Keeyask at 12 cents/kWh. Mr. Woodford questioned whether the cost of constructing the Project would exceed the earnings received from export sales.

The Southeast Stakeholders Coalition (SSC) also argued that Manitoba Hydro will not recover the construction costs of the Project and the GNTL from export revenue.

Manitoba Hydro agreed with SSC and Mr. Woodford that the Project is not expected to recover its costs from export revenue. Manitoba Hydro noted that Keeyask is not being built as a merchant plant, with an expectation that export revenues will cover its costs. Rather, Keeyask is being built to serve Manitoba load demand over the long run. The NFAT process determined that Keeyask, in conjunction with the Project, was preferred over Keeyask without an interconnection because it resulted in lower long run electricity rates in Manitoba.

With respect to pricing, Manitoba Hydro noted that, although the actual long-term prices for contracts associated with Keeyask are confidential, Manitoba Hydro's export reporting filings with the Board for 2017 demonstrate that long-term export prices in excess of 10 cents/kWh can be achieved, as compared to non-negotiated prices of 2.5 cents/kWh. This magnitude of pricing differential is typical of what can be expected for future long-term firm power that has been sold as a result of Keeyask and the Project.

SSC also submitted concerns about the ownership of the GNTL, stating that Manitoba Hydro, through its wholly owned subsidiary, 6690271 Manitoba Ltd., was entitled to own 54 per cent of the GNTL but gave it away to Minnesota Power in April 2016. SSC argued that this confirms that the Project is not in the public interest.

In response to concerns about the ownership of the GNTL, Manitoba Hydro said that it was in the interests of Manitoba Hydro to transfer the ownership to Minnesota Power while retaining the right to use the line. By transferring ownership to Minnesota Power, Manitoba Hydro shed the risk of owning assets in the United States that expose Manitoba Hydro to tax liability and physical liability as part of ownership. Manitoba Hydro is of the view that there was no benefit to ownership, only risk, and Manitoba Hydro chose to shed that risk.

The Manitoba Branch of the Consumers Association of Canada (CAC Manitoba) argued as the latest economic analyses of the Project are from 2016, the Board does not have an up-to-date economic analysis of the MMTP.

CAC Manitoba argued that changed circumstances since 2016 make this analysis unreliable. Specifically, CAC Manitoba submitted that given recent reductions in export market prices, the removal of the premium attached to surplus dependable energy, and the increase in forecast interest rates, it is unclear if the economics of the Project would still be favourable. CAC Manitoba recommended that the NEB should order Manitoba Hydro to provide an updated business case analysis based on June 2018 information before rendering its decision.

In response to CAC Manitoba, Manitoba Hydro argued that it should be of no surprise to CAC Manitoba that financial information from late 2016 was relied upon by Manitoba Hydro for an Application that was filed in late 2016. Manitoba Hydro argued that an update to the economic business case would not be necessary as the 2016 500 kV Report accurately reflects the benefits of the Project and contains sensitivity analysis to address the concerns that CAC Manitoba raised regarding key inputs to the economic analysis.

Views of the Board

Manitoba Hydro said repeatedly that it is committed to building Keeyask regardless of the outcome of the NEB Hearing on the Project. Therefore, when evaluating the economic feasibility of the Project, the Board evaluated whether there will be a positive economic benefit to constructing the Project, given that Keeyask will be built. The Board finds that Manitoba Hydro has demonstrated that the Project and the associated American infrastructure result in a positive NPV compared with an alternative without the Project and GNTL.

The Board notes, as highlighted by COC Winnipeg, CAC Manitoba, and Manitoba Wildlands, there is some uncertainty regarding the magnitude of the economic benefits Manitoba Hydro expects from the Project. These benefits could erode due to construction overruns, project delays, export price shocks, and changes in the cost of debt, among other risks. However, in the Board's view, Manitoba Hydro has demonstrated that it is aware of these risks and has taken steps to address them. The Board is of the view that the steps Manitoba Hydro plans to take will sufficiently mitigate the identified risks.

The Board has considered the Intervenor evidence that suggests the Project will be unable to recover its costs through export revenue. Manitoba Hydro agreed with the Intervenors. However, the Board is persuaded by Manitoba Hydro's argument that the need for the Project is multifold and revenue generated from the Project will likely lower the costs of electricity in Manitoba. The Board is satisfied that there are additional benefits to Manitoba and Manitoba Hydro ratepayers, such that the economic impact of the Project can be expected to be positive when compared to an alternative without the Project.

CAC Manitoba raised concerns with the use of economic analyses from 2016 to support the business case for the Project. The Board is persuaded that it is reasonable to use a business case from 2016 to support an application filed in 2016. While the Board is cognizant that changes may have occurred, the possible benefit of an updated analysis does not outweigh the burden it would place on Manitoba Hydro. Any additional analysis would have limited benefit and require delaying the Board's decision.

Concerns were raised by SSC with regard to Manitoba Hydro's transfer of its stake in the GNTL to Minnesota Power for \$0. The Board accepts the argument of Manitoba Hydro that the transfer of ownership in the GNTL does not impact the economic feasibility of the Project and benefits Manitoba Hydro by avoiding the risk, including tax risk, it identified in the 2016, 500 kV Report.

The Board also considered concerns about changes in export price forecasts and the possible economic implications of those changes. Manitoba Hydro has identified energy price risk as a risk facing the Project, modelling it in the 500 kV Report. For the NPV of the Project to be reduced to zero, based on its 2014 NPV analysis and the contracts underpinning the Project, Manitoba Hydro would need to sell exports into the MISO at a negative price. Manitoba Hydro is a vertically integrated utility that generates, markets, and transmits the electricity that will be exported using the Project. As such, the Board views the volatility of export prices as a risk to be borne by Manitoba Hydro and any party contracting energy over the

Project. The Board is aware of the public interest considerations that result from the proponent being a Crown corporation. However, the Board is of the opinion that Manitoba Hydro has demonstrated that it is aware of the changes to export prices, as well as cognizant of the risk of uncertainty in the export price of electricity, and has taken reasonable action to address these risks and insulate itself from some of the risks through long-term firm contracts.

The Board finds that the Project is economically feasible.

5.5 Ability to Finance

Manitoba Hydro said it had an approved budget for MMTP of \$453 million Canadian dollars and that the most recent publicly available estimated cost of the GNTL was between \$560 and \$710 million U.S. dollars. The capital and operating costs, as well as the portion of the costs associated with GNTL that Manitoba Hydro is responsible for, are discussed in more detail in Section 5.4.

Manitoba Hydro is a Crown Corporation. Manitoba Hydro plans to fund the majority of the MMTP capital expenditures through long-term debt advances from the Province of Manitoba. Manitoba Hydro may also issue long-term debt in its own name with the guarantee of the Province. The Province of Manitoba has approved capital authority totaling nearly \$5 billion for Manitoba Hydro with \$208 million specifically approved for MMTP via Loan Act Authority. Manitoba Hydro has included an additional \$83 million for MMTP in a Loan Act, 2018 request which has yet to be approved in the Legislature.

Manitoba Hydro's financial strength and ability to attract capital is not expected to be affected by the borrowing requirements of the MMTP.

Manitoba Hydro also provided financial statements for ALLETE, Inc. Minnesota Power is a division of ALLETE, Inc. and will own and operate the GNTL. The Dorsey IPL will connect with the GNTL. Minnesota Power also holds the long-term firm contracts with Manitoba Hydro which underpin the Project.

Views of the Board

The Board finds that as a Crown Corporation with the backing of the Province of Manitoba, Manitoba Hydro has sufficient ability to finance the proposed Project.

5.6 Financial Resources

As the operator of the Project, Manitoba Hydro is responsible for addressing a possible emergency or incident during the lifecycle of the Project, including during construction, operation, and abandonment.

Manitoba Hydro filed examples of costs associated with incidents that have occurred or could occur in facilities similar to those proposed in the Application.

Table 5.1: Cost of Potential Incidents

Incident	Remediation	Cost
Collapse of a 500kV AC tower	Complete replacement of tower	\$250,000 - \$500,000
Equipment failure resulting in accidental release of hazardous materials	Clean-up and remediation	\$2,500 - \$10,000
Total failure of a bank of 500kv current transformers at a station	Complete replacement of the bank	\$300,000 - \$500,000
Failure of other electrical equipment (e.g. circuit breakers, surge arresters, disconnecting switches)	Replacement	\$5000 - \$1,000,000

Views of the Board

Manitoba Hydro must be able to demonstrate that it has sufficient financial resources to cover the costs of losses or damages that may arise from potential malfunctions, accidents, and failures during the operation of the Project. Based on the cost range of potential incidents submitted by Manitoba Hydro and the financial strength and ability to attract capital described in section 5.5, the Board finds that Manitoba Hydro has sufficient financial means to pay for the cost of an incident during the operation of the Project.

5.7 Abandonment Funding

When a company whose infrastructure is regulated by the NEB wants to abandon a power line, or part of one, it must file an application to the Board. The Board considers the application and, if the Board approves the application, the Board may impose conditions and will monitor the abandonment activities. The company is responsible for funding the abandonment of the facilities as well as any ongoing conditions imposed by the Board as a result of its decision on an abandonment application.

Manitoba Hydro does not envision abandoning the Project. Currently, Manitoba Hydro plans to operate the Dorsey IPL in perpetuity. However, in the event that the Dorsey IPL was abandoned, there would be expenses related to dismantling structures, salvaging or disposing of all steel structure components and removing conductors and ground wires.

Following any abandonment, Manitoba Hydro would reclaim and restore the transmission right-of-way as close to pre-disturbance condition as practical and in accordance with all applicable legislation. Manitoba Hydro provided its abandonment cost estimate of \$38.1 million, which included costs related to environmental assessment, environmental protection planning, land access, and site restoration. Any abandonment costs would be financed in the same manner as other capital expenditures.

Views of the Board

The Board approves of Manitoba Hydro's abandonment cost estimate for the Project of \$38.1 million. The Board expects Manitoba Hydro to ensure it has the financial resources required to abandon the Project. The Board reminds Manitoba Hydro that any future abandonment requires an application to the Board.

Chapter 6

Land Matters

6.1 Project Footprint and Routing

The general location of the Project is the southeastern portion of the province of Manitoba. The Dorsey International Power Line (IPL) component of the Project will originate at the existing Dorsey Converter Station near Rosser, travel south around Winnipeg within the existing Southern Loop Transmission Corridor, then east within the existing Riel to Vivian Transmission Corridor to a point south of Anola, then continue southeast in a new right-of-way (ROW) and cross the international border south of Piney, Manitoba. The terminal point of the IPL in the United States is the proposed Iron Range Station near Grand Rapids, Minnesota.

Approximately 43 per cent of the proposed route (92 km) is located within existing transmission line corridors. Manitoba Hydro said that the utilization of Manitoba Hydro's existing corridors was encouraged by the public and factored heavily in the transmission line routing process. The remaining 121 km requires a new ROW. Of this new ROW, approximately 30 per cent is owned by the Provincial Crown and 70 per cent is privately owned. Manitoba Hydro said that in general, the new ROW required for the Project is proposed to vary in width from 80 m, in areas where self-supporting steel lattice towers are used, to 100 m in areas where guyed steel lattice towers are used. Overall land ownership along the proposed route is 804.36 ha of provincial Crown land, 703.21 ha of privately owned land and 1576.49 ha of land owned or under easement by Manitoba Hydro.

Manitoba Hydro indicated that the final preferred route for the Project represents the culmination of years of study with respect to alternative routes. The process of developing alternatives and selecting the route included data gathering and analysis, multiple rounds of engagement with the public, First Nations and Métis, and multiple rounds of alternative route evaluation. In order to find a route that balances several types of land use and interests, and reduces potential adverse effects, Manitoba Hydro used a routing process based on the Electric Power Research Institute and Georgia Transmission Corporation (EPRI-GTC) methodology, that it said was transparent and comprehensive.

Manitoba Hydro described the EPRI-GTC methodology as a quantitative, computer-based methodology developed for use in siting overhead transmission lines. This methodology is informed by geospatial information and incorporates input from internal "stakeholders" (such as the Project proponent's personnel and consultants) as well as external interested parties (such as First Nations and Métis, the public, non-government organizations, and government branches responsible for the management of various land uses). The models and decision-making methodology make use of three perspectives that represent the various interests: the engineering environment, the natural environment, and the socio-economic environment. A fourth perspective is also employed that balances these three perspectives equally. Feedback is collected during the engagement processes and is considered in the determination of a preferred route. Through various rounds of routing, the top route from each of these perspectives was

determined, as well as one additional route that made use of an existing corridor, resulting in five alternative routes. These five routes then went through an additional preference determination step, which included consideration of cost, reliability, schedule, potential socio-economic and environmental effects, plus the community perspective.

Manitoba Hydro noted that two of the central issues that were raised during its engagement process and evaluated throughout the transmission line routing process were: (i) the competing values with respect to the use of private versus Crown lands and (ii) the relative effect of the power line on natural habitat versus farmland or residences. The models and related criteria used in the route evaluation process represented this trade-off in the decision-making process and helped guide the selection of a route that aimed to balance these concerns. Manitoba Hydro said that considerable efforts were made throughout the routing and engagement processes to understand the concerns and preferences of individual landowners who would be directly affected by the Project. Wherever possible, route adjustments were made to address these concerns, or alternative mitigation measures such as tower spotting, or selection of tower type were explored.

Finally, Manitoba Hydro said transmission line routing is a preferred form of mitigation for potential effects on people and the environment. Manitoba Hydro noted that, by routing the transmission line away from key areas of concern, potential effects to these valued areas can be avoided. Land-use-specific considerations from multiple stakeholders were incorporated into the development of alternative corridors.

The Southeast Stakeholders Coalition (SSC) said Manitoba Hydro used a flawed routing methodology to select the final preferred route, which discounted the concerns of private landowners and failed to properly incorporate First Nations and Métis concerns. SSC said a more appropriate route alternative that balances the concerns of private landowners, First Nations and Métis is available but requires additional study and engagement. The SSC filed a letter on the NEB record that it has written to the provincial Minister of Sustainable Development to request that the province decline to grant the requested licence until such time as part of the route of the MMTP is adjusted. The contentious part of the route for the SSC is between Anola and the Watson P. Davidson Wildlife Management Area.

In response to SSC, Manitoba Hydro acknowledged that the alternative route suggested by SSC affects fewer residences and less high-value farmland, as well as fewer public land uses and development potential than other potential routes. It said it would also affect the most natural areas (forest and wetlands) and the most species at risk. Further it would cross more Crown land. Manitoba Hydro said that the final preferred route was the best compromise between both the public and Indigenous perspectives, as it balances future and existing residential and commercial development, parallels existing transmission lines, and avoids sensitive cultural, spiritual and resource use areas.

Views of the Board

The Board acknowledges Manitoba Hydro's efforts to determine an appropriate route, taking into consideration land use in the area, as well as input from the public and Indigenous communities. The Board notes Manitoba Hydro's route selection methodology,

which considered stakeholder concerns and minimized potential environmental and social impacts. The Board finds the anticipated land requirements to be reasonable and justified. The Board notes that Manitoba Hydro's route selection criteria included avoiding sensitive environmental areas and following existing infrastructure as much as possible, such that over 43 per cent of the route follows an existing ROW. The Board also notes that the route selection process and the criteria used to determine the route were discussed in great deal as part of the Clean Environment Commission (CEC) Report, and finds them to be acceptable and appropriate.

More information regarding impacts of the route on the availability of Crown lands, including the traditional land and resource use of Crown lands by Indigenous Peoples are discussed in Chapter 8, Indigenous Matters.

6.2 Land Requirements, Rights and Acquisition

Manitoba Hydro said that, as the Project is located on both existing and new ROW, it will require the acquisition of rights over provincial Crown and privately-owned land. As noted in Chapter 7, Public Consultation, Manitoba Hydro has provided notice of the Project to all affected landowners. At the time of the Application to the Board, negotiations with landowners for land acquisition had not yet commenced. Manitoba Hydro confirmed during the hearing, that since the time of the Application, it has signed easement agreements with 87 of 128 landowners, which represents 68 per cent of landowners. Manitoba Hydro has also submitted applications to the Crown Lands Property Agency for all of the easements over provincial Crown land. Manitoba Hydro said the granting of these easements is not expected until after the Province issues *The Environment Act* licence for the Project.

Manitoba Hydro filed a sample of its standard Transmission Line Statutory Easement agreement with the Board and noted that, in accordance with its policies, landowners affected by this Project will receive:

- 150 per cent of market value for granting an easement for a ROW on their property;
- structure impact compensation for each tower located on agricultural lands;
- construction damage compensation to landowners for damages caused by construction activities; and,
- ancillary damage compensation where Manitoba Hydro's use of the ROW impacts the use of the land (i.e., agricultural impacts, constraint impacts, and transitional impacts).

Canadian Association of Energy and Pipeline Landowner Associations (CAEPLA) raised concerns regarding Manitoba Hydro's ability to expropriate land where it is not able to enter into an easement agreement with landowners. CAEPLA asserted that Manitoba Hydro employs a "take it or leave it" approach towards landowners with its easement agreements and that if landowners were to be subject to expropriation, they would not have an opportunity to challenge the expropriation. CAEPLA also provided information related to landowner concerns with land negotiations that were undertaken with its clients in the context of Manitoba Hydro's Bipole III project.

Manitoba Hydro disagreed with CAEPLA's characterization of its approach to acquiring land. Manitoba Hydro said it has a strong preference to negotiate a voluntary easement with individual landowners. Manitoba Hydro noted that after lessons learned from the Bipole III project, its land acquisition process was modified in several aspects:

- Landowner Liaisons were established to ensure landowners have a "single point of contact" from land acquisition right through to completion of construction;
- property representatives employed by Manitoba Hydro are being used exclusively in securing of voluntary easements on private property; and,
- the non-refundable deposit payable to landowners upon signing of an easement was increased to 50 per cent of the appraised land value.

Manitoba Hydro further noted that CAEPLA's clients are not affected by this Project but, rather, by the Bipole III project. However, Manitoba Hydro also said that it is preparing commitment letters for individual landowners which summarizes its commitments, the concerns that were heard and details about future steps and communication, including site visits upon request to learn about site specific features of concern and discuss mitigation measures.

In response to CAEPLA's concerns about expropriation, Manitoba Hydro noted that the land acquisition process for the Project will be overseen provincially as Manitoba Sustainable Development has been designated as the "provincial regulatory agency" under section 59.17 of the *National Energy Board Act*. As such, the Board will not share oversight with Manitoba. Manitoba Hydro also noted that landowners may have the right to issue a Notice of Objection calling for a public inquiry as to whether a proposed expropriation is fair and reasonably necessary.

Views of the Board

The Board acknowledges the efforts made by Manitoba Hydro in its negotiations with landowners along the route, such that it has entered into voluntary easements with 68 per cent of landowners. The Board notes that in accordance with its Electricity Filing Manual, detailed route and land acquisition in respect of the Project is carried out under provincial laws. The Board acknowledges that these matters were considered in the CEC hearing and ultimately are determined by the province of Manitoba.

Chapter 7

Public Consultation

The Board's Electricity Filing Manual sets out the Board's expectations of applicants regarding consultation to support a project application. Applicants are expected to undertake an appropriate level of public involvement, commensurate with the setting, nature and magnitude of a project. The Board considers public involvement to be a fundamental component during each phase in the lifecycle of a project (project design, construction, operation and maintenance, and eventual abandonment) in order to address potential impacts of that project. This chapter addresses Manitoba Hydro's public consultation program and project-specific consultation activities.

Manitoba Hydro's First Nations and Métis Engagement Program and project-specific consultation activities with Indigenous Peoples are discussed in Chapter 8, Indigenous Matters.

7.1 Overview of Manitoba Hydro's Public Consultation

Manitoba Hydro stated that it designed and implemented a Project-specific Public Engagement Process (PEP) which began in June 2013. Manitoba Hydro noted that the specific design of the engagement program for the Project was influenced by the type of Project, the land use of the Project area, anticipated impacts on land use, feedback from provincial regulators and participants in previous proceedings related to transmission projects, and the input received by Manitoba Hydro during the preliminary phase leading up to the engagement program.

Manitoba Hydro stated that it developed its PEP with the goals of:

- sharing Project information;
- obtaining feedback for use by Manitoba Hydro in the route selection and environmental assessment process;
- gathering and understanding local interests and concerns;
- integrating interests and concerns into the routing and assessment process; and,
- reviewing potential mitigation measures.

Manitoba Hydro stated that it designed the PEP for the Project to be adaptive and inclusive, offering a wide variety of mechanisms and opportunities for stakeholder groups, affected landowners, local municipalities, government departments and the general public to receive information, provide input and voice concerns regarding the Project. Manitoba Hydro noted that engagement began with the solicitation of input into the design of the PEP itself, and that engagement is planned to continue through the operation and maintenance of the Project.

7.2 Public Consultation Implementation

Manitoba Hydro described its PEP as having three phases: pre-engagement, pre-regulatory, and ongoing engagement.

The pre-engagement phase started in June 2013 and was designed to announce the Project, identify interested parties and receive input into the design of the PEP itself. Manitoba Hydro said the results of the Pre-Engagement Phase influenced the following features of Manitoba Hydro's PEP: the level of information provided via the Project webpage; the methods of contacting interested parties; days of the week and times for open houses; the offering of public engagement through email notification, telephone calls and meetings with Manitoba Hydro personnel; and the identification of a comprehensive list of stakeholder groups.

Over the course of the pre-regulatory phase of the PEP, which lasted from October 2013 to August 2015, Manitoba Hydro said it held 33 open houses and landowner information centres, convened over 70 stakeholder meetings and workshops, responded to over 850 emails and telephone calls, and at least three rounds of letters were sent to potentially affected landowners. Manitoba Hydro noted that there were over 1,500 participants in this phase of the PEP. Feedback received during this phase assisted in:

- determining issues to be addressed in the environmental assessment;
- the development of criteria for the evaluation of the alternative routes;
- the inclusion of local knowledge to assist in the determination of a preferred route, including the preferred border crossing point;
- opportunities to identify further constraints or adjustment; and,
- the identification of potential effects of the Project, including possible mitigation measures.

As part of its ongoing engagement, Manitoba Hydro said it is committed to sharing information with the public throughout the regulatory, construction and operation phases of the Project. Mechanisms for ongoing engagement include the following:

- updates to the Project webpage will be made regarding the provincial and federal regulatory review processes (including regulatory contact information), the status of the Project and environmental monitoring reports;
- email contact regarding upcoming milestones with those on Manitoba Hydro's list of email contacts;
- letters to potentially affected landowners, stakeholder groups regarding regulatory approvals;
- continuation of Manitoba Hydro's toll-free information line and dedicated Project email address for asking questions and voicing concerns;
- meetings on request; and,

- discussions with impacted parties during easement negotiations.

Formal inquiries and concerns will be recorded and reviewed by members of Manitoba Hydro's Environmental Protection Management Team for response.

Manitoba Hydro filed its Draft Communication Plan for the Project with the Board. As part of the PEP, Manitoba Hydro indicated that stakeholder groups will continue to be notified regarding key milestones in the regulatory and construction phases of the Project to assist in the dissemination of information to their membership. It said the Draft Communication Plan will be updated based on feedback from the activities within the Plan itself, as well as at Project milestones. Manitoba Hydro indicated that work is currently being done to update elements of the Draft Communication Plan with more detail regarding the methods and timing of communication, tying these to specific activities, and attaching roles and responsibilities for this communication. Feedback received and commitments made during the Clean Environment Commission (CEC) and NEB hearing process and through the MMTP Indigenous Monitoring Committee are being added to the Draft Communication Plan over time. Prior to construction, it will be posted on Manitoba Hydro's website and shared with interested parties.

7.3 Consultation with Landowners

Manitoba Hydro noted that its consultation efforts with landowners involved discussions with 141 potentially affected landowners and 2,144 landowners within one mile (1.6 km) of the proposed transmission line. Manitoba Hydro initially notified all potential affected landowners by ExpressPost which required a signature. Follow up phone calls were made and letters were sent to potentially affected individuals encouraging them to share their concerns, provide feedback and have their questions answered by Manitoba Hydro staff. Manitoba Hydro said that meetings were offered during all rounds of engagement for those unable to attend other venues. Examples of other venues included Open Houses and Landowner Information Centre (LIC) meetings which Manitoba Hydro said it scheduled to avoid harvest and seeding times.

Manitoba Hydro described LICs as a venue to collect detailed property information in order to inform the environmental assessment and route determination processes. During the LIC meetings, engagement materials were made available to provide additional background information on key topics for the Project. Landowner forms and maps were used to record feedback provided by each participant. Manitoba Hydro noted that the LICs were a valuable tool for identifying potential route modifications, mitigation measures and tower spotting considerations. Manitoba Hydro also said that ongoing land-related commitments and concerns will be documented in a Landowner Database. Concerns requiring mitigative actions during the construction phase are captured in the Environmental Protection Plan, with the actions being tied to associated land features.

Finally, Manitoba Hydro noted that it has dedicated landowner liaisons which are assigned to each landowner and act as the main point of contact for landowners from the beginning to the end of the Project.

Manitoba Hydro said the landowner liaison role will continue following construction to address any concerns raised by the affected landowners. At the time of the Application, Manitoba Hydro had seven landowner liaisons, but said this may change depending on the nature of the ongoing landowner concerns. Manitoba Hydro also said it will facilitate landowner participation in monitoring construction activities through active engagement by the landowner liaisons who will communicate timelines and types of construction activities in the area.

The Canadian Association of Energy and Pipeline Landowner Associations (CAEPLA) raised concerns regarding the lack of comprehensive construction agreements or operation and maintenance agreements for landowners. CAEPLA noted that these types of agreements are intended to provide landowners with a comprehensive view of the anticipated project impacts and the mitigation strategies to be employed by the project proponent. Landowners receive specific, detailed commitments that they can rely upon and, where necessary, enforce against the proponent. By relying solely on easement agreements and landowner liaisons, CAEPLA argued that Manitoba Hydro is leaving MMTP landowners uninformed and vulnerable to environmental damage and economic loss.

CAEPLA also noted that the CEC report included Licensing Recommendation 12.6, as follows:

Manitoba Hydro establish and support a monitoring advisory group composed of nominees of First Nations communities and the Manitoba Métis Federation and representatives of local residents, interested non-governmental organizations and academic researchers, which will provide input into monitoring and management of the right-of-way.

CAEPLA noted that while Manitoba Hydro has established a monitoring committee for Indigenous communities, a separate committee of local residents and landowners has not been created. CAEPLA urged Manitoba Hydro to agree to the creation of a joint committee consisting of landowner liaisons and individual landowner representatives with a mandate to resolve landowner construction issues.

In response to CAEPLA's request for a joint committee of landowner liaisons and individual landowners, Manitoba Hydro noted that it does not feel a joint committee is necessary as construction issues are often site-specific and Manitoba Hydro's practice is to address these issues directly with the affected landowner. Manitoba Hydro noted that there are other vehicles and communication protocols to handle landowner interests, such as the landowner liaisons that landowners can call to discuss issues of concern. In cases where there are broader issues affecting a number of landowners (e.g., agricultural biosecurity), Manitoba Hydro's practice is to consult with a range of stakeholders in order to address the issues.

In response to CAEPLA's assertion that more than easement agreements are required to address landowner concerns, Manitoba Hydro noted that easement agreements are not the only form of agreement or commitments that it has made with landowners, as it will also be providing commitment letters to individual landowners. Prior to construction, Manitoba Hydro said it will prepare a draft letter for landowners affected by the new right-of-way (ROW) summarizing its commitments, the concerns that were heard and details about future steps and communications. Once landowners have had the opportunity to review the draft letters, Manitoba Hydro will seek to gain additional feedback on whether they have any new or additional concerns to note. Site

visits will occur on request or as needed, and will be completed by Manitoba Hydro to learn about site specific features of concern and discuss mitigation measures. Manitoba Hydro will then provide final letters summarizing its commitments to landowners prior to commencing construction on their lands.

Manitoba Hydro further noted that no individual Project landowners have requested the type of comprehensive agreements requested by CAEPLA and further, that CAEPLA's clients are not affected by this Project.

Views of the Board

With respect to public consultation, the Board acknowledges Manitoba Hydro's efforts to identify and consult with potentially affected and interested stakeholders and its commitment to continuing to consult throughout the lifecycle of the Project. The Board is of the view that the overall design and implementation of Manitoba Hydro's public consultation program was appropriate for the scope and scale of the Project. The Board notes that Manitoba Hydro has been consulting on the Project since 2013 and it has committed to continuing consultation during all phases of the Project. The Board expects Manitoba Hydro to continue its efforts to consult and maintain effective and timely consultation activities, as appropriate, throughout the lifecycle of the Project.

While the Board notes Manitoba Hydro's commitments to ongoing consultation with landowners, including the implementation of landowner liaisons and the creation of commitment letters with individual landowners, the Board is of the view that a landowner-specific monitoring committee may be another vehicle for effective communication and responding to issues that may be raised by affected landowners. The Board notes that CEC Recommendation 12.6 envisioned a broader monitoring committee than the Project's Indigenous Monitoring Committee that has been established. The Board imposes **Condition 17** requiring Manitoba Hydro to develop a plan for a Landowner Advisory Committee, in consultation with those landowners and any of their representatives, who may be interested in this type of committee. The Board is of the view that this committee could be an appropriate venue to explore issues of importance to landowners such as Manitoba Hydro's biosecurity procedures, its proposed mitigation measures to protect landowners' interests and reduce effects on agricultural activities, and the role of third-party monitors. More information regarding Manitoba Hydro's mitigation for potential effects on agricultural lands is found in Section 9.6.5.1 of this Decision.

The Board also imposes **Condition 21** requiring Manitoba Hydro to create and maintain records that chronologically track complaints by Indigenous communities, landowners, and municipal and regional governments relating to the Project, beginning with the commencement of construction and continuing for five years after the commencement of operations.

Chapter 8

Indigenous Matters

8.1 Introduction

The Board has considered all of the evidence provided by Indigenous¹⁰ communities and others, including Manitoba Hydro, about the potential impacts of the Project on Indigenous interests, including rights, Manitoba Hydro's proposed mitigation of the Project's potential effects, requirements in the regulatory framework and the conditions imposed by the Board in the Certificate and Orders. The Board interprets its responsibilities in a manner consistent with the *Constitution Act, 1982*, including section 35(1), which recognizes and affirms the existing Indigenous and Treaty Rights¹¹ of Indigenous Peoples. Further discussion of the Board's role in upholding section 35 of the *Constitution Act, 1982* is available in Section 8.7.10. The Board is of the view that there has been adequate consultation and accommodation for the purpose of the Board's decision on this Project. The Board is also of the view that any potential Project impacts on the interests, including rights, of affected Indigenous communities are not likely to be significant and can be effectively addressed.

This chapter includes summaries of evidence provided directly by Indigenous communities through their participation in the hearing, as well as summaries of Manitoba Hydro's engagement with affected Indigenous communities, which noted the concerns and interests, assessment methods and rationales, and any proposed mitigation by Indigenous communities as recorded by Manitoba Hydro. The Board notes that identifying and referring to specific passages within the record can lead to other direct and indirect references being overlooked. Therefore, anyone wishing to fully understand the context of the information and evidence provided by Indigenous communities should familiarize themselves with the entire record of the hearing. This Chapter of the Decision should not be considered in isolation from the Decision as a whole. In addition, Appendix II provides a summary of the general and specific concerns and issues raised by Indigenous communities through this proceeding, as well as summaries of the responses to these concerns provided by the applicant, responses by the Board (including conditions), and applicable requirements provided through regulation and/or legislation.

¹⁰ The use of the term "Indigenous" has the meaning assigned by the definition of "aboriginal peoples of Canada" in subsection 35 (2) of the *Constitution Act, 1982* which states: In this Act, "aboriginal peoples of Canada" includes the Indian, Inuit, and Métis peoples of Canada.

¹¹ The term "Indigenous Rights" has the meaning assigned to the term "aboriginal rights" as set out in subsection 35(1) of the *Constitution Act, 1982*.

8.2 Manitoba Hydro's Engagement with Indigenous Peoples

Manitoba Hydro said that the following principles guided its approach to First Nation and Métis engagement for the Project:

- The diversity of First Nation and Métis cultures and worldviews should be understood and appreciated.
- Manitoba Hydro should work with First Nations and Métis to better understand perspectives and determine mutual approaches to address concerns and build relationships.
- First Nation and Métis should be provided opportunities to communicate on an ongoing basis and early in the process.
- First Nation and Métis should have a responsibility to respond to engagement requests and participate in relationship building in good faith in order to make their concerns known.

Manitoba Hydro noted that the proposed route for the Project is located on lands that are within the district of Treaty No. 1 and within a Recognized Area for Métis Natural Resource Harvesting. Manitoba Hydro said that its First Nations and Métis Engagement Process (FNMEP) was designed to engage First Nations, Métis and Indigenous organizations early in the process and at every stage and to provide input into the transmission line routing methodology. The FNMEP began in August 2013, when letters were sent to the leaders of 15 Indigenous communities as noted below, providing general information regarding the Project, its purpose, regulatory requirements, inviting questions and/or input about the Project and offering a meeting with the community. Manitoba Hydro held 6 initial meetings with Indigenous communities.

Manitoba Hydro said that, starting in November 2013, its engagement became more in-depth, and included the following activities:

- routing workshops;
- meetings with community leaders and representatives;
- opportunities to review and comment on draft meeting notes;
- community open houses;
- Project site tours;
- tours of similar projects;
- community information sessions;
- routing workshops;
- community-specific engagement checklists;
- Project comment sheets;
- self-directed Indigenous Knowledge and land use or occupancy studies; and,

- opportunities to review Manitoba Hydro’s interpretation and use of community-based Indigenous Knowledge.

Manitoba Hydro said it also encouraged the development of community engagement plans and offered funding for community engagement.

In its Environmental Impact Statement (EIS), Manitoba Hydro described common concerns and perspectives that were shared by Indigenous communities that were engaged, along with how these were considered during the design of the Project, including routing and the development of the Environmental Protection Program (EPP). Manitoba Hydro provided tables describing concerns or questions raised through the FNMEP and the company’s responses. Manitoba Hydro said it shared these tables with each Indigenous community through ongoing discussions to show how concerns that were identified were subsequently addressed. Manitoba Hydro also said that it was committed to ongoing engagement with Indigenous communities and organizations throughout the lifecycle of the Project.

Initially, Manitoba Hydro identified the following 15 Indigenous communities to be engaged through its FNEMP:

- Brokenhead Ojibway Nation
- Buffalo Point First Nation
- Dakota Ojibway Tribal Council
- Dakota Plains Wahpeton First Nation
- Dakota Tipi First Nation
- Long Plain First Nation
- Peguis First Nation
- Roseau River Anishinabe First Nation
- Sagkeeng First Nation
- Sandy Bay Ojibway First Nation
- Swan Lake First Nation
- Aboriginal Chamber of Commerce
- Assembly of Manitoba Chiefs
- Southern Chiefs Organization
- Manitoba Métis Federation.

Manitoba Hydro said that, in May 2014, it added the following additional communities when it learned of their interest in the Project from other Indigenous communities:

- Black River First Nation
- Iskatewizaagegan No. 39 Independent First Nation
- Shoal Lake # 40 First Nation.

The Board, through its own assessment of publicly known or asserted Indigenous traditional territory information, identifies Indigenous communities which could be potentially affected by any project. After receiving Manitoba Hydro’s Application, the Board identified the following

seven Indigenous communities as having known or asserted traditional territory in the Project area and, therefore, may be impacted by the Project:

- Animakee Wa Zhing #37
- Anishinaabeg of Naongashiing
- Birdtail Sioux First Nation
- Canupawapka Dakota First Nation
- Northwest Angle #33 First Nation
- Sioux Valley Dakota First Nation
- Waywayseecappo First Nation.

On 2 June 2017, the Board issued a consultation directive to Manitoba Hydro directing it to serve a copy of the directive, the Board's Decision on Process of 19 April 2017 and Manitoba Hydro's information package on the above-mentioned Indigenous communities. As a result of this directive, Manitoba Hydro said it had offered to meet with each of the communities to discuss an engagement process that best suits the needs of that particular community. Manitoba Hydro indicated that it has proposed discussions with each of the communities to:

- discuss the EPP;
- discuss what it has heard to date;
- share its proposed plan with leadership, resource users and Elders;
- determine if concerns brought forward by the community have been addressed; and,
- provide an opportunity for any outstanding concerns to be raised.

After construction is completed, upon request, Manitoba Hydro said it will meet with interested communities to discuss matters about ongoing maintenance, such as vegetation management. Manitoba Hydro has also invited each of these Indigenous communities to participate in the Manitoba-Minnesota Transmission Project (MMTP) Monitoring Committee – which is a committee of Indigenous representatives with a purpose that includes supporting effective and meaningful Indigenous participation in the monitoring of the Project – and confirmed that these Indigenous communities will have access to the ongoing engagement opportunities that form part of its overall FNMEP.

8.3 The Board's Hearing Process and Participation of Indigenous Peoples

The Board's hearing process was designed to obtain as much relevant evidence as possible on concerns regarding the Project, the potential impacts on Indigenous interests (as noted in the Board's List of Issues), and possible mitigation measures to minimize adverse impacts on Indigenous interests.

As further described in Chapter 3, Overview, the Board recommended to the Minister that the Project be considered through the Certificate process under section 58.16 of the NEB Act. The Governor in Council issued an Order in Council on 15 December 2017 designating the Project under that section of the NEB Act.

The Board received and considered extensive information about concerns related to the Project, and the measures that would be required to address those concerns, as brought forward through engagement undertaken by Manitoba Hydro and through the participation of potentially affected Indigenous communities and other participants in the hearing process.

8.3.1 Enhanced Indigenous Engagement Process

The Board's Enhanced Indigenous Engagement (EIE) initiative aims to provide proactive contact with Indigenous communities that may be affected by a proposed project, and to help Indigenous communities understand the Board's regulatory process and how to participate in that process. The Board assesses the completeness of the list of potentially affected Indigenous communities identified in the proponent's project application in collaboration with the Government of Canada (in this case, the Major Projects Management Office). The Board then sends letters to each potentially impacted Indigenous community on the revised list, informing them of the project as well as the Board's regulatory role in respect of the project, and offers to provide further information on the Board's process. Following issuance of these letters, Board staff follow up, respond to questions or conduct information meetings, where requested by Indigenous communities.

The Board carried out its EIE activities for the Project commencing with the receipt of the Project Application on 12 December 2016. On 13 June 2017, the Board sent EIE letters to 25 potentially affected Indigenous communities and organizations (specifically, the 25 Indigenous communities and organizations listed above in Section 8.2). The EIE letters described the Board's process and Participant Funding Program (PFP). The letters also included a summary of the Project, information on how to contact the Board to obtain further information, and an offer from Board staff to attend a community meeting.

On 20 March 2018, the Minister of Natural Resources Canada sent a letter to the Board, filed on the Board's record, attaching the Order in Council and indicating that the Government of Canada would rely on the Board's process to fulfil the federal Crown's duty to consult. On 29 April 2018, Natural Resources Canada (NRCan) sent letters to 22 potentially affected Indigenous communities, based on the consideration of information related to traditional activities, reserves and treaty areas falling within 100 km of the proposed Project. NRCan's list did not include three organizations that received EIE letters from the Board (Southern Chiefs' Organization Inc., Aboriginal Chamber of Commerce, and Assembly of Manitoba Chiefs). All of these letters were also filed on the Board's record.

The purpose of these letters was to clarify the federal Crown's approach to fulfilling its duty to consult Indigenous Peoples that may be impacted by the Project. The federal Crown strongly encouraged all Indigenous communities whose established or potential Indigenous or Treaty Rights could be affected by the Project to apply to participate in the Board's process. The Government of Canada also encouraged potentially impacted Indigenous communities to engage directly with Manitoba Hydro. The letters also provided a contact person at NRCan in case the letter recipient should have any questions with respect to the broader Crown approach to fulfilling the duty to consult for the Project.

8.3.2 Participant Funding Program

Independent of the Panel's hearing process, the Board administered a PFP for the Project, which allocated funding to assist Intervenor with their participation. The funding opportunity for the Board's hearing was announced in March 2017 with a funding envelope of \$250,000. The PFP received 16 applications requesting a total of \$1,197,967. After reviewing the applications, the PFP recommended awarding to all Indigenous communities. The Indigenous communities that applied for funding were awarded the amounts shown in Table 8-1.

Table 8-1 : Participant Funding Program Awarded Amounts

Intervenor Name	Funding Amount
Animakee Wa Zhing #37	\$80,000
Anishinaabeg of Naongashiing	\$61,830
Brokenhead Ojibway Nation	\$73,115
Manitoba Métis Federation	\$80,000
Northwest Angle #33 First Nation	\$80,000
Peguis First Nation	\$80,000
Roseau River Anishinabe First Nation	\$80,000
Sagkeeng First Nation	\$79,000
Shoal Lake #40 First Nation	\$80,000
Southern Chiefs Organization Inc.	\$80,000
Wa Ni Ska Tan	\$80,000

8.3.3 Participation of Indigenous Peoples in the Board's Hearing Process

Indigenous communities who are concerned with potential Project-related impacts on their interests, including rights, had opportunities to present their views directly to the Board. While the Board required the applicant to implement an engagement program and undertake an assessment of the Project's potential effects, including its environmental and socio-economic effects, the Board also took steps to facilitate the direct participation of these communities in the Board's hearing. Section 55.2 of the NEB Act requires the Board to hear any person who is directly affected by the granting or refusing of an Application. The following 11 Indigenous communities applied to participate in the hearing and were granted Intervenor status, as requested:

- Animakee Wa Zhing #37 (AWZ)
- Anishinaabeg of Naongashiing (AON)
- Brokenhead Ojibway Nation (BON)
- Isakatewizaagegan No. 39 Independent First Nation
- Manitoba Métis Federation (MMF)
- Northwest Angle #33 First Nation (NWA)
- Peguis First Nation (Peguis)

- Roseau River Anishinabe First Nation (RRAFNF)
- Sagkeeng First Nation (Sagkeeng)
- Shoal Lake #40 First Nation (Shoal Lake #40)
- Southern Chiefs Organization (SCO).

The Board notes that Wa Ni Ska Tan, which describes itself as an alliance of hydro-impacted communities made up of representatives from 24 Cree, Anishinabe and Métis nations, as well as researchers, universities, and environmental non-government organizations, was granted Intervenor status as an association, not an Indigenous community. Wa Ni Ska Tan asked for and was granted the ability to provide Oral Traditional Evidence (OTE), but the Board notes that as a collective, Wa Ni Ska Tan does not hold rights, though its members may have Indigenous rights separately. However, Wa Ni Ska Tan did present members of First Nations who provided OTE.

On 21 December 2017, the Board issued Hearing Order EH-001-2017, which outlined the process to be followed in the Board's adjudication of Manitoba Hydro's Application. During the proceeding, Indigenous Intervenors were able to obtain further information about the Project and present their views to the Board in numerous ways. Indigenous Intervenors could submit written evidence, provide OTE, ask written questions of Manitoba Hydro (information requests), respond to any written questions asked of them by the Board and Manitoba Hydro, conduct oral cross-examination of Manitoba Hydro, provide comments on draft conditions and provide final argument. The Board notes that it received comments from Indigenous Intervenors on the Board's draft conditions released on 14 February 2018. The Board carefully considered all of the comments it received and made changes where appropriate, requiring Manitoba Hydro to file additional information, or imposing additional conditions as noted in this Chapter, to address issues raised by Indigenous communities with respect to impacts on traditional land and resource use, heritage resources and the Project's routing on Crown land. As noted in Chapter 3, Overview, the Board is of the view that many of the comments received on the draft conditions were sufficiently captured in the Board's conditions as drafted, or were addressed by Manitoba Hydro's standard mitigation measures in its Construction Environmental Protection Plan (CEPP) and its associated management plans, in its post-construction monitoring program, or in its commitments to Indigenous communities during Project planning, and the provincial and NEB hearing processes. The Board also notes that many of the comments received have been addressed by the CEC licensing recommendations.

The Board also asked IR 1.1 to Indigenous Intervenors, requesting that they provide additional comments on Manitoba Hydro's proposed mitigation measures in order to aid the Board in its assessment of the suitability and appropriateness of the proposed mitigation measures.

Table 8-2 below summarizes the process steps participated in by Indigenous Intervenors, including the types and sources of information submitted by Indigenous Intervenors during the proceeding and considered by the Board.

Table 8-2: Written and Oral Submissions by Indigenous Intervenor by Exhibit Number

Intervenor Name	Information requests to Manitoba Hydro	Written Evidence	Comments on Draft Conditions	Response to IR 1.1	Oral Traditional Evidence	Final Argument
Animakee Wa Zhing #37	A90855 ; A90858	A91812	A92173	A92380	A92301	A92661
Anishinaabeg of Naongashiing	A90870	A91749	A92146	A92416	A92301	N/A
Brokenhead Ojibway Nation	N/A	A91763	N/A	N/A	A92406	N/A
Isakatewizaagegan No. #39 First Nation	N/A	N/A	N/A	N/A	N/A	N/A
Manitoba Métis Federation	N/A	N/A	N/A	A92389	N/A	A92669
Northwest Angle #33 First Nation	A90861 ; A90862	A91738	A6E7Y4	A92381	A92317	A92663
Peguis First Nation	A90739 ; A90742 ; A90864	A91721 ; A91726 ; A91732 ; A91737	A92172	A92387	A92340	A92680
Roseau River Anishinabe First Nation	A90843	N/A	N/A	N/A	N/A	N/A
Sagkeeng First Nation	A90845	A91739	A92182	A92373	A92317	A92680
Shoal Lake #40 First Nation	A90848	A91723	N/A	N/A	A92370	A92645
Southern Chiefs Organization Inc.	A90867	A91711 ; A91714 ; A91729	A92177	A92836 A92411	A92370	A92657
Wa Ni Ska Tan	A90876	A91743	A92175	N/A	A92370 A92406	A92680

The Board understands that Indigenous Peoples have an oral tradition for sharing information and knowledge from generation to generation and that this information cannot always be shared adequately in writing. The Board is of the view that it is valuable to hear OTE which assists the Board in understanding how the Project may impact Indigenous interests, including rights.

On 27 March 2018, the Board issued Procedural Update No. 1, which extended an invitation to all Indigenous Intervenor in the proceeding to provide OTE in person or remotely. The Board held the oral portions of the hearing in Winnipeg, MB, a location near the Project. The Board received notices of intent to present OTE from AON, AWZ, BON, Sagkeeng, NWA, MMF, Peguis, Shoal Lake #40, SCO and Wa Ni Ska Tan. MMF subsequently withdrew from providing OTE.

While the schedule for the hearing was originally set out on 5 January 2018, the Board received a number of motions from Indigenous Intervenors relating to the timing and accessibility of the Board's hearing process, including the filing of written evidence. The Board strives to make its hearing processes flexible in order to facilitate the full participation of all parties. In response to a motion from Shoal Lake #40, which was supported by a number of other Indigenous Intervenors, in Ruling No.5, the Board extended previously set deadlines to enable more time for Intervenors to ask IRs of Manitoba Hydro, submit written evidence, as well as moving the previously set date of the OTE from 23 May 2018 to 4 June 2018 and the oral portion of the hearing from 28 May 2018 to 18 June 2018.

In addition to the written steps of information requests and written evidence, the Board heard OTE from the communities noted above and allowed oral cross-examination of Manitoba Hydro's and Intervenors' witness panels. The Board also provided an audio broadcast, as well as transcripts of its proceedings, so that interested parties who were not in attendance could be aware of what was occurring during the hearing. The Board offered remote participation in an effort to make the hearing as accessible as possible, though no one chose to participate in this manner. To the extent that other government organizations had information to provide to the Board that potentially relates to Indigenous communities' concerns, they had the opportunity to participate in the Board's process and file relevant information on the Board's record. NRCan participated in the Board's proceeding as an Intervenor and filed information on the Board's hearing record related to Indigenous matters.

8.4 Manitoba Hydro's Assessment of Potential Impacts of the Project to Indigenous Peoples

Manitoba Hydro said its understanding of traditional land and resource use (TLRU) in the area was gathered through its FNMEP, together with information from the self-directed Indigenous Knowledge studies and existing literature. As a result, Manitoba Hydro identified the following key concerns related to potential environmental effects of the Project:

- plant harvesting (food, medicinal and cultural purposes)
- hunting and trapping (food, economic and cultural purposes)
- trails and travelways (e.g., trail systems, waterways, landmarks)
- cultural sites (e.g., burial sites, sacred sites, spiritual sites and sacred geography).

Manitoba Hydro said that Indigenous communities listed a number of specific and general sites and areas located in the Project area in which they continue to practice their Indigenous and Treaty Rights. Indigenous communities also provided details on those sites and areas, such as the type of wildlife and plants that can be found, a description of the natural habitat, and specific traditional uses of those places.

Manitoba Hydro said it offered Indigenous communities the opportunity to conduct self-directed Indigenous Knowledge studies or land use and occupancy studies by providing funding. Prior to filing its application with the Board, Manitoba Hydro had received five studies, representing

seven Indigenous communities. As of 24 May 2018, Manitoba Hydro has received eight Indigenous Knowledge/Land Use Occupancy reports, with three more pending.

Manitoba Hydro said it incorporated feedback from Indigenous communities and findings from Indigenous Knowledge studies into its routing process, in many cases resulting in the avoidance of sensitive areas, and reducing the effects on land and resource use. It said plant harvesting, fishing, hunting and trapping, travel and use of cultural sites will be widely available in the area of the Project, and that these activities will still be possible, except during active construction, within the Project right-of-way (ROW).

Manitoba Hydro committed to cataloguing Environmentally Sensitive Sites (ESS) identified by Indigenous communities, which will be subject to specific environmental protection measures as part of its Construction Environmental Protection Plan. Manitoba Hydro described ESS as locations, features, areas, activities or facilities along or immediately adjacent to the transmission line ROW and other Project components that have been determined to be ecologically, socially, economically or culturally important and sensitive to disturbance by the Project. Manitoba Hydro said further ESS from outstanding Indigenous Knowledge studies will be incorporated into the CEPP once it has reviewed mitigation measures with, and discussed the confidentiality of such sites with Indigenous communities.

Manitoba Hydro said that, prior to construction, it will seek feedback from Indigenous communities, through the MMTP Monitoring Committee, on topics of interest to the committee regarding its CEPP and associated plans. As part of its ongoing engagement, Manitoba Hydro also committed to hold pre-construction meetings with Indigenous communities to provide an opportunity to demonstrate how input, including local and traditional knowledge, has been considered and interpreted and how concerns that were identified with the Project were addressed.

8.5 Issues and Concerns Raised by Indigenous Peoples

8.5.1 Manitoba Hydro's Engagement with Indigenous Peoples

AON, AWZ and NWA all said that Manitoba Hydro's engagement did not occur early enough in the process. AWZ and NWA said that Manitoba Hydro did not engage with them until directed to do so by the NEB in June 2017. As a result, according to AWZ and NWA, Manitoba Hydro did not incorporate, consider or address any of these First Nations' interests regarding the Project. Further, AWZ and NWA both said that, while Manitoba Hydro has committed to ongoing discussions, it has failed to provide adequate resources to support meaningful and effective engagement on the Project with the First Nations.

AON said the criteria Manitoba Hydro used to identify impacted communities was not encompassing enough and missed AON as an impacted community with interests in the Project area. While Manitoba Hydro has indicated that it is willing to meet with AON to discuss details regarding its EPP, AON has asked Manitoba Hydro to engage with AON, at minimum, with the same effort as it did with the communities identified as part of its FNMEP.

Sagkeeng raised concerns regarding Manitoba Hydro's engagement, noting that Manitoba Hydro's decisions regarding mitigation were made unilaterally and it has not accommodated Sagkeeng's requests regarding issues such as herbicide use or additional benefits to Sagkeeng.

SCO raised concerns about Manitoba Hydro's engagement, saying that its FNMEP process was insufficient, as demonstrated by strict criteria and a lack of First Nation communities from outside of Treaty No.1. SCO said First Nations Peoples have large occupancy and use areas that are not limited to their reserve lands. It said First Nations Peoples have an interest in this entire area as they often travel vast distances to carry out traditional harvesting activities in accordance with seasonal and other demands. SCO said Manitoba Hydro should have engaged with Indigenous communities or outside experts to determine more reasonable criteria to identify potentially impacted Indigenous communities.

8.5.2 Capacity Funding, Timing and Resource Constraints

Indigenous communities expressed concerns about the timing and lack of capacity funding provided by Manitoba Hydro to engage meaningfully on the Project.

AON said it was not provided capacity funding to undertake a TLRU study and, as such, it is difficult to assess whether the impacts identified in the EIS and mitigation proposed by Manitoba Hydro are appropriate. AON suggested that Manitoba Hydro should fund and consider the results of a TLRU study by AON, including allowing AON's input in the CEPP based on the study results.

AWZ and NWA both said they were seeking a meaningful engagement process that ensured that both of the First Nations were properly supported to enhance technical, logistical and administrative capacity and enable them to understand the Project, identify and evaluate its impacts and to develop and implement appropriate and effective mitigation measures. AWZ and NWA said Manitoba Hydro has not provided funding beyond the traditional land use and knowledge component of the engagement workplan.

BON said that Manitoba Hydro had not provided capacity funding for BON to complete a Traditional Knowledge and Land Use Study to better understand how BON values and land use intersect with the Project. BON said Manitoba Hydro should make reasonable efforts to negotiate a Long-Term Relationship Agreement with BON, and to establish a formal arrangement for consultation and accommodation related to Manitoba Hydro's operations in BON Territory.

The MMF said it has been engaging with Manitoba Hydro regarding the Project since 2015. It said they finalized a mutually agreeable workplan in relation to the Project in January 2016. The workplan included the development of a Métis Occupied Lands Study (the "MMF Study") to identify Métis-specific effects caused by changes in harvesting activities and experiences of the Manitoba Métis Community as a result of the Project. The MMF Study documents extensive Métis harvesting, use and reliance in relation to the Project's study area and concludes that "without specific and detailed mitigation measures applied to these effects, the remaining residual effects on the Manitoba Métis Community will be significant." The MMF Study called for mitigation measures to be developed in partnership with Manitoba Hydro. The MMF said

that its outstanding issues and concerns were addressed in a July 2017 document. However, this document is currently the subject of a dispute before the Manitoba Court of Queen's Bench.

Peguis said Manitoba Hydro should continue the funding for Community Liaisons/Coordinators within the affected Indigenous communities for the life of the Project. Peguis was of the view that these liaisons could bring forward community concerns for the life of the Project and help in designing and organizing community monitoring Projects.

Sagkeeng said it had not been provided with the time or resources necessary to engage Manitoba Hydro about the Project, including the time and resources to conclude a comprehensive TLRU study with appropriate methodology and confidentiality agreements. Sagkeeng took issue with what Manitoba Hydro described as a Traditional Knowledge Study. According to the Sagkeeng, Manitoba Hydro provided too little funding, and called a meeting of random individuals a Traditional Knowledge Study. Sagkeeng was of the view that the studies were not exhaustive or complete.

8.5.3 MMTP Monitoring Committee

Several Indigenous Intervenors raised concerns about the scope, governance and activities that Manitoba Hydro has planned to be part of the MMTP Monitoring Committee.

AWZ and NWA said that, while Manitoba Hydro had set up the MMTP Monitoring Committee in response to requests for Indigenous monitoring, the committee is too broad in focus. They requested that Manitoba Hydro provide opportunities and adequate funding for affected Indigenous communities to develop community-specific environmental monitoring programs for the life of the Project, saying that each Indigenous community has unique interests, concerns, and processes for ongoing Project monitoring that need to be addressed.

AON requested that the MMTP Monitoring Committee include First Nations representatives to provide a unique perspective on relevant issues, and to represent the interests of Indigenous communities in the affected areas.

Sagkeeng said that, as currently formulated by Manitoba Hydro, the MMTP Monitoring Committee is inadequate and not fit for purpose. It said that monitoring – both environmental and compliance – needs to be empowered to act, independent of the Proponent. Sagkeeng suggested that monitoring needs to be re-visioned by all life-cycle regulators and the Crown in general as a fundamental right and responsibility of Indigenous governing bodies. It said monitoring is a nation-to-nation responsibility of the federal Crown and Indigenous governing bodies, and is a critical part of the package of tools that must be available in all circumstances to audit and manage the activities of a proponent and to diagnose and treat their effects on the land, waters and wildlife. It is not an occasional and partial 'concession' to affected Indigenous communities. Sagkeeng said it must be responsible for its own monitoring on its traditional territory; and suggested that, if the potential scope of true impacts to Sagkeeng's rights are to be monitored and mitigated, monitoring must be robust and led by Sagkeeng, rather than being limited to ensuring compliance with license conditions.

Wa Ni Ska Tan suggested that reasonable efforts should be taken to ensure that the MMTP Monitoring Committee is comprised of representatives from Indigenous communities impacted by the Project, including communities impacted by the increased generation requirements to satisfy Manitoba Hydro's export contracts with Minnesota. Wa Na Ska Tan further suggested that the committee not only provide input into monitoring and management of the ROW, but also have the authority to issue stop work orders on the Project should Manitoba Hydro be found to be in non-compliance.

8.5.4 Employment and Economic Benefits

AWZ and NWA said that economic participation in the Project is, at least in part, a measure to accommodate impacts to Indigenous and Treaty Rights. AWZ and NWA also said that First Nations bear all the negative impacts of the expansion, but have no opportunity to benefit from it.

BON said Manitoba Hydro should make all reasonable efforts to hire BON members for all phases of the Project and to provide BON with business opportunities related to the Project through a preferential contracting and procurement protocol or set-aside contracts.

Peguis noted that opportunities for construction are short and not long-lasting.

“When it comes to a project like this, a long-term investment, we have to start sharing in the revenues with our communities, because you're coming into our traditional territory, you're looking for that support, providing us with short-term jobs that's fine, but we're still back at square one when it's gone. We need long-term investment into our communities, into our people, to help sustain those people.”

Mike Sutherland, Peguis First Nation.

RRAFN expressed an interest in revenue sharing and other economic opportunities for Indigenous communities associated with construction activities. It said that, at the time of the EIS, Manitoba Hydro had not made any decisions about economic opportunities associated with construction activities that would be made available to Indigenous communities and businesses.

Sagkeeng said compensatory accommodation is required, which would include preferential hiring for Indigenous Peoples and preferential contracting for businesses of impacted First Nations, and monetary compensation as a condition of Project approval. Further, Sagkeeng said revenue-sharing is an important mitigation to compensate for the loss of land.

“Accommodation means preventing all the impacts that can be prevented, giving us the measures of control to mitigate impacts which cannot be prevented, and compensating us for impacts which remain and are outstanding. This compensation must reflect the sharing of the land and the resources that we agreed to, and benefits and profits should be shared.” Chief Derrick Henderson, Sagkeeng First Nation

SCO said Indigenous content should be a core component of Manitoba Hydro's work and that SCO and its members would like the ability to participate meaningfully in the economy through projects like the MMTP. SCO said it has created a Working Warriors program which has

registered thousands of people who are ready and waiting for jobs. SCO also said the Indigenous content requirements to be included in Manitoba Hydro's construction tender documents should be higher than the minimum 20 per cent Indigenous content as presently suggested. SCO said that Indigenous content requirements should be part of the certificate conditions imposed by the NEB, rather than simply being internal mitigation targets of Manitoba Hydro.

8.5.5 Scope of Manitoba Hydro's Environmental Impact Statement

Indigenous Intervenor raised concerns regarding the scope of Manitoba Hydro's EIS, saying that it did not include information regarding water levels upstream of the Project, including Lake of the Woods and the Winnipeg River. Concerns were also raised regarding Manitoba Hydro's selection of Valued Components (VC), with Intervenor saying that, by focusing solely on biophysical markers, the EIS did not include the Indigenous worldview of interconnectedness between the land, waters and people, nor did it sufficiently capture Indigenous concerns related to species or habitats of importance to Indigenous Peoples, such as moose. Indigenous Intervenor also suggested that Manitoba Hydro's EIS approach was too generic and should have focused on impacts on individual First Nations. Indigenous Intervenor also raised concerns regarding Manitoba Hydro's assessment of cumulative effects.

AON said its community is located on Lake of the Woods and it is concerned about changing water levels there because of the operation of upstream dams. AON said there are six Manitoba Hydro dams on the Winnipeg River flowing out to Lake of the Woods. AON members rely on the Lake of the Woods to support commercial and traditional fishing, as well as harvesting wild rice. AON said these activities cannot occur if the water levels rise.

AWZ and NWA raised concerns regarding the lack of a species-specific moose study as part of Manitoba Hydro's EIS, as well as Manitoba Hydro's lack of any specific habitat mitigation measures for moose. AWZ and NWA said moose populations have sharply declined in southern Manitoba and that moose are of critical value to the First Nations for subsistence and cultural purposes.

AWZ said it also has concerns about the water regulation of Lake of the Woods, including the loss of wild rice, the swamping of reserve lands, and resulting loss of lands. AWZ said that without being able to harvest wild rice, the ability to teach their children is lost as well.

BON said Manitoba Hydro does not fully understand the inter-connected nature of social, economic, and land use value components from BON's perspective. That each of these components was assessed in isolation and discussed in separate chapters represents a fragmentation of the holistic perspective held by First Nations generally and BON specifically. BON said that, when these VCs are assessed in isolation, the pathways and effects do not reflect the worldview of First Nations generally and BON specifically, and important indicators are scoped out of certain analyses.

The MMF said Manitoba Hydro's EIS did not adequately describe the valued components necessary to fully identify potential environmental effects to Métis rights and interests. The MMF was concerned with the lack of Métis-specific valued components, and so identified its

own Métis Specific Interests that could be measured as part of a traditional land use and occupancy study.

NWA said that, while the community relies on Lake of the Woods to harvest wild rice, it has no influence on water levels and the changes to water regulation, and that water levels have a huge impact to land use and traditional practices for NWA and its members.

Sagkeeng said the lack of mitigation measures to avoid clearing of trees and the inevitable disturbance of moose means that Manitoba Hydro does not appear to understand the multiple mechanisms that alteration of the landscape have on the willingness and ability for Sagkeeng members to practice their rights. Further, Sagkeeng said Manitoba Hydro's failure to adequately study and consider cumulative impacts to moose (including historic range and distribution, assessment of cumulative effects, and inclusion of linear disturbance density and area in cumulative effects assessment) prevents discussion of accommodation with respect to Sagkeeng's rights to harvest moose, and effectively renders Manitoba Hydro's application incomplete in the context of a cumulative effects assessment. Sagkeeng said that Manitoba Hydro's cumulative effects assessment was also inadequate because it lacked supporting evidence and analysis of cumulative effects to support many of the conclusions; and instead, relied on vague, qualitative and inadequately evidenced material in support of the assessment.

Shoal Lake #40 raised concerns regarding the potential of the Project to manipulate the natural flow of water on its lands. Shoal Lake #40 said its rights and interests have consistently been ignored when artificial regulation of the natural flow of waters has been proposed. Shoal Lake #40 said that an assessment of the impacts of water levels upstream falls within the scope of issues which must be addressed by the Board pursuant to the *Canadian Environmental Assessment Act*, including effects on the environment on Indigenous Peoples' health and socio-economic conditions, physical and cultural heritage and current use of lands and resources for traditional purposes.

SCO said it does not think of the Project as a singular project apart from any other project, rather it is part of the long-term planning of Manitoba Hydro that started in the early 1900s, that has impacts beyond southern Manitoba, with the dams continuing to impact Indigenous Peoples in the Northern part of the province. SCO also said that, in its Application, Manitoba Hydro has failed to understand the Indigenous principles of interconnectedness, and that without this understanding of our interconnected place in the universe, Manitoba Hydro's mitigation measures are doomed to fail.

Wa Ni Ska Tan raised concerns regarding Manitoba Hydro's hydraulic management of the rivers and reservoirs located upstream of the Project. Wa Ni Ska Tan said approval of the Project will require an increase in electricity generation, and subsequent negative environmental effects and impacts to the traditional activities of a large number of Indigenous communities who were not engaged by Manitoba Hydro. Wa Ni Ska Tan identified several concerns regarding past alterations to the Churchill River and subsequent impact on traditional activities and resource use, such as fishing. Wa Ni Ska Tan also raised concerns regarding Project impacts beyond southern Manitoba, saying Manitoba Hydro does not report on the destruction of pristine country or the erosion of land where islands are disappearing in the north. Further, Wa Ni Ska

Tan raised concerns with the VCs chosen by Manitoba Hydro, saying they were too high-level, with little input from communities. Wa Ni Ska Tan also said that Manitoba Hydro's cumulative effects assessment was largely descriptive and devoid of any data, with arbitrary time and space boundaries.

8.5.6 Social and Cultural Well-Being

AON said a loss of connection to the lands equals a loss of culture and said Manitoba Hydro needs to understand, consider and recognize that AON's connection to the land and water and traditional land uses are a key part of its well-being as a People.

“Land use for traditional purposes is connected to our social, economic and personal wellbeing. We go to the lands and waters for healing, for medicines, for food, for community and for a livelihood.”

Chief Vanessa Powassin, Anishinaabeg of Naongashiing

AWZ and NWA said that hunting, trapping and harvesting are central activities to the First Nations for both subsistence and commerce, and that it is important for the community's physical, mental and cultural health that these traditional practices continue. AWZ and NWA also said that passing this knowledge down to future generations is a fundamental part of the First Nations' cultures.

BON said Manitoba Hydro's approach to assessing well-being is only from the perspective of access to traditional foods, and other potential indicators and effects are not considered. For example, BON suggested that an assessment of well-being should also include the connection between land use and well-being. BON said Manitoba Hydro needs to recognize that the use of the environment for traditional purposes is interconnected with social, economic, and personal well-being.

Peguis First Nation said cultural awareness training should be mandatory for Manitoba Hydro staff and contractors working on MMTP and should continue for the life of the Project. Peguis suggested that this training should be specific to the First Nations affected by the MMTP (e.g., Ojibway, Chippewa, Sioux, Dakota, Cree, and Anishinaabe).

Sagkeeng said its members will avoid traditional land and resource use activities because of exposure to psychosocial stress caused by the use of herbicide in vegetation management, the presence of electromagnetic fields, and an altered visual context incompatible with what Sagkeeng values in the cultural landscape. It also said that clearing of the ROW will remove and alter lands that are important teaching areas for the transmission of knowledge; resulting in adverse effects on cultural transmission capacity.

Wa Ni Ska Tan said Manitoba Hydro has not taken seriously enough the concerns of Indigenous communities regarding the potential risk of Electric and Magnetic Fields (EMF), noting that even the perception of risk can play a central role in individual, family and community well-being.

8.5.7 Project Routing on Crown land

Indigenous Intervenor raised concerns regarding the amount of Crown land that will be impacted by the route.

AON said Manitoba Hydro's EIS did not provide sufficient details, discussion and evaluation of the study's methodology regarding the decision to route the Project on Crown lands. AON said the ongoing fragmentation of Crown lands because of projects like roads and transmission lines affects AON's ability to access the lands for traditional land uses.

AWZ and NWA said Manitoba Hydro did not take the First Nations' rights, interests, or values into account when it selected the route. As a result, AWZ and NWA said the route for the transmission line does not minimize impacts to AWZ and NWA's traditional uses, cultural and spiritual values, or allow for unencumbered Crown lands available to satisfy outstanding land claims.

BON said its members had concerns related to the quantity of undeveloped Crown land available on Treaty No.1 lands. Since portions of the Project will be located on Crown land, BON said the route represents further encroachment on the amount of available Crown land for BON members to use for traditional purposes. Due to the extensive development with Treaty No.1 boundaries, any sections of remaining Crown land are extremely valuable for BON and so they must be protected. BON also requested that Manitoba Hydro provide more details, discussion and evaluation of the study's methodology regarding the decision to route the Project on Crown lands. Finally, BON requested that any Crown land impacted by MMTP be compensated at a 1:1 ratio through habitat enhancement initiatives.

A key concern of the MMF was the lack of available unoccupied Crown lands in southern Manitoba to practice traditional activities. The MMF noted the importance of unoccupied Crown lands as they represent areas where the Métis of Manitoba have access to exercise their Métis rights without permission. On all other land types, the exercise of Métis rights can be restricted from time to time under certain circumstances. The MMF noted that phases of the Project could result in: a change the ability of Métis to use the land based on legal restriction; a change in the physical attributes of the land available for the exercise of Métis rights; and a change in perception by MMF in the lands available for use. As a result of these changes, the MMF assert that this will result in a change to or reduction of the total amount of lands available for the exercise of Métis rights.

Peguis said there should be an objective of not losing anymore Crown land in southeast Manitoba where there is land use, occupancy, and traditional activities. Peguis suggested that either as a mitigation measure from Manitoba Hydro or a condition of approval from the Board, there should be no-net-loss of Crown land in the Project region. Similarly, Peguis said the Board should also ensure that equivalent Crown lands are available for Treaty Land Entitlements (TLE) to replace lands taken up by the Project.

RRAFN said building transmission lines through Crown lands reduces and encumbers lands available to fulfill TLE. RRAFN also said building transmission lines may impact current reserve lands and traditional territories by limiting development and creating third-party interests.

Sagkeeng said the Crown lands which are to be cleared are effectively the only lands left for Sagkeeng to practice traditional harvesting, given widespread alienation from the land base by privatization, industrialization and other land fragmentation factors. Sagkeeng also raised concerns with the way in which Manitoba Hydro has weighted Crown lands, environmental considerations, and Indigenous rights and interests, in choosing a route that intersects this large amount of Crown lands. Sagkeeng said that there are already high pre-existing cumulative effects in the Project area, and that the Board should look beyond impact minimization and provide compensation and benefits to offset unavoidable Project-specific residual impacts to Indigenous Peoples. Sagkeeng said cumulative effects to its rights as Indigenous Peoples are magnified by continued erosion and loss of land, and by alienation and fragmentation.

“Our Elders will tell you aboutso-called Crown land that will be taken up for this project on which our members have hunted and trapped since before your ancestors have yever heard of this land.” Chief Derrick Henderson, Sagkeeng First Nation

SCO said that Treaty No.1 and the *Manitoba Natural Resource Transfer Act, 1930* promised access to unused Crown lands. Given that 30 per cent of this Project would be built upon such lands, SCO said that, in a situation where these lands have been reduced to a small rump of their former ecological state, extraordinary precaution must be applied to any proposals that would consume large or small portions of what remains. SCO suggested that the broader need for the MMTP does not appear to meet this standard. SCO also recommended that a zero-net-loss of Crown land be a condition for the Project.

8.5.8 Traditional Land and Resource Use

A number of concerns were raised by Indigenous communities about the Project’s potential effects on their use of lands, waters and resources for traditional purposes. Indigenous Intervenors also raised concerns about Manitoba Hydro’s lack of community-specific information regarding Traditional Land and Resource Use (TLRU), as well as its findings on the significance of impacts of the Project to TLRU.

AON said it does not agree with Manitoba Hydro’s statement that the effects of the Project on TLRU will not be significant. Such changes to a landscape and creation of corridors otherwise not on a landscape, specifically in forested areas, does have impact on TLRU. AON suggested that Manitoba Hydro needs to better consider the cumulative impacts to future generations. AON also said that the MMTP has the potential to alter landscapes by removing wildlife habitat and traditional harvesting areas in AON traditional territory. AON requested that Manitoba Hydro provide accommodation through an ecological offset program, which may include enhancing and restoring habitat in the local vicinity or creating new habitat to replace what has been lost, with the intended result of no-net-loss to biodiversity and habitat. AON said offsetting would also reduce the potential impacts to AON’s rights and interests with respect to traditional land use.

AWZ and NWA said its members continue to use areas in the vicinity of the Project for harvesting traditional foods like wild rice, for medicines, for cultural and spiritual uses, and for travelling to access resources, sacred sites, and cultural gatherings. They said that, because they

were not engaged early enough in the process, Manitoba Hydro's assessment of traditional land and resource uses does not include current use of lands and resources by either NWA or AWZ.

BON did not agree with Manitoba Hydro's conclusion that the effects of the Project on TLRU will not be significant, given the changes to the landscape and creation of corridors, which will impact TLRU. BON said that, because it did not undertake a TLRU Study as part of the FNMEP, it is difficult to assess whether Manitoba Hydro's identified impacts and mitigations are appropriate. BON also said its traditional knowledge and systems must be respected and given due consideration, and not measured against science only.

Peguis filed a land use and occupancy map which included a number of data points indicating land use and occupancy by Peguis members in southeastern Manitoba. Peguis said the map demonstrates its relationship and rights to the land. It said it currently uses the land across the Treaty No.1 territory and throughout Manitoba to: gather resources; hunt, fish, trap, and practice its culture; raise families; work; and go to school. Peguis said it has been building its traditional land use database for the Project since 2014 and it has records of all the cultural activities including fishing, gathering, hunting large game, birds, biological sites, recreation, trapping, travel and occupancy. The data points all show that Peguis does not live just in Peguis; Peguis lives in Winnipeg, Selkirk, Roseau, St. Anne, Richer, and Piney. Peguis travels to all these areas. Information continued to be gathered up to the oral portion of the NEB hearing, at which time it had over 6,000 data points. In addition to all the locations of traditional land and resources that Peguis has identified, it also said the Project has the ability to affect not just the land, but all of the different historical, cultural, and legal relationships that have been in this place far longer than Canada has ever been.

"We take our traditional knowledge seriously. It is real, it is meaningful, and it is living. It is not to be taken casually or lightly or to be treated recklessly or simply given away." Chief Glenn Hudson, Peguis First Nation

The MMF said it prepared its study to identify Métis-specific effects caused by changes in harvesting activities and experiences of the Manitoba Métis Community as a result of the Project. The MMF Study documents extensive Métis harvesting, use and reliance in relation to the MMTP's study area and concludes that "without specific and detailed mitigation measures applied to these effects, the remaining residual effects [on the Manitoba Métis Community] will be significant." The MMF said the Project falls within the Métis Recognized Harvesting area, an areas in which the Métis have recognized and established harvesting rights. The MMF Study shows that the Manitoba Métis Community uses the Project area for: hunting, trapping, fishing, berry picking; and plant, mushroom and medicine gathering; and that the majority of those community members surveyed for the study would avoid transmission lines when engaging in these activities. In its study, members identified 281 specific-use sites as intersecting the Project Development Area (PDA).

RRAFN's Traditional Knowledge study indicated that members still practice traditions of hunting, trapping and gathering medicines/berries, and these are passed down from generation to generation. Traditional Ceremonies are held four times a year and the Sacred Lodge is still used for healing, strength and teachings.

Sagkeeng said its members equate hydro development with long term cumulative impacts in Sagkeeng territory. It said the impacts of hydro development on traditional lands and waterways and on the cultural practices and traditions of the Sagkeeng have been witnessed and experienced by its members for over a hundred years, yet members have seen little in the way of compensation for the impacts on their lands, waterways and lives in general. To Sagkeeng members, it is a common understanding that increased hydro development in its traditional territory will lead to restrictions on cultural practices and traditional activities.

Shoal Lake #40 shared how it uses the waters in its territory for fishing for food, cultural, ceremonial and commercial purposes. Shoal Lake #40 said its community has always used the lands and waters in its territory to produce and gather wild rice, fish, hunt, trap and carry out other traditional activities. In addition to having an importance for transportation, Shoal Lake #40 said water flows and water levels have always been critical to the plants, fish and animals on which its members depend. Water literally gives life and is an integral part of Shoal Lake #40 culture. Shoal Lake #40 described how it has used the shallow waters in its territory to produce and gather wild rice, which is a staple in its traditional diet. Shoal Lake #40 shared that it traded wild rice with other First Nations before the arrival of Europeans and then traded it with the fur traders when they established themselves in Shoal Lake territory.

Shoal Lake #40 said that the damage caused by the maintenance of artificial water levels on Lake of the Woods has diminished the ability of Shoal Lake's members to carry out traditional practices and rely on the lands and waters for their livelihood, such as gathering wild rice, trapping and fishing. Shoal Lake #40 shared that the threat of flooding is a constant concern, especially if this Project adds to the fluctuating waters.

“Wild rice harvesting depends on the lake levels. Right now, our water is really shallow and that’s a good sign for us, that we’ll have wild rice harvesting this year. And that happens every spring, the water goes down a bit and it comes back up again. And just when the wild rice is starting to come up, then they open their gates to -- so we can have higher water and we -- there goes our livelihood. Some people depend on that. If you don’t have a job, then that’s where you go. You have to live off the land.”
Elder Julia Redsky, Shoal Lake #40 First Nation

Members of SCO said they continue to harvest in the area of the Project because the plants are clean, pure and uncontaminated, while plants elsewhere in the prairie region are contaminated because of agricultural activity around those medicinal plants. One SCO presenter described how, due to the contamination of some of the plants in the area, he has found safe zones. For example, he has transplanted *echniacea angustifolia*, the purple cornflower that is used for medicines to a different area where there is little agricultural contamination so that these plants can continue to survive. He further noted that wild rice can also be transferred.

“Wild rice is actually not a rice. It is a grass that we developed and worked with for thousands of years. Manomin. Mano means good. Omin means good berry. So Manomin in our language is a good berry. It’s part of our food system. We’ve transplanted wild rice from Minnesota into Manitoba, into Saskatchewan, Alberta, and now we have – I have transplanted some of those green wild rice into B.C. So

those regions will have manomin grown in their regions, again to protect that species of plant.” Mr. David Daniels, Southern Chiefs Organization

SCO also shared information about how Anishinaabeg Peoples understand treaty and the mutual responsibilities that are part of Treaties.

“The Queen also promised, through her representatives, maciwin, hunting, a traditional form of livelihood. She promised to give ammunition, twine, nets, et cetera, all the things we would need to follow our traditional livelihood. Again, something gets a little tricky here. You're going to impact the animal migration routes, the animal habitats. When you entered into treaty with us, when Canada entered into treaty with us, they entered into a treaty, a pre-existing treaty that we had with the animals that we were not supposed to destroy their habitat or disrespect the animals in any way. So Canada, and by extension Manitoba Hydro, have a responsibility to uphold that treaty as well.” Mr. Darren Courchene, Southern Chiefs Organization

8.5.9 Heritage Resources

Peguis First Nation said Manitoba Hydro’s Heritage Resources Impact Assessment (HRIA) should be submitted to the Board for approval prior to construction and should be made public and posted on the MMTP website. Peguis said that prior to construction, Manitoba Hydro should develop a plan to identify and mitigate the effects of construction on sacred sites identified by Indigenous communities that may not have associated physical heritage resources. Once identified, the plan should include buffers on these sites. In addition, Indigenous communities should be involved in the review of the sites along the full ROW and their input should be reflected in the HRIA or in another report.

Sagkeeng suggested that Manitoba Hydro report on any outstanding concerns raised by potentially-affected Indigenous communities regarding Culture and Heritage resources, including how it will respond to them and that Manitoba Hydro should be providing opportunities for Indigenous community involvement in outstanding heritage resource surveys.

Wa Ni Ska Tan said the involvement of Indigenous and local knowledge holders in heritage resource surveys must be more than a token gesture. Wa Ni Ska Tan suggested that heritage resource surveys must be conducted by independent researchers at the direction of Indigenous Peoples with an interest.

8.5.10 Section 35(1), Constitution Act, 1982

In written evidence, Oral Traditional Evidence, as well as letters to the Board and NRCan, Indigenous communities raised concerns regarding the issue of adequacy of Crown consultation, noting that the federal government should be meeting with them directly and that the Board’s process is not properly set up to meet the honour of the Crown or the Duty to Consult.

AWZ and NWA said the Crown has not consulted with either of the First Nations regarding the proposed Project, despite requests. AWZ and NWA said they have raised concerns about the

unclear consultation process with the federal government and has supported an adjournment of the Board's hearing on this basis.

“Our elders “believed the treaties; they believed the agreements that we made in the past. They believed that when people shake hands and promise something, that it means something ... Even after all these years of broken promises, they still continue to cling to that belief, that eventually things will work out, that eventually the honour of Crown will be shown to be honourable.”

Chief Kim Sandy-Kasprick, Northwest Angle #33 First Nation

AWZ and NWA noted that a letter from the Minister of Natural Resources Canada to the Chair of the Board, stating that NRCan will inform potentially impacted Indigenous Peoples of Canada's intention to rely on the Board's process was sent in March 2018. At the time of filing evidence, the federal Crown had not yet notified AWZ or NWA of its intent to rely on the *NEB Act* certificate process nor had it provided or proposed any consultation framework or agreements for this Project. Further, AWZ and NWA expressed concern that its rights and ability to fairly participate in the Board's hearing process are prejudiced because the Crown consultation process was not confirmed or clarified before the hearing process started.

Shoal Lake #40 filed a letter on the Board's record that it had sent to NRCan stating that it has concerns about the Board's willingness and ability to discharge the Crown's duty to consult in relation to the Project. In Shoal Lake #40's view, the Board's certificate process is not an appropriate forum for carrying out meaningful consultation consistent with the federal government's commitment to a renewed relationship with Indigenous Peoples based on recognition, partnership and respect. Shoal Lake #40 said it was deeply concerned that the Board intends to proceed with a decision without ensuring that Shoal Lake #40 has adequate information about the potential effects of the Project and without considering issues identified by the community. Shoal Lake #40 said concerns are exacerbated by the inherently adversarial, quasi-judicial nature of the Board's certificate process, as evidenced by Manitoba Hydro's scheduled cross-examination of Indigenous leaders on written evidence setting out the views and interests of their communities. Shoal Lake #40 said that a direct process of engagement with the federal Crown is required prior to any decision by the Board.

In a letter filed with the Board regarding its process, the MMF stated that the depth of the Crown's duty to consult with the MMF in these circumstances falls on the most onerous end of the spectrum. This is because the Project would whittle what little Crown land remains available to the Métis in southeastern Manitoba down to even less, risking not only adverse effects but indeed the infringement of the Manitoba Métis Community's rights.

SCO said the NRCan information letters provided to potentially impacted Indigenous communities were sent after the deadline to apply as Intervenors in the Board's hearing had passed. SCO also noted that the Government of Canada had, at the time of the hearing, not yet issued a final project agreement with respect to the Project, which SCO suggested leaves some uncertainty as to what these hearings will accomplish towards the goal of consultation.

Sagkeeng expressed concerns regarding the Board's process. During OTE, Sagkeeng noted that for the knowledge of its People to meaningfully inform the consideration of the NEB, that

knowledge must be systematically gathered, analyzed, and recorded in a methodologically reliable way. Sagkeeng said this would require time and require resources, as research that is reliable and credible always does. It said that neither time nor resources have been provided to date and that PFP funds barely covered the cost of the technical support required for this hearing. Further Sagkeeng said a three-hour OTE session is not sufficient to understand the knowledge of Sakgeeng Elders, which is broad and runs deep. It suggested that putting leadership and a few others at the table seems like they are being used as props. Instead, if the Board is serious about incorporating traditional knowledge into its decision making process, Sagkeeng said the Board ought to do so at every stage of the proceeding, including having a council of Elders advising it throughout its deliberation and ensuring that First Nations are able to provide their traditional knowledge, independent of their Western science evidence, in a reliable and variable manner.

In a letter to NRCan filed on the Board's record on 22 May 2018, Sagkeeng sought clarity from NRCan about its intention to rely on the NEB's process and requested that Canada confirm that the NEB has the jurisdiction to grant or order the proponent to grant all forms of accommodation measures necessary for the Duty to be met. Sagkeeng wrote that concerns are substantially addressed through accommodation measures, which Sagkeeng described as prevention, mitigation, compensation and benefits. It was Sagkeeng's view that it is not clear whether the Board has the jurisdiction to order compensation and benefits. Sagkeeng requested that Canada confirm that the NEB has all the necessary jurisdiction and authority to order all forms of accommodation and conduct all forms of consultation as required. And if not, Sagkeeng requested that the Canada immediately commence an engagement with Sagkeeng and other affected Indigenous parties on a parallel process to ensure that the Duty is fully met.

Peguis said NRCan's letter to Indigenous communities of 29 April 2018 which stated that the Board is responsible for consultation on the Project, was a decision that was made unilaterally without asking any Indigenous communities if they felt the Board was an acceptable forum for consultation. Further, Peguis pointed out that the NEB process had been underway since December 2017 and the letter came late in the process, after crucial decisions for this process, ranging from funding to evidence to procedure, had already been made and left little time to go forward. Peguis noted that this cannot be considered adequate, transparent or fair. Peguis said it was prepared to be a part of a dialogue to contribute to discussion and help form and achieve meaningful consultation, but that it has been ignored. Peguis said the Board's process should not be considered consultation.

"We were prepared to consult. We have shown ourselves to be committed to engagement through one hearing and process after another. We have developed and accumulated our traditional knowledge. We have developed a policy and processes. No one can say that we're not available and not willing to be a part of dialogue to contribute to discussion and to help form and achieve meaningful consultation. But for those critical decisions we were ignored, and we're still being ignored. The Crown seems to believe that it can determine consultation by talking to itself and it can determine what bodies do it and how it gets done without any input from the people that are supposed to be consulting with. I don't accept that."
Chief Glenn Hudson, Peguis First Nation

8.6 Manitoba Hydro's Reply to Issues and Concerns raised by Indigenous Peoples

8.6.1 Manitoba Hydro's Engagement with Indigenous Peoples

Manitoba Hydro said it continues to engage with the following communities that were not part of the NEB process.

- Birdtail Sioux First Nation
- Buffalo Point First Nation
- Canupawakpa Dakota Nation
- Sioux Valley Dakota Nation
- Waywayseecappo First Nation
- Black River First Nation
- Dakota Plains Wahpeton First Nation
- Dakota Tipi First Nation
- Long Plain First Nation
- Sandy Bay Ojibway First Nation
- Swan Lake First Nation
- Aboriginal Chamber of Commerce
- Assembly of Manitoba Chiefs
- Dakota Ojibway Tribal Council.

Manitoba Hydro said it has continued to provide Project updates to the above communities, including offers of meetings where they wish to do so. During this time period, the response of Indigenous communities to Manitoba Hydro has varied, with some choosing not to engage. While bilateral meetings have occurred and continue to occur, the main platform for engagement with communities and organizations since March 2017 has been through the MMTP Monitoring Committee, in which all communities have been invited to participate.

For those Indigenous communities that are Intervenors in the NEB hearing, Manitoba Hydro filed engagement summaries for each community, along with responses to concerns raised thus far, including site-specific impacts, general Project concerns (such as impacts to the exercise of Indigenous and Treaty Rights) and ongoing economic and monitoring opportunities. Manitoba Hydro said it is committed to share information with all Indigenous communities throughout the regulatory, construction and operation and maintenance phases of the Project.

Manitoba Hydro said its FNMEP is adaptive and ongoing. In addition to the MMTP Monitoring Committee, Manitoba Hydro committed to hold EPP meetings with interested Indigenous communities. Manitoba Hydro said EPP meetings are used to confirm what has been heard to date, share the proposed Construction Environmental Protection Plan (CEPP) with leadership, harvesters and Elders, determine if concerns brought forward by the community have been addressed, and hear about any outstanding concerns.

8.6.2 Capacity Funding, Timing and Resource Constraints

In order to assist in the administration of the engagement process, Manitoba Hydro said it encouraged the development of community engagement plans and offered funding for community engagement coordinator positions within the communities. Manitoba Hydro also offered Indigenous communities funding to conduct self-directed Indigenous Knowledge or land use and occupancy studies. Manitoba Hydro said that, as the engagement phase has evolved and the community coordinator positions have concluded, Manitoba Hydro now supports two members from each community to participate in the MMTP Monitoring Committee activities.

Manitoba Hydro said it is seeking to enter into community-specific Project agreements with the Indigenous communities who Manitoba Hydro understands have interests in the Project area. These agreements are being pursued as a means of promoting positive relationships with these communities in the context of the Project. Funding under these agreements could be used by the communities for a variety of purposes such as Project-related employment, training, or economic development initiatives, or other community programming that benefits a broad segment of their membership. Manitoba Hydro confirmed during the hearing that five Indigenous communities had entered into these agreements.

In response to concerns from AWZ and NWA regarding the availability of resources to support technical meetings, Manitoba Hydro said it has a policy that it will fund members of an Indigenous community who are not employed by the Band, for mileage expenses and an honorarium to attend meetings. Manitoba Hydro also said it is always open to proposals from Indigenous communities regarding funding for additional consultants, field tours or other types of discussions.

In response to AON's statement that it was not provided capacity to undertake a study, Manitoba Hydro said it has made attempts to meet with AON to discuss a study, but to date, no meetings have occurred. Manitoba Hydro said it remains open to meeting with AON to discuss an engagement plan for the Project, including funding a traditional knowledge study.

Manitoba Hydro said it has offered an Indigenous Knowledge study to BON and remains open to meeting with BON about their wildlife harvesting practices, important access route locations and concerns that can be used to inform the CEPP for the Project.

In response to the MMF's comments regarding the July 2017 document, Manitoba Hydro said that it does not rely on that document for its mitigation measures.

In response to Sagkeeng's assertion that it had not been provided with adequate capacity to complete a TLRU study, Manitoba Hydro said it has funded an Indigenous Knowledge study, as well as second supplemental study for Sagkeeng. These studies were self-directed, and as such, the scope was chosen by Sagkeeng. Manitoba Hydro said it also funded community open houses, a community coordinator position and a field tour for Sagkeeng members.

8.6.3 MMTP Monitoring Committee

While not originally part of the Project, as the regulatory process progressed, Manitoba Hydro updated its commitments regarding Indigenous monitoring and committed to establish the MMTP Monitoring Committee. Manitoba Hydro said the purpose of the committee is to support effective and meaningful Indigenous participation in monitoring the construction and operation of the Project. Manitoba Hydro said it has been hosting Committee meetings to collaboratively develop the draft Terms of Reference, which is currently being circulated for approval by members. Manitoba Hydro said that the purpose of the Committee is to:

- Support Indigenous participants' effective and meaningful participation in the monitoring of the Project;
- Create a platform for understanding issues of concern to Indigenous participants and Manitoba Hydro in order to collaboratively provide informed advice on how to address issues of concern; and,
- Share information in a cooperative and transparent manner relating to the environmental issues of the Project.

Manitoba Hydro said that the following are the goals drafted by the Monitoring Committee:

- Manitoba Hydro does what they say they would do and is compliant with licence and certificate conditions with the assistance of the MMTP Monitoring Committee.
- The land and water is respected as we use our knowledge to monitor its health.
- Leadership, members and staff at my community or organization feel informed about the status of MMTP and information is accessible to those who just want to check in if interested.
- There is a place to discuss topics of interest to us that are beyond MMTP.

Specific tasks are currently being discussed to reach each of these goals and the methodology employed for each differs based on the task. An example of two tasks planned for June 2018 include:

- Tours for each community represented on the Committee (Anishinaabe, Dakota and Métis) to visit sites considered important to each. The broader group will then meet to discuss outcomes and concerns. The methods used for these tours will include observations, photographing key features, and discussion. The outcome of these events will inform the type of skills required for the construction monitors hired by the Committee.
- Botanical work – the Committee passed a motion to hire an Elder to lead the survey; methods and reporting have been decided on, and information from the survey will inform the CEPP.

Other tasks planned include:

- Creating plain language summaries of licensing/certificate conditions and commitments made by Manitoba Hydro throughout the regulatory filing.
- Offer a focused workshop to train those interested in compliance monitoring.
- Hire monitors as determined by a subcommittee to participate in compliance monitoring with Manitoba Hydro.
- Have ceremonies at the onset of Project construction, during construction and post construction.
- Tour the right-of-way on a regular basis (possibly seasonally) with group tours.
- Complete botanical monitoring of right-of-way and surrounding area.
- Formalize the Committee by having participating First Nations and the MMF sign the Terms of Reference and by meeting regularly.
- Develop a Committee members' report structure in which the members of the Committee report back to their principals and further a report structure in which any subcommittees of the Committee report back to the broader Committee.
- Start a Project or social media page for Committee members and monitors.
- Routing – develop a better way to include Indigenous perspectives in routing decisions.

Manitoba Hydro said invitation to be a member on the Committee was determined using the same list of invited participants included in the original FNMEP as well as the additional communities on the Board's Consultation Directive (25 communities in total). The Committee has met seven times since November 2016 and that 14 communities have participated thus far. The following Indigenous communities have sent representatives to all or some of the meetings:

- Black River First Nation
- Brokenhead Ojibway Nation
- Dakota Plains Wahpeton First Nation
- Dakota Tipi First Nation
- Long Plain First Nation
- Manitoba Métis Federation
- Peguis First Nation
- Swan Lake First Nation
- Roseau River Anishinabe First Nation
- Southern Chiefs Organization
- Animakee Wa Zhing First Nation
- Northwest Angle #33 First Nation
- Sandy Bay First Nation
- Shoal Lake #40 First Nation
- Aboriginal Chamber of Commerce
- Manitoba Sustainable Development

Manitoba Hydro said it will continue to provide opportunity for all 25 communities to participate on the Committee. Manitoba Hydro confirmed that all elements of construction and geographic locations of the Project are included within the Committee's scope; however most attention has been focused in the area of the new ROW, and in particular, Crown lands along the new ROW. Manitoba Hydro said it plans to use information provided by the Committee to mitigate potential effects from the construction and operation of the Project and to inform regulators and those interested about the effectiveness of the planned mitigation measures.

Manitoba Hydro said it is funding all committee activities and supports two members from each community or organization to participate in the Committee. The Committee will have the opportunity to provide comments on the various monitoring plans being proposed by Manitoba Hydro. For example, at the May 2018 meeting, a Project archaeologist provided an overview of the Cultural and Heritage Resources Protection Plan (CHRPP) where members expressed the importance of cultural finds and the archaeologist invited those community members that expressed an interest to attend field work activities.

Manitoba Hydro said that First Nations and Métis involvement in the monitoring program is essential for the Project and that it would continue its work to develop mechanisms for their involvement. It said the MMTP Monitoring Committee will remain in place through Project construction and participation in the operations phase will be commensurate with the nature of activities occurring during that time.

8.6.4 Employment and Economic Benefits

Manitoba Hydro said the construction tender documents for the Project will include a variety of Indigenous content provisions and incentives. A minimum of 20 per cent of the value of the transmission construction contracts will consist of Indigenous content, where Indigenous content includes purchases from Indigenous suppliers, contracts with Indigenous subcontractors, and direct employment and training of Indigenous Peoples. The tender documents will include incentives for contractors to exceed the minimum threshold, meaning that a bid that includes greater than 20 per cent Indigenous content will be scored more favourably. Indigenous employment opportunities will be promoted through an Indigenous hours requirement and an Indigenous hiring preference.

Manitoba Hydro also said it will have mechanisms in place to monitor how the contractors are meeting the Indigenous content that they commit to in their initial bids. If a contractor is not achieving the target, Manitoba Hydro would expect the contractors to provide a recovery plan, and Manitoba Hydro would withhold payment commensurate with the degree to which they have missed their Indigenous content commitment.

Manitoba Hydro said recruitment sessions for the Project will be advertised to Indigenous communities for a minimum of two weeks in advance of the session. At these sessions, interested individuals can learn about potential employment opportunities and submit their name and resume. The contractors would then add these potential candidates into their own internal database and would use this database to staff the Project, giving first preference to qualified Indigenous Peoples. Manitoba Hydro noted that some transmission construction companies have recently completed other projects in Manitoba, and would have an existing

list of Indigenous employees who worked on those Projects. Manitoba Hydro anticipates that these companies would also draw from this information if they are one of the successful bidders on the Project.

Manitoba Hydro said the way the construction tenders are being structured, it anticipates the prime contractors will make use of Indigenous sub-contractors to meet the Indigenous content requirements. Manitoba Hydro said that, for a number of reasons, including the broad range of potentially interested Indigenous communities and businesses, Manitoba Hydro will not contractually require the prime contractor to work with any one specific Indigenous business, including labour brokering services. However, Manitoba Hydro did say it will be including information regarding SCO's Working Warriors in the "Instructions to Proponents" section of the Project transmission construction tender.

Manitoba Hydro said it anticipates operating the Project with existing internal resources. It said it has a strong record of hiring and training Indigenous Peoples and, for many years, has operated successful programs to promote Indigenous participation in its in-house apprentice programs. As a result, Manitoba Hydro said that approximately 32 per cent of Manitoba Hydro's Powerline technicians and trainees have self-identified as Indigenous. Manitoba Hydro also said it has had a strong employment equity program in place since the 1990s, and reports publicly on its Indigenous employment results on an annual basis. As of 31 March 2018, 19.4 per cent of Manitoba Hydro's workforce identifies as Indigenous, including 14 per cent of its managers, and 48.8 per cent of its northern workforce. Manitoba Hydro noted that overall, approximately 17 per cent of Manitoba's population identified as Indigenous.

In response to requests about revenue sharing, Manitoba Hydro said it does not have a mandate to enter into discussions related to the issue. Due to the broader financial and policy implications, Manitoba Hydro said revenue sharing is not a matter that it can address on its own. Rather, it said revenue sharing is a matter that would require input from, and consideration by, other interested third parties including the province of Manitoba and the Public Utilities Board.

8.6.5 Scope of Manitoba Hydro's Environmental Impact Statement

In response to concerns regarding the VCs selected for the environmental assessment, Manitoba Hydro said that understandings shared through the FNMEP and Indigenous Knowledge studies were provided to assessment practitioners for consideration during the VC selection process. For example, the understanding that all components of the earth are connected contributed to using broad-based, rather than species-specific VCs. Other examples of specific feedback that contributed to specific VC selection included the concerns placed on wildlife (specifically moose and deer), request for employment and training opportunities on the Project, maintaining access to traditional use areas, medicinal plants and the use of herbicides. The value placed on these components by Indigenous communities led to selecting Wildlife and Wildlife Habitat as a VC, and moose and white-tailed deer as focal species. The value placed on medicinal plants contributed to ensuring the Vegetation and Wetlands Chapter of the EIS included considering change in traditional use plant species abundance and distribution.

In response to concerns raised about moose in particular, Manitoba Hydro said its EIS assessed moose within the context of wildlife and the surveys that were done. As an example,

Manitoba Hydro said it conducted aerial ungulate surveys, and moose were among the species that were detected. Targeting multiple species at once is an efficient way to gain an understanding of multiple species. Manitoba Hydro said its assessment of Project impacts on moose also included knowledge about the local populations based on Indigenous input, knowledge from provincial departments, and an understanding of the ecology of the species gained from literature. Those together allowed Manitoba Hydro to draw conclusions about the species and its future in the range.

Manitoba Hydro said VCs that are commonly supported by provincial and federal guidance documents break the world into components. The rationale for this approach is that it is possible to quantitatively measure change in these component parts, allowing reliance on a science-based approach for measuring change. Manitoba Hydro said Indigenous communities have conveyed that this may not align with an Indigenous worldview that does not generally break Mother Earth into component parts, underscoring the value placed on connectedness.

Manitoba Hydro replied to concerns that its EIS methodology is insufficient, as it has not done enough to incorporate Project effects on non-ecological components such as Indigenous cultural knowledge or cultural sense of place and landscapes. It explained this type of information was collected through its FNMEP, including through Project-specific, self-directed studies conducted by several Indigenous communities. Manitoba Hydro shared with communities completing self-directed studies a suggested template of information that included discussion of Cultural and Heritage Areas, Traditional Ecological Knowledge or Important Areas, and Sensitive Information.

Manitoba Hydro reiterated that a key goal of the FNMEP was to integrate perspectives raised through engagement into the route selection and assessment process. The FNMEP and knowledge from self-directed studies were integrated with the EIS and indicated that Project effects may alter the experience of access to and use of cultural sites. Manitoba Hydro said experiential aspects of cultural practices are intangible values. These values encompass individual beliefs and perceptions, are qualitative by nature and not quantifiable in the same way as effects on tangible lands and resources. Given the subjective nature of this effect pathway, Manitoba Hydro said that characterization of effects regarding these intangible values was considered narratively in the assessment of Project effects on plant gathering, hunting and trapping, trails and travelways and cultural sites.

In response to comments that the EIS should have included information related to the impacts on water levels upstream, Manitoba Hydro pointed to the Board's Ruling No. 4 which indicated that upstream effects have been appropriately assessed by other agencies. Though the matter is out of scope, Manitoba Hydro confirmed that water levels on Lake of the Woods will not be impacted by the Project. Further, Manitoba Hydro said the water levels in the Lake of Woods are controlled by the Canadian Lake of the Woods Control Board, which is a government organization to which Manitoba Hydro has no legislative relationship.

8.6.6 Social and Cultural Well-Being

Manitoba Hydro said that through its FNMEP, it heard concerns expressed by some Indigenous communities that EMFs will have an overall negative effect that could result in avoidance of land and changes in traditional activities. Manitoba Hydro said that perceptions about adverse

effects are difficult to quantify and not easily amenable to assessment in the same way as other Project effects. However, the anticipated outcome for these members is reduced use of the land. Given the subjective nature of this effect pathway and the limited site-specific information provided by First Nations regarding perceptions and concerns regarding the Project, this topic was considered narratively in the assessment of Project effects on plant gathering, hunting and trapping, trails and travelways, and cultural sites.

Manitoba Hydro said that as part of its assessment of potential effects on community health and well-being, it undertook a review of literature related to public perception and psychological health related to power lines and industrial developments. Manitoba Hydro acknowledged that despite the number of studies showing there are no links between exposure to EMFs and long-term health effects, the perception of these risks is still a cause for concern and that there are often increased levels of stress and anxiety that result from the presence of a transmission line. In an attempt to mitigate this stress and anxiety, Manitoba Hydro said it will continue to address concerns related to EMF by providing factual, science-based information to concerned individuals and organizations. For example, Manitoba Hydro developed handouts to provide an overview of AC electric and magnetic fields, health information relate to EMF and audible noise from EMF, as well as information regarding EMF interference with electronic devices. Manitoba Hydro also made available a Health Canada brochure which discussed exposure to EMF, reducing risk and Canada's role in monitoring EMF.

Manitoba Hydro responded to concerns raised by Indigenous communities regarding use of herbicides, saying the development of an Integrated Vegetation Management Plan (IVMP) would provide a balanced approach for addressing these concerns through knowledge-sharing and mapping areas of concern. Manitoba Hydro provided the framework for the IVMP, and said it would be completed prior to commencement of vegetation management activities for operation and maintenance of the Project. Manitoba Hydro also developed handouts providing an overview of the process it employs when managing vegetation near transmission power lines, including tree removal, safety, and herbicide application.

Manitoba Hydro said psychosocial effects due to the Project would be very difficult to monitor given they differ between individuals and individuals perceive stresses and risks differently. Given the difficulty in being able to discern the cause of the stress, to measure it and understand the specific reason for that stress, monitoring the impacts of psychosocial effects due to the Project is not anticipated at this time. Manitoba Hydro said one way to mitigate the stress associated with a development like a transmission line is to look for ways to build trust and understanding. It said that one of the ways that it is hoping to build trust is through the activities of the MMTP Monitoring Committee and through the ongoing engagement process. Manitoba Hydro has also committed to working with Indigenous communities to develop additional communication resources that discuss this issue.

8.6.7 Project Routing on Crown land

Manitoba Hydro said it understands that areas of unencumbered Crown lands are important to Indigenous communities. General routing preferences heard through the FNMEP included avoiding Crown land where possible to protect TLE selection opportunities, intact natural areas and wildlife, important plant harvest areas and culturally or historically important sites.

Manitoba Hydro said a key goal of the FNMEP was to integrate perspectives raised through engagement into both the routing and assessment process and the environmental protection program.

During the preference determination step, Manitoba Hydro said the concerns heard during FNMEP, including the value of Crown land and its usage, were considered when routes were evaluated. Manitoba Hydro said the understanding that Crown land is valuable to carry out activities considered important to Métis and First Nations was communicated during each step of transmission line routing and the development of its EIS. Specifically, this value was conveyed during route evaluation workshops and during analysis of traditional land use activities.

For those communities that were not involved in the routing process, Manitoba Hydro indicated that it understands that areas of unencumbered Crown lands and intact natural landscapes are of value to those Indigenous communities as well. It reiterated that general routing preferences heard through the FNMEP included avoiding Crown land where possible to protect TLE selection opportunities, intact natural areas and wildlife, important plant harvest areas and culturally or historically important sites. Manitoba Hydro said that through multiple rounds of engagement, incorporating FNMEP interests into the routing exercise resulted in avoidance of both general and specific areas described as important. As Indigenous communities such as AWZ and NWA develop traditional knowledge studies and identify specific sites of importance, Manitoba Hydro said that additional ESS can be developed to provide further protections.

During Project operation, Manitoba Hydro said there will be no restriction to access of traditional use sites on Crown lands within the Project easement. It said Indigenous communities can still access Crown lands; however, there will be short periods during construction where there will be some restrictions in active construction zones based on safety concerns to Project staff and the public.

With regard to the suggestion of no-net-loss of Crown lands, Manitoba Hydro said this is not feasible for the Project. Manitoba Hydro said the purchase of small amounts of private land and the transferring of it to the Province for distribution or use by Indigenous Peoples is not practicable. Manitoba Hydro suggested that the contiguous nature of intact Crown lands is one of the key aspects of its value. It said the Project's impact to natural habitat is minimal and, in some cases, there are enhancements or additional protections to habitat. Further, Manitoba Hydro said access to Crown land will be impacted only minimally by the Project, and only for short durations during construction. Therefore, Manitoba Hydro said it is not proposing the purchase of offsetting private lands.

With respect to public lands, Manitoba Hydro said an offset program involving the replacement of land affected by the Project with land of similar value elsewhere would require oversight and participation by the Province of Manitoba. As the Province of Manitoba is the owner of most Crown land in Manitoba, and would have oversight over many of the challenges associated with implementing an offset requirement, the Government of Manitoba would be best suited to determine whether an offset program is appropriate and, if so, in what form.

In response to questions about why offsetting was not being proposed, Manitoba Hydro said that in the order of mitigation, first and best is avoiding effects, second is mitigation or minimizing

effects, third is onsite rehabilitation and fourth is offsetting which is last of the sequence. Manitoba Hydro said its first and best approach is avoidance through routing, and it said it has accomplished this in many ways. Manitoba Hydro further submitted that offsets are often not effective.

Manitoba Hydro said the resulting 213 km long Final Preferred Route represents a reasonable balance of perspectives and values, incorporating mitigation proposed during Manitoba Hydro's Public Engagement Process and First Nations and FNMEP. By making use of 92 km of existing corridors that are owned or under easement by Manitoba Hydro, only 121 km of new ROW is required. Manitoba Hydro said the proposed route also mitigates concerns with respect to lands used for private conservation and recreation, and concerns regarding lands of recognized cultural importance to First Nations. As a result of this process, less than 10 per cent of the route traverses unoccupied Crown lands.

8.6.8 Traditional Land and Resource Use

Manitoba Hydro said the effects of previous landscape change, including the conversion of land for agricultural purposes, mining and other resource development, expanding transportation networks, the creation of rights-of-ways and utility corridors, and the transformation of settlements into towns and cities, have resulted in changes to TLRU in the area of the Project.

Manitoba Hydro said Indigenous communities identified a variety of TLRU activities throughout the Regional Assessment Area (RAA): plant harvesting for food, medicinal and cultural purposes; hunting and trapping for both economic and cultural purposes, including big game, small mammals, birds and waterfowl; the use of long-established trails and travelways that connect communities, harvesting areas and gathering places in a network of traditional use and cultural patterns; and cultural sites including areas such as burial sites, sacred sites, spiritual sites and sacred geography.

Manitoba Hydro said Project activities have the potential to change land and resource uses for traditional activities by altering the availability of resources or access to land used for traditional activities. Potential Project effects on TLRU, shared by participants during preliminary routing discussions, included effects on Indigenous and Treaty Rights, historical use, harvesting, sacred and traditional practices, gathering places and burial sites, pressure on TLE interests, and Medicine Line burials.

Manitoba Hydro said a key mitigation measure to address cumulative effects to traditional land and resource use is routing, and the understanding that traditional practices can continue on the ROW once construction is complete. Manitoba Hydro said cumulative effects on the ability to continue to conduct traditional activities and practices is anticipated to be limited as a result of the Project being routed for much of its length within an existing transmission corridor and in a manner that skirts large, intact cultural areas such as those east of the Watson P. Davidson Wildlife Management Area, the Boutang Area of Special Interest, and the Hugo, Caliento, Piney and Sundown Wetlands. Manitoba Hydro said the final preferred route avoids areas identified as important for birds, wildlife, plants of traditional importance, sites of cultural importance and areas to be considered to have high heritage value. Manitoba Hydro also said the routing process considered, and ultimately avoided, many known areas with traditional

use plant species, including 1073 recorded during the 2014 field surveys along the alternate routes that were considered.

Manitoba Hydro said plant harvesting, fishing, hunting and trapping, travel, and use of cultural sites will be widely available in the area of the Project, and that these activities will still be possible, except during active construction, within the Project ROW. Manitoba Hydro said it will work with Indigenous communities to schedule some activities in the ROW around the seasonal timing of Indigenous traditional practices to the extent feasible in light of safety and operational needs.

In response to concerns from those Indigenous communities who have not yet completed an Indigenous Knowledge study, Manitoba Hydro said it adopted a conservative assumption that traditional use activities may occur near the Project even if these activities or site-specific uses were not specifically identified by Indigenous communities.

Manitoba Hydro said Indigenous Knowledge Reports received during the regulatory phase of the Project can still influence the pre-construction, construction and post-construction phases of the Project. The reports will be shared with assessment practitioners who will review them and consider whether assessment conclusions would change. In addition to this review, Manitoba Hydro said ESS can be identified and mitigation can be applied to protect locations, features, areas and activities that are identified to be ecologically, socially or culturally important, or sensitive to disturbance and require protection during Project construction and operation. Manitoba Hydro explained that the information shared would then be used to help inform the CEPP for the Project, which includes monitoring plans, and management plans.

In response to concerns from Indigenous communities who said members may avoid areas due to changes in landscape, access conditions, perceived effects as well as disruption or reduced ability to use areas of importance, Manitoba Hydro said it had considered these concerns. Manitoba Hydro acknowledges that Project effects such as sensory disturbance and vegetation clearing may alter the experience of traditional land use and recognizes the experiential aspects of cultural intangible values. These values encompass individual beliefs and perceptions, are qualitative by nature and not quantifiable in the same way as effects on tangible lands and resources.

Manitoba Hydro said it reduced potential Project effects by considering culturally important areas identified by Indigenous community members during the routing process and through other mitigation measures. It said mitigation measures can address potential effects regarding both tangible and intangible values. It also said its Project design has reduced the adverse effects to land and resources important to cultural practices, while areas of interest to Indigenous Peoples will remain accessible to practice traditional harvesting activities once the Project is operational (and during certain portions of construction). Because tangible and intangible values are often connected, mitigation measures aimed at avoiding or reducing effects to tangible values may also help avoid or reduce effects to intangible values.

Manitoba Hydro said that, in addition to the work of the MMTP Monitoring Committee, Indigenous communities would be invited to attend regular field trips to the construction areas with the focus being the highly valued undisturbed land or land with little disturbance, as well as

areas identified as sensitive sites. Field trips with representatives would take place throughout both the construction and monitoring and would be guided by various staff depending on topic, including Construction Supervisors, Environmental Inspectors and Specialists such as experts in botany, wildlife, and traditional medicinal plants. Further, Manitoba Hydro is planning to monitor changes to traditional use plant species to validate EIS predictions, verify implementation of mitigation measures and to allow for adaptive management. More information regarding Manitoba Hydro's monitoring plans can be found in Chapter 9, Environmental and Socio-Economic Matters.

8.6.9 Heritage Resources

Manitoba Hydro said the best mitigation practice for heritage resources is avoidance. It explained that the routing criteria for selecting alternative and preferred routes are an example of how heritage resources were avoided during the early planning stages for the Project. Manitoba Hydro noted that Indigenous Knowledge studies and the FNMEP also provided an opportunity for areas of heritage resources concerns to be identified.

Manitoba Hydro said additional mitigation measures are determined through the Heritage Resources Branch (HRB) of Manitoba review of Manitoba Hydro's heritage resources impact assessment (HRIA) for the Project that details the results of the archaeological assessment conducted for the Project and the heritage resource management strategy recommendations from the province. Manitoba Hydro said the initial HRIA was conducted in September and October 2014, with additional surveys for sites with high potential for archaeological resources within the ROW planned for 2018. Manitoba Hydro said its HRIA is still under review by the HRB, and should be completed in the near term.

Should previously unidentified heritage resources be encountered during the construction phase of the Project, Manitoba Hydro said activity will cease until the HRB has been informed, a qualified archaeologist has examined the objects and site context, and clearance from HRB has been granted. Additionally, Manitoba Hydro said it will follow processes outlined in Manitoba's *Heritage Resources Act (1986)* and the Draft Manitoba-Minnesota Transmission Project CHRPP.

Manitoba Hydro said the use of a CHRPP is a proactive approach to effectively manage potential discoveries of human remains, and cultural and heritage resources. Ongoing reporting will include annual monitoring reports submitted to the Manitoba Historic Resources Branch as per the terms of the *Heritage Resources Act (1986)* and heritage permit requirements. Manitoba Hydro said that, in addition to the HRIA, ongoing protection measures such as the implementation of a heritage resource impact monitoring (HRIM) field work program will continue the assessment of areas of high heritage potential over the course of clearing and construction activities.

Manitoba Hydro's CHRPP also includes a communication protocol that will be circulated to interested Indigenous communities and which will enable them to provide feedback on items such as a description of the area of interest the community feels may contain heritage and cultural resources important to them, whether they want Manitoba Hydro to contact them upon discovery of unrecorded cultural or heritage resources, as well as any ceremonial or spiritual activities the community would like conducted prior to construction. Manitoba Hydro said the

HRIM will follow an adaptive management approach and will include Indigenous knowledge regarding cultural and heritage resources. Indigenous knowledge holders will inform the heritage resource surveys through direct involvement in the pre-construction HRIM field investigation and share results with their respective communities.

Manitoba Hydro also said the MMTP Monitoring Committee will have input into the CHRPP, and committee members have been invited to attend future field work activities. Manitoba Hydro said effects are also mitigated through worker education programs before construction begins, and detailed recording of any surface sites judged to be at increased risk of vandalism because of increased human access.

8.6.10 Section 35(1), *Constitution Act, 1982*

Manitoba Hydro said it views its engagement program as distinct from the Crown's required consultations on rights protected by Section 35 of the *Constitution Act, 1982*. It said the legal obligation to undertake consultations with respect to the Project lies with Canada and the Province of Manitoba and has not been delegated to Manitoba Hydro.

Manitoba Hydro said that when acting as an agent of the Crown in circumstances where the Crown is required to uphold the honour of the Crown, Manitoba Hydro must act in a way which upholds the honour of the Crown, and that it attempts to do so at all times. Manitoba Hydro said it recognizes that Indigenous rights are constitutionally recognized and affirmed under Section 35. In considering Indigenous rights, Manitoba Hydro endeavours to engage with the Indigenous community to fully understand the importance of any Treaty Rights and any activities, practices and traditions that are unique to the culture of that community. Manitoba Hydro said its focus is not on valuing those rights in comparison with other interests, but rather on endeavouring to avoid (where possible), lessen or mitigate any potential impact on such right or the exercise of such rights.

Manitoba Hydro noted that Section 35 rights include Treaty Rights such as the right to continue traditional pursuits of hunting, trapping, and gathering on unoccupied Crown lands. The section also recognizes Indigenous rights which the courts have defined as the collective customs, practices and traditions significant to the distinctive culture of an Indigenous community or nation. Manitoba Hydro said the consideration of these traditional pursuits, activities, practices and traditions and the potential impact of the Project on them were considered through engagement with Indigenous communities, through traditional land and resource use studies undertaken with funding provided by Manitoba Hydro, and through participation of Indigenous communities in the FNMEP, all of which informed transmission line routing and the EIS.

Manitoba Hydro said it did not do an assessment of the rights as such, but on the potential impacts of the Project on the activities, pursuits, practices and traditions which are often the subject matter of such rights. When an Indigenous community described these as constitutionally protected rights, Manitoba Hydro accepted that statement and considered these as exceptionally important to that Indigenous community. In every case, Manitoba Hydro said that efforts were made to avoid or mitigate potential effects.

8.7 Views of the Board

8.7.1 Manitoba Hydro's Engagement with Indigenous Peoples

In addition to providing technical information addressing Project-related impacts on, among other things, land use, wildlife, vegetation, and heritage resources, Manitoba Hydro was required to make all reasonable efforts to engage with potentially affected Indigenous communities and to provide information about that engagement to the Board. This included evidence on the nature of the interests potentially affected, the concerns that were raised and the manner and degree to which those concerns have been addressed. Manitoba Hydro was expected to report to the Board on all concerns that were expressed to it by Indigenous communities, even if it was unable or unwilling to address those concerns. Therefore, even if Indigenous communities chose not to participate in the subsequent hearing process, any concerns could be brought to the attention of the Board through the applicant's evidence.

This early engagement was guided by the Board's Electricity Filing Manual requirements. The requirements reflect the fact that an applicant is often in the best position to respond to the concerns of Indigenous communities about a project before an application is filed, and while a project is still in the early stages of development. The Board expects an applicant to design and implement its engagement activities with regard to the nature and magnitude of a project's potential impacts both from early in the design phase and into the future operational phase of the project. Where there is a greater risk of more serious impacts on Indigenous interests including rights (which would, in part, depend on the nature of that interest), the Board has greater expectations in terms of the applicant's engagement with potentially impacted Indigenous communities. In contrast, where there is a remote possibility of an impact on Indigenous interests, or the impacts are minor in nature, the applicant's engagement will generally not be expected to be as extensive.

A proponent's early engagement with Indigenous communities is a critical part of the development of a proposed project, and a key matter for consideration within the regulatory review process. Timely, accessible and inclusive engagement facilitates the effective exchange of information, and provides opportunities for the company to learn about the concerns of potentially affected Indigenous communities, to discuss how those concerns can be addressed through project design and operations, and to develop and discuss measures to reduce and mitigate the effects a project may have on the interests of Indigenous communities. Timely and effective engagement can help establish productive relationships that can carry on throughout the life of the project. It also informs the Board of the concerns Indigenous communities may have about a project's impacts.

In assessing the engagement undertaken by Manitoba Hydro with Indigenous Peoples, the Board evaluated the design and implementation of Manitoba Hydro's engagement activities. The Board considered the company's activities to engage Indigenous communities and to learn about their concerns and interests, as well as the concerns and views expressed by Indigenous communities. It also considered how Indigenous communities responded to opportunities for engagement and how Manitoba Hydro sought to understand and address the concerns of potentially affected communities. The Board considered how this input influenced the Project's proposed design and operation.

The Board has fully considered the concerns raised by Indigenous communities about Manitoba Hydro's engagement (summarized in section 8.5.1), and has weighed that evidence against the evidence submitted by Manitoba Hydro in reply to these concerns (summarized in section 8.6.1).

The Board is of the view that Manitoba Hydro's design of Project-specific engagement activities was adequate given the scope and scale of the Project. The Board notes that Manitoba Hydro has been engaging on the Project since August 2013, when Manitoba Hydro sent a Project Information Package to Indigenous communities it identified as being potentially impacted by the Project. In addition to its early engagement on the Project itself, Manitoba Hydro also made communities aware of both the provincial CEC and the NEB assessment processes. Manitoba Hydro was required to provide additional notice in June 2017 to communities not previously identified, as a result of the Board's Indigenous consultation directive. Manitoba Hydro provided Project information to all potentially-impacted Indigenous communities, including information about the Project design, operations, environmental, social and economic effects, as well as potential economic development opportunities such as contracting and employment. The Board is of the view that potentially affected Indigenous communities were appropriately identified and provided information about the Project.

The Board notes Manitoba Hydro's commitment to work with Indigenous communities to address Project-related concerns and finalize measures to address the Project's effects. The Board is encouraged by the establishment of the MMTP Monitoring Committee and notes that all 25 potentially impacted Indigenous communities have been invited to participate. The Board expects Manitoba Hydro to continue to learn about the concerns that Indigenous communities may have about a Project, and to discuss ways to address those concerns to the extent possible. The Board also encourages Indigenous communities with an interest in the Project to continue to engage with Manitoba Hydro.

The Board's process acts as a necessary and important check on the engagement conducted by the proponent, by providing Indigenous Peoples an additional avenue to explain their concerns about the Project and have those concerns considered by the Board. The Board is satisfied that, with Manitoba Hydro's commitments and the Board's **Conditions 10, 11 and 21**, Manitoba Hydro will continue to engage with Indigenous communities in order to learn more about their interests and concerns; provide opportunities through the MMTP Monitoring committee to participate in additional surveys; demonstrate how it has considered and addressed information provided in outstanding Indigenous Knowledge studies into its EPP; and address issues that Indigenous communities may raise throughout the lifecycle of the Project. Therefore, having assessed all of the evidence, the Board finds that the design and implementation of Manitoba Hydro's engagement activities is appropriate.

8.7.2 Capacity Funding, Timing and Resource Constraints

Indigenous communities raised concerns about capacity funding and resource constraints. To address these constraints, the Board administers a PFP which provides financial assistance to support participation of Indigenous Peoples and other affected communities. The Board also assigned a Process Advisor to support Indigenous communities and the public who participated in the hearing.

The Board, as a regulatory tribunal, is bound by the common law requirements related to procedural fairness when making decisions that have the potential to impact rights. In its Rulings, described in Section 8.3.3, the Board strived to address timing and hearing constraints fairly.

The Board notes that Manitoba Hydro entered into a variety of agreements with Indigenous communities in order to carry out technical discussions and community and engagement activities, including: funding for Indigenous Knowledge studies and land-use or occupancy studies; funding to hire part-time community coordinators; support for two members from each community or organization to participate in the MMTP Monitoring Committee activities; and also offered community-specific Project agreements.

Having considered the evidence filed, as summarized in sections 8.5.2 and 8.6.2, the Board is satisfied with how Manitoba Hydro has addressed these constraints and with the commitments that Manitoba Hydro has made to Indigenous communities as part of its ongoing engagement process.

8.7.3 MMTP Monitoring Committee

The Board has considered the evidence filed about the MMTP Monitoring Committee, which is summarized in sections 8.5.3 and 8.6.3.

The Board understands the value and unique perspective that Indigenous communities can provide in determining the effectiveness of mitigation measures, based on their traditional knowledge, as well as their ongoing use of the lands and resources in the area. The Board is encouraged by the establishment of the MMTP Monitoring Committee, which is already underway with Terms of Reference and scope of activities being developed by its members. The Board notes that all 25 potentially affected Indigenous communities have been invited to participate in the Committee.

The Board understands that the purpose of the committee is to support effective and meaningful participation in the monitoring of the Project, to create a platform for understanding issues of concern to Indigenous participants and Manitoba Hydro in order to collaboratively provide informed advice on how to address issues of concern, and to share information relating to the environmental issues in a cooperative and transparent manner. The Board is of the view that the MMTP Monitoring Committee will be an effective way to both address Indigenous communities' concerns regarding Project impacts, as well as to include Indigenous knowledge in monitoring activities for the Project.

8.7.4 Employment and Economic Benefits

The Board has considered the evidence filed with respect to employment and economic benefits. The evidence is summarized in sections 8.5.4 and 8.6.4.

The Board acknowledges Manitoba Hydro's commitments regarding the Indigenous content provisions of its construction contracts, which will result in purchases from Indigenous suppliers, contracts with Indigenous subcontractors, and direct employment and training of Indigenous

Peoples. The Board notes that approximately 17 per cent of Manitoba's population identifies as Indigenous and is of the view that Manitoba Hydro's minimum requirement of 20 per cent Indigenous content, with additional incentives for greater than 20 per cent, is appropriate. The Board expects that Manitoba Hydro will work with its contractors to ensure that job descriptions and necessary skill requirements for each job are clearly communicated to those Indigenous individuals and communities that are interested in participating in construction for this Project. As noted in Chapter 10, the Board is of the view that the Project will benefit local, regional and provincial economies. The Board is also of the view that the Project will result in increased employment for Indigenous individuals and contracts for Indigenous-owned businesses.

8.7.5 Scope of Manitoba Hydro's Environmental Impact Statement

The Board heard concerns from Indigenous communities about the scope of Manitoba Hydro's EIS. The concerns raised are summarized in section 8.5.5. Manitoba's reply is summarized in section 8.6.5. The Board has fully considered all of the evidence filed on this issue.

The Board has considered the concerns raised by AWZ, NWA and Shoal Lake #40 related to the generation of electricity and reservoir management, and the potential impacts of these on its traditional territory. However, the Board accepts the evidence of Manitoba Hydro that this Project will not impact the water levels on Lake of the Woods. The Board notes that Manitoba Hydro is continuing to engage with Shoal Lake #40, including as part of the MMTP Monitoring Committee, and encourages AWZ, NWA and Shoal Lake #40 to continue to engage with Manitoba Hydro on Project-specific impacts on its traditional territory. Further, the Board notes that water levels on Lake of the Woods are regulated by the Canadian Lake of the Woods Control Board, which the Board understands operates under legislation that describes the operating limits for Lake of the Woods. The Board heard from Indigenous communities that their concerns are not considered when it comes to the water level on the lake and encourages the Canadian Lake of the Woods Control Board to continue to seek input from all people who are affected by the water levels, both upstream and downstream of the dam, including the Indigenous communities that participated in this hearing.

The Board notes the concerns raised by Wa Ni Ska Tan related to the upstream generation of electricity and reservoir management and the potential impacts of these on the traditional territories of Indigenous communities living elsewhere in Manitoba, and also notes the Project as applied for is not dependent on any new upstream facilities. The application before the Board is for the construction and operation of the Project. The Board is of the view that upstream facilities are not part of the Project, and as such, the scope of this decision is limited to the powerline and its immediate associated facilities.

The Board has assessed Manitoba Hydro's EIS methodology, including its selection of VCs to assess Project impacts and is satisfied that it used an approach that is in accordance with provincial and federal guidance documents, including the Board's Filing Manual. This is discussed in greater detail in Chapter 9, Environmental and Socio-Economic Matters.

8.7.6 Social and Cultural Well-Being

In arriving at its Views on the issue of social and cultural well-being, the Board fully considered the evidence filed by Indigenous communities (summarized in section 8.5.6) and by Manitoba Hydro (summarized in section 8.6.6).

The Board acknowledges the concerns raised regarding EMF exposure and herbicide use, and in particular the perception of risk to human health by Indigenous communities. The Board notes that Manitoba Hydro's Application included a comprehensive assessment of EMF and EMF-related exposures. The Board accepts the results of that assessment which indicate that health impacts are not expected to occur for those who may be exposed to EMF while using the transmission line ROW. The Board is also satisfied that Manitoba Hydro will develop an IVMP to address concerns related to herbicide use.

The Board notes Manitoba Hydro's commitment to continue to work with Indigenous communities through ongoing engagement as well as the MMTP Monitoring Committee to develop relevant educational materials to assist in alleviating concerns regarding EMF, as well as herbicide use, and their impacts.

The Board acknowledges the concerns expressed from Indigenous communities regarding the impacts and availability of Crown land, including the cultural connection they have with this land and the value they place on the ability to access Crown land. The Board's consideration of routing impacts on Crown land, including a Board Condition, is noted below.

Having weighed all of the evidence filed on the record, the Board is satisfied with Manitoba Hydro's approach to assessing concerns related to the social and cultural well-being of Indigenous communities and notes that it is working to share information and building understanding of the Project in an attempt to build trust with all potentially impacted communities. The Board's assessment of impacts to human health, including that of Indigenous Peoples, is in Chapter 9, section 9.6.5.2 of this Decision.

8.7.7 Project Routing impacts on Crown land

The Board acknowledges the concerns expressed from Indigenous communities regarding the impacts and availability of Crown land, including the cultural connection they have with this land and the value they place on Crown land. The evidence on this issue is summarized in section 8.5.7, Manitoba's reply summarized in section 8.6.7 and additional assessment and views are found in Chapter 9, Environmental and Socio-Economic Matters.

The Board notes that Manitoba Hydro considered the value placed on Crown lands identified by Indigenous communities and worked to adjust the route in order to address concerns, with the result being that of the 121 km of new ROW, only 36 km will be on Crown land, with less than 10 per cent of the overall route crossing unoccupied Crown lands.

As indicated in Chapter 6, Land Matters, the Board finds the anticipated land requirements to be reasonable and justified. The Board also notes that the route selection process and the criteria used to determine the route were discussed in great deal as part of the CEC Report, and

finds them to be acceptable and appropriate. The Board echoes the CEC's non-licensing Conditions 7.2, which states that Manitoba Hydro take into account the full range of natural values and traditional uses of Crown land and private land in route selection, as well as 8.4 which states that Manitoba Hydro support reforestation or other habitat development projects within the Project Study Area.

The Board also recognizes that reduced or interrupted access to Crown lands may result in disruptions in the ability of Indigenous communities to practice their Treaty Rights or traditional activities. The Board is of the view that such an event could place burdens and challenges on affected Indigenous communities. As a result, the Board imposes **Condition 22** which requires Manitoba Hydro to submit a Crown Land Offset Measures Plan that outlines how permanent loss of Crown lands available for traditional use by Indigenous Peoples resulting from the Project will be offset or compensated.

8.7.8 Traditional Land and Resource Use

Sub-paragraphs 5(1)(c)(iii) and (iv), and 5(2) (b)(ii) and (iii) of the CEEA 2012 require consideration of the environmental effects that are likely to result from the designated project on the current use of lands and resources for traditional purposes,¹² as well as physical and cultural heritage, or any structure, site or thing that is of historical, archaeological and paleontological or architectural significance with respect to Indigenous Peoples. In its evaluation, the Board has considered the effects of the Project to include all of the effects described in section 5 of CEEA. The Board's approach to its environmental assessment is described in Chapter 9, Environmental and Socio-Economic Matters.

In assessing potential impact on Indigenous interests, the Board considered all of the evidence provided. The Board assessed the information provided in Manitoba Hydro's EIS on potential impacts on Indigenous interests, including rights, the concerns raised by Indigenous communities and the measures Manitoba Hydro has proposed to minimize or eliminate the Project's potential impacts on the interests of Indigenous Peoples. (Concerns about impacts on traditional land and resource use filed by Indigenous communities are summarized in section 8.5.8 and Manitoba Hydro's responses are summarized in section 8.6.8. Additional assessment and views are provided in Chapter 9.)

Through the assessment process, Indigenous communities had the opportunity to make known to Manitoba Hydro and the Board their views and concerns about the Project, including what effects it might have on their potential interests. As noted above, Indigenous communities expressed their views and concerns about the importance of the land and the water, and how the Project might affect their Indigenous and Treaty rights, including those related to hunting,

¹² The Board references the Technical Guidance for Assessing the Current Use of Lands and Resources for Traditional Purposes under CEEA 2012: https://www.canada.ca/en/environmental-assessment-agency/services/policy-guidance/technical-guidance-assessing-current-use-lands-resources-traditional-purposes-under-ceaa-2012.html#_Toc006.

fishing, trapping, the harvest of plant resources for food and medicines, and the maintenance of cultural practices within their traditional territories.

The Board heard from Indigenous Intervenors about the importance of incorporating traditional land use information into the Project's design, as well as construction and operational activities. The Board understands that Manitoba Hydro has reached an agreement with 11 Indigenous communities to complete Indigenous Knowledge studies, and has committed to continue to meet with Indigenous communities to identify sites of concern to be avoided during construction and during application of chemical vegetation management. The Board is encouraged by the creation of the MMTP Monitoring Committee which has seen the participation of 14 Indigenous communities since its inception in 2016.

The Board acknowledges the concerns raised by Indigenous communities regarding the potential effects of the Project on traditional land and resource use, as well as the recommendations made to the Board by a number of Indigenous communities. The Board acknowledges Manitoba Hydro's commitments to hearing and, where possible, addressing concerns, to ensuring on-going dialogue about the Project and its potential impacts, and to seeking information on an ongoing basis about the use of lands in the area for traditional purposes by all Indigenous communities who have expressed an interest in the Project. The Board imposes **Condition 11** requiring Manitoba Hydro to submit a report outlining a plan for completing outstanding Indigenous knowledge studies, including a description of how Manitoba Hydro has revised its CEPP as a result of the Indigenous knowledge studies.

The Board accepts the evidence of Manitoba Hydro that it has worked to route the Project away from unoccupied Crown lands to the extent possible in order to respond to concerns from Indigenous communities. The Board also accepts that, after construction is completed, access to the ROW will be unchanged and plant harvesting, fishing, hunting and trapping, travel and use of cultural sites will be widely available in the area of the Project, and that these activities will still be possible. The Board finds that effects of the Project on traditional land and resource use will therefore be short-term to medium-term in duration, reversible in the long-term, limited to the LAA, and low to moderate in magnitude. Given all of the above, the Board finds that the potential adverse effects of the Project on the current use of lands and resources for traditional purposes by Indigenous Peoples are not likely to be significant. Chapter 9 specifies the definitions for criteria used in this evaluation.

As previously noted, the Board recognizes that reduced or interrupted access to Crown lands may result in disruptions in the ability of Indigenous Peoples to practice their traditional activities. The Board is of the view that such an event could place burdens and challenges on affected Indigenous Peoples. As a result, the Board imposes **Condition 22** which requires Manitoba Hydro to submit a Crown Land Offset Measures Plan that outlines how permanent loss of Crown lands available for traditional use by Indigenous Peoples resulting from the Project will be offset or compensated for.

8.7.9 Heritage Resources

Sub-paragraphs 5(1)(c)(ii) and (iv), and 5(2) (b)(ii) and (iii) of the CEAA 2012 require consideration of the environmental effects that are likely to result from the designated project on physical and cultural heritage, or any structure, site or thing that is of historical, archaeological and paleontological or architectural significance, including with respect to Indigenous Peoples. In its evaluation, the Board has considered the effects of the Project on heritage resources to include all of the effects described in paragraph 5 of the CEAA 2012. The Board's approach to its environmental assessment is described in Chapter 9, Environmental and Socio-Economic Matters.

The Board recognizes the value of heritage resources preservation to Indigenous communities, and acknowledges the information and knowledge shared by Indigenous communities with the Board and Manitoba Hydro regarding historical, cultural, archaeological and paleontological sites that are of significance and value to them. The Board acknowledges the concerns raised by Indigenous communities regarding the potential effects of the Project on physical and cultural heritage resources, as well as the recommendations made to the Board by a number of Indigenous communities. These included, among other things, the inclusion of Indigenous communities during field work, and reporting and monitoring during construction. A summary of concerns raised by Indigenous communities about heritage resources is provided in section 8.5.9, and Manitoba Hydro's responses are provided in section 8.6.9. Additional assessment of possible effects to heritage resources is in Chapter 9.

Management of archaeological and heritage resources is the responsibility of the provincial government. Before construction can begin, Manitoba Hydro must obtain clearances from the Heritage Resources Branch of Manitoba with respect to archaeological and heritage resources. Any permits issued by Manitoba may identify any conditions of approval or mitigation measures that Manitoba Hydro would be required to meet. The Board is also supportive of CEC licensing recommendation 9.1 which says Manitoba Hydro is to include participation of Indigenous and local knowledge holders in heritage resource surveys.

The Board is therefore of the view that, with the measures and commitments made by Manitoba Hydro to avoid all sites where possible and to implement its CHRPP in the event resources are encountered during construction, the evidence and traditional knowledge identifying potential sites of concern provided by Indigenous communities, and the regulatory oversight of provincial authorities that issue final clearances for lands involved for the Project, the potential effects of the Project on physical and cultural heritage resources would be confined to the ROW, would be short to long term, reversible to permanent, and of low to moderate magnitude. Chapter 9 specifies the definitions for criteria used in this evaluation.

To ensure that the Board and all parties, including potentially affected Indigenous communities, are aware of any approvals or conditions imposed by provincial authorities for the Project, the Board imposes **Condition 16** requiring Manitoba Hydro to file confirmation that all archaeological and heritage resource permits and clearances have been obtained from the relevant provincial ministry prior to commencing construction, including how these have been incorporated into Manitoba Hydro's CEPP. In addition, **Condition 10** (Construction Environment Protection Plan) is for approval and includes the final version of Manitoba Hydro's CHRPP.

The Board finds that, with Manitoba Hydro's obligation to meet provincial requirements, its own commitments, and the Board's recommended conditions, the construction and operation of the Project are not likely to cause significant adverse environmental effects on heritage resources, including with respect to Indigenous Peoples. Chapter 9 specifies the definitions for criteria used in this evaluation.

8.7.10 Section 35(1), Constitution Act, 1982

Submissions were made during the hearing process by AWZ, MMF, Peguis, NWA, Sagkeeng, SCO and Shoal Lake #40, regarding the adequacy of consultation, in recognition of the rights recognized and affirmed in section 35 of the *Constitution Act, 1982*, and the need for an assessment of consultation. Submissions made by Indigenous communities are summarized in section 8.5.10 and Manitoba Hydro's responses are summarized in section 8.6.10.

The Board notes that two recent Supreme Court of Canada decisions, *Clyde River (Hamlet) v. Petroleum Geo-Services Inc.*, 2017 SCC 40, and *Chippewas of the Thames First Nation v. Enbridge Pipelines Inc.*, 2017 SCC 41, have acknowledged the Crown's ability to rely on the Board's regulatory assessment process to fulfill its duty to consult when the Board is the final decision-maker. The Board is the decision-maker in relation to Manitoba Hydro's MMTP. The Federal Crown strongly encouraged all Indigenous communities whose established or potential Indigenous or Treaty Rights could be affected by the Project to apply to participate in the Board's public hearing process.

Regulatory tribunals, through their legislative mandates, are charged with performing duties and exercising the powers that fall within the executive branch of government. Regulatory tribunals such as the Board must perform those duties and exercise those powers, not only in accordance with their legislative mandates, but also in accordance with section 35 of the *Constitution Act, 1982* and other applicable laws. The NEB Act provides the Board with broad powers and expansive remedial authority to deal with the impacts of federally-regulated power line projects. The Board is the federal statutory body that has the most direct involvement in the assessment of applications to construct and operate international power lines. The Board also has the technical expertise and the regulatory experience to understand a project, the likelihood of effects and the measures that can be implemented to minimize effects. In addition, the Board has the authority to elicit commitments from the proponent, impose conditions on an approval and ensure ongoing regulatory oversight of a project and a proponent's compliance. The Board also has been given the statutory mandate to impose and enforce mitigation measures to reduce negative project effects and hold a proponent to the commitments made in the Board's project assessment process to enhance benefits.

The framework within which the Board operates and under which decisions under the NEB Act are made, including the requirement that a project assessment process be conducted in a procedurally fair manner, can provide a practical, effective and efficient way within which Indigenous Peoples can request and receive meaningful assurances from the proponent or the Board about project-related effects on Indigenous interests, including rights. Hearing directly and indirectly about Indigenous Peoples' concerns about project-related impacts on their interests allows the Board to impose measures to mitigate the impacts and balance, as appropriate, any residual effects with the other societal interests at play when assessing a

project. As a result, decisions on international power line projects can be made in a constitutionally-appropriate manner consistent with the honour of the Crown.

It should be understood that the Board's consideration of what is required in terms of consultation with Indigenous Peoples is a fluid process as more information is obtained and assessed in the Board's proceeding. There are several points in a Board proceeding where the existence and extent of an Indigenous interest and the potential impact on that interest will be considered with a view to determining the procedural opportunities that must be provided and the substantive outcomes that are warranted. For example, such factors may be considered when:

- the proponent determines who may be impacted by its proposed project;
- the Board decides to whom notices are sent;
- the Board considers the type of Board process that should be employed;
- the Board decides who should be allowed to participate in the proceeding and to what extent;
- the Board assesses the level of consultation expected of the proponent and any others who may have authority to deal with an issue;
- the Board considers the totality of information required from the proponent regarding potential impacts and proposed mitigation measures;
- the Board considers the totality of information required from Indigenous participants;
- the Board determines what conditions would need to be imposed; and,
- the Board determines whether the authorization should be issued.

The Board's process is designed to be thorough and accessible to Indigenous Peoples so that they may make their concerns known to the Board and have those concerns addressed as appropriate. In addition to the mandated one-on-one engagement that is to occur between an applicant and potentially impacted Indigenous communities (described in Section 8.2), it should be understood that the Board's hearing process itself (described in Section 8.3), including these reasons, is part of the overall consultative process.

In this Application, while much of the early engagement was performed by Manitoba Hydro, the Board process acted as a necessary and important check on that engagement and gave Indigenous Peoples an additional avenue to explain their concerns about the Project and have those concerns considered by the Board. In addition to the information submitted by Manitoba Hydro regarding potential impact of the Project on Indigenous interests in the Project area, the Board also asked IR 1.1 to Indigenous communities directly, asking them to provide additional comments on Manitoba Hydro's proposed mitigation measures in order to aid the Board in its assessment of the suitability and appropriateness of the proposed mitigation measures. Indigenous Intervenor also had the opportunity to comment on both the Board's draft conditions, as well as the CEC Recommendations.

The Board is of the view that Manitoba Hydro designed and implemented appropriate and effective engagement activities for the Project, and is also of the view that the Board process was appropriate for these circumstances.

The Board has considered the information submitted regarding the nature of potentially affected Indigenous interests in the Project area, including information on constitutionally protected Indigenous and Treaty Rights. The Board has also considered the anticipated effects of the Project on those interests and the concerns expressed by Indigenous communities, as discussed in this Chapter and this Decision. In light of the nature of the interests and the anticipated effects, the Board has evaluated the consultation undertaken with respect to this Project, including the mandated engagement performed by Manitoba Hydro and the consultation undertaken through the Board's project assessment process. The Board has also considered the mitigation measures proposed to address the various concerns and potential effects. The Board is of the view that there has been adequate consultation and accommodation for the purpose of the Board's decision on this Project. The Board is of the view that any potential Project impacts on the interests, including rights, of affected Indigenous communities, after mitigation, are not likely to be significant and can be effectively addressed.

As a result of the above, considering all of the findings in this Decision, the Board is of the view that an approval of this Project is consistent with section 35 of the *Constitution Act, 1982* and the honour of the Crown.

Chapter 9

Environmental and Socio-Economic Matters

Since the Project includes construction and operation of a new electrical transmission line with a voltage greater than 345 kV and more than 75 km of new right-of-way (ROW), it is a designated project under the *Canadian Environmental Assessment Act, 2012* (CEAA 2012). The NEB, as the responsible authority under the CEAA 2012, is required to ensure that an environmental assessment (EA) is conducted and an EA report is prepared. The Board also considers environmental protection as part of its broader mandate under the *National Energy Board Act*. When making its decision, the Board is responsible for assessing the environmental and socio-economic effects of the Project. This chapter represents the Board's EA.

The proposed modifications to the Riel and Glenboro international power lines (IPLs), as well as several of Manitoba Hydro's station sites, are incidental to the construction of the Dorsey IPL and have been included in the Board's EA.

9.1 The Canadian Environmental Assessment Act, 2012 Context

The Board posted a Notice of Commencement on the Canadian Environmental Assessment Registry Site (CEARIS) on 21 December 2017 and its reference number is 80114. Prior to this, on 19 April 2017, the Board posted on the CEARIS a description of the scope of the assessment, including the broad scope of environmental effects and factors that the Board must consider as provided for under sections 5 and 19 of the CEAA 2012. The environmental effects considered include those listed in subsection 5(1) of the CEAA 2012 and those set out in the NEB's Electricity Filing Manual.

The CEAA 2012 requires the Board to provide opportunities for public participation and to provide participant funding, both of which are further described in Chapters 3, Overview, and Chapter 8, Indigenous Matters.

For brevity, where the terms *environmental effects* or *environmental issues* are used in this Chapter, they refer to socio-economic as well as environmental effects or issues.

9.2 The Province of Manitoba's Environmental Assessment

On 31 December 2015, the Manitoba provincial Minister of Conservation and Water Stewardship (now Minister of Sustainable Development) asked the Clean Environment Commission (CEC) to conduct public hearings into the application by Manitoba Hydro for an *Environment Act* licence for the Project. In a letter to the CEC, the Minister provided terms of reference for the hearings and for the CEC's report. In accordance with the *Environment Act*, the CEC was asked to review Manitoba Hydro's Environmental Impact Statement, including its public engagement program. The Minister also asked the CEC to consider, as input to the hearings, documents produced by the Technical Advisory Committee of provincial officials and

federal specialists, as well as any other documentation produced in the review process. The CEC was also requested to make a recommendation on whether an *Environment Act* licence should be issued for the Project and on any conditions that should be attached to such a licence.

The CEC issued its report on 12 September 2017. A decision by the Minister of Manitoba Sustainable Development has not yet been rendered for the Project.

9.3 The Board's Environmental Assessment Methodology

In assessing the environmental effects of the Project, the Board used an issue-based approach as set out in the NEB's Electricity Filing Manual.

The assessment begins with a description of the Project and activities to be conducted (Section 9.4), followed by a description of the setting, and the environmental and socio-economic elements within that setting (Section 9.5).

Based on this information, the Board then identified Project-environment interactions expected to occur and any resulting potential adverse environmental effects (Table 9-2 in Section 9.6.1). For those valued components for which Project-related environment interactions are not expected, or the interaction would result in positive or neutral effects, further examination was deemed unnecessary.

The Board then assessed the potential adverse environmental effects and the adequacy of Manitoba Hydro's proposed environmental protection strategies and mitigation measures for the Project. Section 9.6.3 discusses the extent to which standard mitigation measures are relied upon by Manitoba Hydro to mitigate potential adverse effects. The Board provides detailed analyses of Manitoba Hydro's mitigation measures as they relate to the Board's federal responsibilities in Section 9.6.4 and of outstanding issues of public concern related to key environmental elements in Section 9.6.5. For each issue discussed in Sections 9.6.3 to 9.6.5, Views of the Board are provided and the Board assesses whether further mitigation is required by way of condition on any potential Project authorization, in order to ensure any potential effects would not be significant.

Where there are any residual effects remaining after proposed mitigation, cumulative effects are considered in Section 9.7. Follow-up under the CEAA 2012 is then discussed in Section 9.8. The Board's determination of significance for the Project under the CEAA 2012 is provided in Section 9.9. The Board's EA Conclusion is provided in Section 9.10.

The Board received a number of submissions from participants who raised numerous concerns related to environmental issues. To avoid duplication of the Province of Manitoba's regulatory process, the Board's EA report does not include an assessment of issues raised by participants in the Board hearing that are similar in nature to those raised by participants of the provincial hearing and for which new information has not been filed in response to those issues as part of the Board hearing. The Board's EA only assesses and addresses those issues raised by participants which are new, or for which new mitigation/environmental protection measures have been committed to by Manitoba Hydro or are required as a result of the Board's assessment.

Table 9-2 in Section 9.6.1 identifies the environmental issues raised by participants, by valued component. The table indicates where hearing participants' issues were considered. The table also identifies similar issues raised during the provincial hearing process. Where issues were raised in the provincial process, the Board has noted this in the table. A number of participants raised concerns related to Manitoba Hydro's mitigation and monitoring plans and the Board's related proposed draft conditions, which are not valued component-specific. These issues have been addressed in Section 9.6.3 (Standard Mitigation).

9.4 Project Details

Chapter 3, Overview, of this Decision provides a general description of the Project. In addition, Table 9-1 provides further details regarding each Project component and the activities associated with those components that are relevant to the environmental assessment. Greater detail regarding Project components and activities can be found in Chapter 4, Facilities, Safety and Emergency Response Matters.

Table 9-1: Project Components and Activities

Project Components and Activities
<i>Construction Phase – Timeframe: December 2018 – May 2020</i>
<p>Dorsey IPL Activities:</p> <ul style="list-style-type: none"> ▪ Construction of a 213 km 500 kV alternating current international power line between Manitoba Hydro's existing Dorsey Converter Station near Rosser, Manitoba, to a point on the international border between Manitoba and Minnesota near Piney, Manitoba, where it would connect with the Great Northern Transmission Line. ▪ 92 km (approximately 43 per cent) of the Dorsey IPL would be located within existing transmission line corridors and the remaining 121 km length would require a new right-of-way (ROW). ▪ The new ROW would vary in width from 80 to 100 m, depending on whether self-supported or guyed towers are used. ▪ Some sections of the new ROW may require additional width to accommodate marshalling and supply of construction materials, and construction and maintenance access. The size of marshalling yards are expected to be 2-10 ha and borrow pits are expected to be 100 m x 50 m. ▪ No additional land is anticipated to be necessary for access roads, associated facilities or other Project components. ▪ Where the Dorsey IPL would be constructed within existing transmission line corridors, the ROW width would range from 177 to 245 m in width. ▪ Towers would be comprised of either steel lattice self-supporting structures (to be used mostly in agricultural and residential areas) or guyed structures (to be used mostly in non-agricultural areas). Towers would be placed approximately 400 to 500 m apart, depending on site conditions. Tower height is expected to range from 50 to 60 m, depending on terrain conditions and environmental sensitivity. Tower span and height may differ from these amounts at certain locations, such as river crossings. The footprint of self-supporting tower structures is expected to range from 10 x 10 m to 15 x 15 m, and be 100 x 100 m for guyed tower structures. ▪ Self-supported towers would be supported by either buried mat or pile foundations. At the Red River Floodway, large earthen mounds would be constructed around tower footprints to protect tower foundations during high water levels during operation of the floodway.

Project Components and Activities

- The transmission towers would support nine sub-conductors, configured as triple-conductor bundles, as well as two skywires to provide lightning protection.
- An underground fibre optic cable, 400 m in length, would be installed on existing ROW from the corner tower to the Richer South Station.
- Activities would include development of access routes and necessary bypass trails, ROW clearing, establishment of borrow sources, geotechnical investigations (tower foundations), transmission tower construction, conductor stringing, demobilization, clean-up and rehabilitation.
- No towers are to be located within any watercourses and no instream works are proposed as part of the Project. However, construction of trail access within riparian buffers, as well as temporary ice bridges or snowfill crossings across watercourses, may be required at some crossings to allow for equipment access. As well, boats will be used during conductor stringing across navigable waters for flag persons.
- Ground excavation would be required at tower locations to install tower foundations and guy anchors. Towers would be either assembled on-site and erected by crane, assembled off-site and trucked to site and erected by crane, or assembled off-site and flown to the site and erected by helicopter.
- Mobile construction camps for clearing and construction workers may be required during construction and would be located on the ROW. The camps would be relocated along the ROW as various construction activities proceed. Additional clearing may be required.

Riel IPL Activities:

- Alteration of the Riel IPL to accommodate the Dorsey IPL. Work would include: moving a 24 km section of the Riel IPL 45.7 m north of its current location within the existing transmission corridor, and constructing new tower structures for the Riel IPL. The current Riel IPL tower structures would then be used for the Dorsey IPL for this section of the corridor. Several existing towers, as well as approximately 1.07 km of transmission line, would also be removed and salvaged.

Glenboro IPL Activities:

- Relocation of approximately 345 m of the existing Glenboro IPL to accommodate construction of the Dorsey IPL, including required work at the Glenboro South Station. Work would mostly take place within the existing transmission corridor and include removal of two existing towers, erection of two temporary towers, construction of one new permanent tubular steel tower, and removal of the temporary towers. A new section of this IPL would be built to tie into the Glenboro South Station.

S53G/G37C Transmission Line Activities:

- Relocation of approximately 660 m of transmission line approximately 30 m north of its existing location. New easements are required for this work. Work would require salvage of one existing tower, construction of two new towers, relocation of five distribution lines and rerouting of a fibre optic cable.

Station Activities:

- Dorsey Converter Station - Modifications/additions to the 500 kV and 230 kV switchyards to allow for connection of Dorsey IPL to the existing electrical network, requiring construction of concrete foundations, steel structures and equipment supports. The station site would require an expansion of 15,900 m² and include installation of a drainage system, expansion of the grounding grid and protection systems, and addition of perimeter light masts. The expansion area would be covered with an insulating stone aggregate.
- Riel Converter Station - Modifications to the station to provide additional capacity. Work would include installation of a new autotransformer, breakers, and transformers requiring concrete foundations, steel structures and equipment supports, as well as the addition of drainage systems, protection systems, ground grid and insulating stone aggregate at locations where new equipment is being installed. All modifications would be contained within the existing fenced area of the station.

Project Components and Activities
<ul style="list-style-type: none"> ▪ Glenboro South Station - Addition of phase-shifting transformers and associated facilities to mitigate potential congestion on other parallel lines, as well as relocation of existing equipment within the station yard. To accommodate this work, the station site requires: an expansion of 130 m by 91 m; drainage system addition; installation of an oil containment pit; construction of concrete foundations, steel structures and supports for equipment additions/modifications/relocations; and addition of protection systems, ground grid and insulating stone aggregate at new locations.
<p><i>Operation and Maintenance Phase – Timeframe: Service life of the Project (estimated in-service date: 31 May 2020)</i></p>
<p>IPLs:</p> <ul style="list-style-type: none"> ▪ Activities would include annual inspection of the transmission lines and ROW corridor. Inspections may include vegetation management, repairing foundations and insulators, and removing ice build-up. Annual patrol is conducted either by ground or air depending on access, geographic conditions and time of year. ▪ Integrated vegetation management is required every 8-10 years to ensure regrowth of cleared ROW does not interfere with transmission line operations. It includes a variety of methods including handcutting, mechanical shear blading, brush mowing, and herbicide treatment. These activities are typically conducted on foot, or by truck or all-terrain vehicle. ▪ Non-scheduled patrols may be conducted if a fault on the line requires visual inspection. <p>Stations:</p> <ul style="list-style-type: none"> ▪ Stations will continue to operate as they have to date. The Riel and Dorsey converter stations have permanent personnel on site performing regular operation, maintenance and inspection duties. Glenboro South Station does not have permanent staff but operators and maintenance personnel routinely inspect and maintain the site and, in the case of contingencies, correct any problems.
<p><i>Abandonment Phase – Timeframe: At the end of the service life of the Project</i></p>
<ul style="list-style-type: none"> ▪ Pursuant to current legislation, an application would be required to abandon the international power line, at which time the environmental effects would be assessed in accordance with applicable legislation at the time.

9.5 Environmental Setting

In this section, the Board provides a description of the environmental setting for the Project. Since the information provided is from Manitoba Hydro’s Application, and specifically its Environment and Socio-Economic Impact Assessment, the Board has used the same spatial extent descriptors as used by Manitoba Hydro. They include Project Development Area (PDA), Local Assessment Area (LAA) and Regional Assessment Area (RAA). Table 9-3 in Section 9.6.2 provides a definition of each of these terms.

Land, Human Occupancy and Resource Use

- The Project is located in urban, suburban and rural areas.
- Regional Municipalities (RMs) crossed by the Project include: Rosser; Headingley; Macdonald; Ritchot; Springfield; Tache; Ste. Anne; La Broquerie; Stuartburn; Piney; and South Cypress (for the Glenboro South Station component only).

- Land use in the area has been altered from historical tall grass prairie, fen and forestland to a combination of agricultural cropland and forestland. Today, the Project area contains a broad range of agricultural land uses, industrial, and residential disturbances.
- Land ownership along the proposed route is 26.1 per cent provincial Crown land (804.36 ha), 22.8 per cent privately owned (703.21 ha) and 51.7 per cent owned or under easement by Manitoba Hydro (1576.49 ha). Of the land that must be acquired for the new ROW, approximately 30 per cent is provincial Crown land and 70 per cent is privately owned.
- There are numerous roads within the vicinity of the Project, including highways, township and range roads. The route includes eight crossings of provincial trunk highways and 13 crossings of provincial roads.
- Two surface water licenses and five groundwater licenses occur within the existing transmission line segment of the LAA, while two surface water licenses and six groundwater licenses occur within the new ROW segment of the LAA. Surface water licenses in the RAA have been issued primarily for irrigation, agricultural and municipal purposes. Water withdrawals are taken from the La Salle River, Red River, Seine River Diversion, Assiniboine River, an unnamed reservoir, and five smaller drainages.
- Groundwater wells in the LAA are used primarily for domestic purposes (1,320 wells), followed by other (207 wells), industrial (seven wells), and one municipal well.
- There are no surface water sources or recorded groundwater well sources occurring in the PDA.
- The transmission line and Dorsey and Riel converter stations are located within Open Trapping Area Zones 1, 3 and 4. The Glenboro South Station is located within Open Trapping Area Zone 1.
- Big game hunting areas crossed by the ROW include GHAs 25B, 33, 34A, 35A and 35. The Project crosses a game bird hunting zone, GBHZ 4, which stretches the entire portion of southern Manitoba from Saskatchewan to Ontario.
- The ROW will cross through approximately 4.5 km of the Sandilands Provincial Forest, affecting 47 ha of land.
- Project construction will affect 515 ha of productive forestland in Forest Management Units (FMU) 1 and 24.
- No existing First Nation Reserve land, trust lands, treaty land entitlement, or private purchase lands are crossed or directly affected by the route.
- The Project does not traverse federal lands.

Physical Environment and Soils

- Most of the Project traverses the Western Canada Sedimentary Basin, with the southeastern portion of the Dorsey IPL within the Canada Shield. Surficial deposits cover the entire Project area and are composed predominantly of glaciolacustrine and

glaciofluvial deposits and till. Topography is generally level to gently sloping, with more complex terrain in the southern part of the PDA.

- Dominant soils in the Project region are of the Vertisolic, Chernozemic, Gleysolic, Organic, Luvisolic and Brunisolic orders, with many areas having poorly drained soils.
- Soils in the LAA predominantly have an agricultural capability ranging from Class 2 (moderate limitations) to Class 6 (only capable of producing perennial forage crops and improvement practices are not feasible), with the existing corridor having fewer limitations than the new ROW. The new ROW traverses lands with greater limitations for dryland agriculture due to excess water and more variable agricultural capability.
- The majority of the soils in the Project footprint have a high risk of compaction as a result of very fine to moderately fine soil textures, organic soils, and imperfect to poor drainage.
- No soils within the PDA have a high risk of water erosion. The majority of soils in the PDA are characterized as having high to severe wind erosion risk.
- The disease of primary concern for field crops within the Project area is clubroot, which affects canola and is caused by a soil-borne pathogen, *Plasmodiophora brassicae*. There have been an increasing number of reported cases of clubroot within Manitoba in the last few years. Verticillium wilt in canola, caused by *Verticillium longisporum*, has also been detected in Manitoba, but the current spread is considered small.
- Manitoba Hydro's Dorsey Converter Station has known contaminated soils, but this previously identified area of contamination is not within the planned construction area. There are no other known contaminated sites within the PDA.

Vegetation

- The Project is located within the Prairies, Boreal Plains, and Boreal Shield Ecozones.
- Agriculture, comprised of pasture and cultivated lands, is the most common land cover class in the PDA (62.6 per cent).
- 576 ha of the PDA (18.8 per cent) is located within areas of native vegetation, including coniferous forest (2.7 per cent), deciduous forest (8.8 per cent), mixedwood forest (4.8 per cent), grassland (1.8 per cent) and shrubland (0.8 per cent).
- The existing corridor is located predominantly on agricultural land, but extends through areas of riparian vegetation where it crosses the Assiniboine, Red and La Salle Rivers. Along the existing corridor, the landscape is highly fragmented due to development and agriculture and intact native vegetation consists primarily of patches that are less than 100 ha, with most patches being less than 2 ha.
- The new ROW crosses a mosaic of upland and wetland areas, and is dominated by native vegetation and is relatively undisturbed. The intactness of vegetation along the new ROW is much higher with a more even distribution and greater number of patches of native vegetation greater than 200 ha.

- Deciduous forests are dominated by trembling aspen or American elm and shrub species such as choke cherry and an understory of herbaceous and graminoid species including two-leaved Solomon's seal, wild sarsaparilla and narrow reed grass.
- Mixedwood forests include conifers such as jack pine and deciduous species such as green ash, trembling aspen, balsam poplar and paper birch, as well as a shrub layer and understory dominated by herbaceous and graminoid species.
- Coniferous forests are dominated by black spruce with an understory of low shrub species such as Labrador tea, bog cranberry and low sweet blueberry, with a sparse understory of herbaceous and graminoid species such as two-leaved Solomon's seal.
- Shrublands are dominated by dwarf birch, green alder, Arctic dwarf birch and trembling aspen. The understory includes graminoids such as fringed brome, sedges and narrow reed grass, and herbaceous species such as wild sarsaparilla, sweet-scented bedstraw and pale vetchling.
- Grassland sites in the PDA include a site located within a cleared patch of forest and comprised of species such as big bluestem, poverty oat grass and purple oat grass. Other sites are comprised of degraded/invaded native grasslands dominated by smooth brome, Kentucky blue grass, and herbaceous species such as goldenrod, spreading dogbane and fleabane.
- Five plant species listed on Schedule 1 of the *Species at Risk Act* (SARA) have the potential to occur within the RAA, based on known habitat preferences:
 - Endangered: *Agalinia aspera*, *Cypripedium candidum*, and *Platanthera praeclara*;
 - Threatened: *Symphyotrichum sericeum*; and,
 - Special Concern: *Solidago riddellii*.
- There are no known occurrences of SARA-listed vegetation species within the PDA or LAA, and none were found during Manitoba Hydro's 2014 and 2017 field surveys.
- There are historical records of two vegetation species of provincial conservation concern within the PDA, six species within the LAA and 62 species within the RAA. During Manitoba Hydro's 2014 field surveys, three provincially-ranked species at risk were found at eight locations in the PDA: moonseed (S3), black ash (S3) and compact grounset (S3).
- Ten invasive plant species were recorded at 36 locations within the PDA during Manitoba Hydro's 2014 field surveys.
- During Manitoba Hydro's 2014 field surveys, 39 traditional use plant species were recorded at 106 locations in the PDA.

Wetlands

- 457.7 ha of wetlands will be intersected by the Project (14.9 per cent of the PDA). These wetlands include: marshes (8.1 per cent), bogs (0.8 per cent), fens (3.0 per cent) and swamp (2.9 per cent).

- A Class III marsh wetland, 0.14 ha in size, is located within the Dorsey station, and is dominated by common cattail. As well, a shallow open water wetland (0.15 ha) is located within the Glenboro South Station. No wetlands are located at Riel station.
- Wetlands are generally less than 2 ha in size, with most 0.1-1 ha in size.
- The Project intersects several large intact peatland bogs and fens within the coniferous forests in the southeastern portion of the new ROW, including the Caliento, Sundown and Piney bogs.

Water Quality and Quantity

- Aquifers are found throughout the Project area in sand and gravel lenses above the carbonate bedrock. There are major buried sand and gravel aquifers located in the RMs of Springfield, Ste. Anne, La Broquerie, Stuartburn and Piney. Depth of these aquifers ranges from a few metres to more than 100 m, and groundwater quality ranges from poor to excellent. As well, the Project traverses several fresh and saline water flowing well areas.
- ROW crosses 75 watercourses within two major watersheds: the Assiniboine River Basin and the Red River Basin. Six of the watercourses spanned are considered navigable (Assiniboine River, Red River, Cooks Creek, La Salle River, Seine River and Rat River).
- The Dorsey, Riel and Glenboro South Stations are not located within 30 m of a watercourse.

Aquatic Species and Habitat

- More than 75 fish species are known or expected to be in the RAA. Forty-two of these species are sport fish species.
- More than 30 of these species are part of, or support, a commercial, recreational and Indigenous fishery in the RAA, with most found in the Assiniboine, Red, La Salle, Seine and Rat rivers.
- Based on DFO's habitat classification system, 23 watercourses were identified as having Type A to C habitat characteristics (watercourses that provide direct fish habitat for spawning, rearing, feeding, overwintering and migrating; flows are intermittent or perennial; and they support either complex or simple habitat with indicator species, or complex habitat with non-indicator species); eight were classified as Type D (watercourses that provide direct fish habitat for life processes and simple habitat for non-indicator species; flows are intermittent or perennial) and the remaining forty-four were classified as Type D (watercourses do not provide direct fish habitat; flows are typically ephemeral).
- Eight watercourse crossings were found to have high fish habitat sensitivity (Assiniboine River, La Salle River, Red River, Seine River, Seine River tributary, Cooks Creek, Cooks Creek South, and Rat River), and a further five watercourses were ranked as having moderately sensitive habitat and eight watercourses as having low sensitivity habitat.

- Eight aquatic species of concern listed on Schedule 1 of the SARA are known or expected to occur within the Project RAA:
 - Endangered: mapleleaf mussel;
 - Threatened: carmine shiner, shortjaw cisco; and,
 - Special Concern: bigmouth buffalo, bigmouth shiner, chestnut lamprey, northern brook lamprey.
- While silver chub are also listed on Schedule 1 of the SARA and are known to occur within the RAA, the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) split the silver chub population into two units, and the Saskatchewan-Nelson River population is no longer considered at risk. Manitoba Hydro indicated that a change in legal status of this population is currently under consideration.
- An ecological reserve candidate, the Assiniboine River Clam Beds, is crossed by the PDA at the Assiniboine River. This is a 100 ha area of river which contains eleven of the twelve species of clam in Manitoba, including mapleleaf mussel.
- As well, mapleleaf mussels are known to occur within the LAA at the Red River crossing.

Wildlife and Wildlife Habitat

- The southeastern part of the PDA features the greatest concentration of undeveloped land, including large intact patches of forest, marsh and bog complexes, that is of importance to wildlife.
- The RAA does not include any Important Bird Areas.
- Upwards of 60 mammals may occur within the RAA. They include ungulates (white-tailed deer, American elk, moose, black-bear, gray wolf and bobcat, coyote), furbearers (American marten, red fox and beaver), bats (little brown myotis, long-eared myotis) and other small mammals (eastern cottontail, striped skunk, snowshoe hare, deer mouse and southern red-backed vole).
- The RAA has the potential to support 225 species of birds during the breeding and migration seasons. During its 2014 field surveys, Manitoba Hydro observed fifty species of waterbirds (swans, geese, ducks, loons, grebes, pelicans, cormorants, herons, rails, shorebirds, gulls and terns), sixteen species of raptors (vultures, eagles, hawks, falcons, owls), eighty-five songbird species, and seventeen other bird species (upland gamebirds, doves, nightjars, swifts and woodpeckers) in the PDA. Most of these species are migratory, with many breeding in the RAA.
- Thirteen amphibian species and nine reptile species are found in the RAA.
- While there are eight core areas of wildlife habitat greater than 700 ha in the eastern part of the RAA near Ste. Genevieve, Richer, Sundown and Piney, wildlife habitat in the RAA is highly fragmented by linear development, forestry practices, residential development and agriculture. The current level of linear disturbance in the RAA is 2.38 km/km².

- Forty-five wildlife species of conservation concern (either listed under SARA, ranked as endangered under the *Endangered Species and Ecosystems Act* (MBESEA), or ranked as S1, S2 or S3 by the Manitoba Conservation Data Centre (MB CDC) as provincially rare) have the potential to occur in the RAA. These include 27 species of birds, seven species of terrestrial invertebrates, six species of herptiles, and five species of mammals.
- Twenty-nine of these wildlife species are listed on Schedule 1 of SARA:
 - *Endangered*: little brown myotis, northern myotis, burrowing owl, prairie skink, dusky dune moth, white flower moth, golden-edged gem;
 - *Threatened*: grey fox, golden-winged warbler, least bittern, ferruginous hawk, Eastern whip-poor-will, common nighthawk, chimney swift, red-headed woodpecker, Canada warbler, chestnut-collared longspur, Sprague’s pipit, loggerhead shrike, olive-sided flycatcher, Verna’s flower moth; and,
 - *Special Concern*: yellow rail, rusty blackbird, short-eared owl, peregrine falcon, common snapping turtle, northern leopard frog (western boreal/prairie population), monarch, pale yellow dune moth.
- During Manitoba Hydro’s 2014 field surveys, the following SARA-listed wildlife species were detected: northern leopard frog, common snapping turtle, least bittern, yellow rail, Eastern whip-poor-will, common nighthawk, short-eared owl, peregrine falcon, golden-winged warbler, olive-sided flycatcher.
- In 2017, Manitoba Hydro conducted supplemental pre-construction surveys for northern leopard frog (e.g., spring call surveys; spring, summer and fall visual encounter surveys; and summer larval amphibian surveys) along the ROW. Northern leopard frogs were observed at many of the sites surveyed.
- The golden-winged warbler is the only species within the RAA to have defined critical habitat within southern Manitoba, near Ste-Genevieve, Richer and Vassar.
- Many of the mammals within the RAA are valued by resource users, including elk, white-tailed deer, moose, bear, wolf, coyote, rabbit, beaver and muskrat.
- Within the RAA, the populations of white-tailed deer, bear and elk are generally considered stable, although populations can fluctuate. Prior to the late 1990s, moose were more prevalent in the area, but have since declined and are now rare.

Atmospheric and Acoustic Environments

- Southeastern Manitoba generally experiences excellent air quality. The air quality in Winnipeg is generally rated as “good” (highest rating of the Canadian Annual Index of Air Quality) for greater than 91 per cent of the year. Air quality in the rural areas in the LAA are assumed to be similar or better than the air quality in Winnipeg.
- Air emissions in the region are generated by industrial and agricultural activities, vehicles, energy generation, waste and industrial combustion sources, and infrequent events such as wildfires.

- The ambient acoustic environment is characterized by rural noise types and noise typical of suburban areas where the PDA is closest to Winnipeg. These types of noise include a combination of wildlife, weather effects (e.g., wind, rain, and thunder), agricultural activities, aircraft flyovers, rail traffic, road traffic, highway traffic, and existing transmission line and station electrical noise.

Navigation and Navigation Safety

- The ROW crosses the Assiniboine River in the RM of Headingley and the Red River south of the Winnipeg city limits. The Assiniboine and Red Rivers are both scheduled waters under the *Navigation Protection Act*, and an additional four water bodies – Cooks Creek, La Salle River, Seine River and Rat River - are considered navigable.

Heritage Resources

- A Heritage Resource Impact Assessment (HRIA) was conducted for the Project in 2014 and is currently still under review by the Province of Manitoba, Historic Resources Branch (HRB).
- One previously recorded archaeological site is within the PDA of the new ROW and four previously recorded archaeological sites are within the PDA of the existing corridor. All previously recorded heritage resource sites have been previously disturbed because of past land use activities.
- No heritage resources have been previously recorded at the Dorsey Converter Station, the Riel Converter Station or the Glenboro South Station.

Traditional Land and Resource Use

- The Project is located within Treaty No.1 boundaries, and within the Métis Recognized Harvesting Area.
- A total of 25 Indigenous communities were identified by Manitoba Hydro, the Board and the Major Projects Management Office as being potentially affected or having an interest in the Project.
- The effects of previous landscape change, including the conversion of land for agricultural purposes, mining and other resource development, expanding transportation networks, the creation of rights-of-ways and utility corridors, and the transformation of settlements into towns and cities, have resulted in changes on traditional land and resource use.
- Indigenous Peoples engage in traditional land and resource use activities and practices on Crown land throughout the region, including plant harvesting, hunting and trapping, use of trails and travelways, and cultural sites.

9.6 The Board’s Environmental and Socio-Economic Effects Analysis

9.6.1 Project–Environment Interactions and Potential Adverse Environmental Effects

Table 9-2 identifies the expected interactions between the Project and the environment, and the potential adverse environmental effects resulting from those interactions.

Table 9-2: Project–Environmental Interactions

**A listing of Participants and the acronyms used can be found in the Glossary of Terms, Abbreviations and Units at the beginning of this document.*

	Environmental Element	Participant(s) who Raised Concerns Regarding the Element*	Description of Interaction (or Why No Interaction is Expected)	Potential Adverse Environmental Effect	Mitigation and Participant(s) Concerns Addressed In:
Bio-physical	Physical Environment		<ul style="list-style-type: none"> • No interaction expected since terrain in the Project area is generally level and stable 		
	Soil and Soil Productivity	<ul style="list-style-type: none"> • AON • BON • MWL • CAEPLA 	<ul style="list-style-type: none"> • Construction activities: <ul style="list-style-type: none"> ○ Access route and bypass trail development ○ ROW clearing ○ Station site preparation ○ Geotechnical investigations at tower sites ○ Marshalling yard, borrow site and temporary camp setup ○ Soil salvage and excavation at transmission tower structures ○ Clean-up, including decommissioning of temporary access and bypass trails • Operations and maintenance activities: <ul style="list-style-type: none"> ○ Inspection patrols ○ Vegetation management 	<ul style="list-style-type: none"> • Loss or degradation of soils and soil productivity due to compaction, rutting, topsoil/subsoil mixing or wind and water erosion • Contamination of soils or spread of contamination • Spread of clubroot or other soil pathogens 	<ul style="list-style-type: none"> • Section 9.6.3 • Section 9.6.5.1

	Environmental Element	Participant(s) who Raised Concerns Regarding the Element*	Description of Interaction (or Why No Interaction is Expected)	Potential Adverse Environmental Effect	Mitigation and Participant(s) Concerns Addressed In:
	Vegetation	<ul style="list-style-type: none"> • AON • AWZ • BON • CAC Manitoba • MWL • NWA • Peguis • RRAFN • SCO • Sagkeeng • Wa Ni Ska Tan 	<ul style="list-style-type: none"> • Construction activities: <ul style="list-style-type: none"> ○ Access route and bypass trail development ○ ROW clearing ○ Station site preparation ○ Marshalling yard, borrow site and temporary camp setup ○ Geotechnical investigations ○ Transmission tower construction ○ Clean-up, including decommissioning of temporary access and bypass trails • Operations and maintenance activities: <ul style="list-style-type: none"> ○ Inspection patrols ○ Vegetation management 	<ul style="list-style-type: none"> • Fragmentation of areas of native vegetation (change in landscape intactness) • Alteration or loss of native vegetation cover class abundance, distribution, structure and species composition • Alteration or loss of rare plant populations, if encountered • Alteration or loss of traditional use plant abundance and distribution • Increase in invasive plant species abundance and distribution 	<ul style="list-style-type: none"> • Section 9.6.3 • Section 9.6.4.1 • Section 9.6.4.3 • Section 9.6.4.4 • Sections 8.5.8, 8.6.8, 8.7.8 • Section 9.6.5.2 • Province of Manitoba's Environmental Assessment Process
	Wetlands	<ul style="list-style-type: none"> • AON • BON • MWL • Peguis • SCO 	<ul style="list-style-type: none"> • Construction activities: <ul style="list-style-type: none"> ○ Access route and bypass trail development, including construction of any temporary ice and snow fill bridges ○ ROW clearing ○ Station site preparation ○ Geotechnical investigations 	<ul style="list-style-type: none"> • Fragmentation or loss of intactness of wetland areas • Alteration or loss of wetland cover class abundance, distribution, structure and function. 	<ul style="list-style-type: none"> • Section 9.6.3 • Section 9.6.4.4 • Sections 8.5.8, 8.6.8, 8.7.8

	Environmental Element	Participant(s) who Raised Concerns Regarding the Element*	Description of Interaction (or Why No Interaction is Expected)	Potential Adverse Environmental Effect	Mitigation and Participant(s) Concerns Addressed In:
			<ul style="list-style-type: none"> ○ Transmission tower construction ○ Clean-up, including decommissioning of temporary access and bypass trails ● Operations and maintenance activities: <ul style="list-style-type: none"> ○ Inspection patrols ○ Vegetation management 		
	Water Quality and Quantity	<ul style="list-style-type: none"> ● AWZ ● AON ● BON ● MWL ● NWA ● Peguis ● SCO ● Wa Ni Ska Tan ● ECCC 	<ul style="list-style-type: none"> ● Construction activities: <ul style="list-style-type: none"> ○ Access route and bypass trail development, including construction of temporary ice and snow fill bridges ○ ROW clearing ○ Station site preparation ○ Geotechnical investigations ○ Transmission tower construction ○ Use of boats during conductor stringing ○ Clean-up, including decommissioning of temporary access, bypass trails and temporary ice and snowfill bridges ● Operations and maintenance 	<ul style="list-style-type: none"> ● Alteration or loss of surface and groundwater quality or quantity 	<ul style="list-style-type: none"> ● Section 9.6.3 ● Section 9.6.4.1 ● Sections 8.5.8, 8.6.8, 8.7.8 ● Province of Manitoba's Environmental Assessment Process

	Environmental Element	Participant(s) who Raised Concerns Regarding the Element*	Description of Interaction (or Why No Interaction is Expected)	Potential Adverse Environmental Effect	Mitigation and Participant(s) Concerns Addressed In:
			activities: <ul style="list-style-type: none"> ○ Inspection patrols ○ Vegetation management 		
	Aquatic Species and their Habitat	<ul style="list-style-type: none"> • AWZ • AON • BON • CAC Manitoba • MWL • NWA • Peguis • RRAFN • Sagkeeng • SCO 	<ul style="list-style-type: none"> • Construction activities: <ul style="list-style-type: none"> ○ Access route and bypass trail development, including construction of temporary ice and snow fill bridges ○ ROW clearing (riparian areas) ○ Use of boats during conductor stringing ○ Clean-up, including decommissioning of temporary access, bypass trails and temporary ice and snowfill bridges • Operations and maintenance activities: <ul style="list-style-type: none"> ○ Vegetation management in riparian areas 	<ul style="list-style-type: none"> • Alteration or loss of riparian or instream habitat functions. • Fish or mussel mortality or injury • Stress, injury, reduced reproductive success and mortality of aquatic species at risk, leading to population declines • Alteration or loss of habitat for aquatic species at risk 	<ul style="list-style-type: none"> • Section 9.6.3 • Section 9.6.4.1 • Sections 8.5.8, 8.6.8, 8.7.8
	Wildlife and Wildlife Habitat	<ul style="list-style-type: none"> • AWZ • AON • BON • CAC Manitoba 	<ul style="list-style-type: none"> • Construction activities: <ul style="list-style-type: none"> ○ Access route and bypass trail development ○ ROW clearing 	<ul style="list-style-type: none"> • Alteration or loss of habitat availability • Sensory disturbance • Wildlife mortality or injury • Stress, injury, reduced 	<ul style="list-style-type: none"> • Section 9.6.3 • Section 9.6.4.2 • Section 9.6.4.3 • Sections 8.5.8,

	Environmental Element	Participant(s) who Raised Concerns Regarding the Element*	Description of Interaction (or Why No Interaction is Expected)	Potential Adverse Environmental Effect	Mitigation and Participant(s) Concerns Addressed In:
		<ul style="list-style-type: none"> • MWL • NWA • Peguis • RRAFN • Sagkeeng • SCO • ECCC 	<ul style="list-style-type: none"> ○ Station site preparation ○ Set-up and use of marshalling yards, borrow sites and temporary camps ○ Geotechnical investigation ○ Transmission tower construction ○ Clean-up, including decommissioning of temporary access and bypass trails • Operations and maintenance activities: <ul style="list-style-type: none"> ○ Presence of operating transmission line ○ Inspection patrols ○ Vegetation management 	<ul style="list-style-type: none"> reproductive success and mortality of wildlife species at risk, leading to population declines • Alteration or loss of habitat for wildlife species at risk 	<ul style="list-style-type: none"> 8.6.8, 8.7.8 • Province of Manitoba's Environmental Assessment Process
	Atmospheric Environment	<ul style="list-style-type: none"> • COC Winnipeg • CAC Manitoba • MWL • RRAFN • SSC 	<ul style="list-style-type: none"> • Construction activities: <ul style="list-style-type: none"> ○ Use of vehicles, machinery and helicopters during construction on the ROW and at station sites ○ Removal of biomass ○ Burning of slash during clearing • Operations and maintenance activities: <ul style="list-style-type: none"> ○ Use of vehicles, machinery and helicopters during routine 	<ul style="list-style-type: none"> • Increase in airborne pollutants (e.g., gases resulting from fossil fuel combustion, particulate matter) • Increase in greenhouse gas emissions 	<ul style="list-style-type: none"> • Section 9.6.3 • Province of Manitoba's Environmental Assessment Process

	Environmental Element	Participant(s) who Raised Concerns Regarding the Element*	Description of Interaction (or Why No Interaction is Expected)	Potential Adverse Environmental Effect	Mitigation and Participant(s) Concerns Addressed In:
			<p>maintenance, inspection patrols and vegetation management</p> <ul style="list-style-type: none"> ○ Periodic removal of biomass 		
	Acoustic Environment		<ul style="list-style-type: none"> ● Construction activities: <ul style="list-style-type: none"> ○ Use of heavy equipment, vehicles and helicopters ○ Blasting (if required) ○ Splicing of conductors using implosive sleeves ● Operations and maintenance activities: <ul style="list-style-type: none"> ○ Use of vehicles, machinery and helicopters during routine maintenance, inspection patrols and vegetation management 	<ul style="list-style-type: none"> ● Increase in noise for nearby receptors 	<ul style="list-style-type: none"> ● Section 9.6.3
Socio-Economic	Navigation and Navigation Safety	<ul style="list-style-type: none"> ● AON ● BON ● Wa Ni Ska Tan 	<ul style="list-style-type: none"> ● Construction activities: <ul style="list-style-type: none"> ○ Stringing of conductors across navigable watercourses ○ Presence of ice and snowfill bridges (or parts of them) at navigable watercourse crossings, if not fully melted or broken up 	<ul style="list-style-type: none"> ● Interference or restriction to navigation ● Decrease in access to navigable waters for waterway users ● Risk to public safety 	<ul style="list-style-type: none"> ● Section 9.6.3 ● Section 9.6.4.5 ● Sections 8.5.8, 8.6.8, 8.7.8
	Traditional Land and Resource	<ul style="list-style-type: none"> ● AON ● AWZ 	<ul style="list-style-type: none"> ● Construction activities: <ul style="list-style-type: none"> ○ Use of heavy equipment, 	<ul style="list-style-type: none"> ● Disturbance to use of trails and travelways 	<ul style="list-style-type: none"> ● Section 9.6.3 ● Sections 8.5.8,

	Environmental Element	Participant(s) who Raised Concerns Regarding the Element*	Description of Interaction (or Why No Interaction is Expected)	Potential Adverse Environmental Effect	Mitigation and Participant(s) Concerns Addressed In:
	Use	<ul style="list-style-type: none"> • BON • MMF • Peguis • NWA • RRAFN • Sagkeeng • Shoal Lake #40 • SCO 	<p>vehicles and helicopters</p> <ul style="list-style-type: none"> ○ Access route and bypass trail development, including construction of temporary ice and snow fill bridges ○ ROW clearing ○ Burning of slash ○ Set-up and use of marshalling yards, borrow sites and temporary camps ○ Geotechnical investigations ○ Transmission tower construction ○ Blasting (if required) ○ Splicing of conductors using implosive sleeves ○ Conductor stringing ○ Clean-up, including decommissioning of temporary access and bypass trails <p>• Operations and maintenance activities:</p> <ul style="list-style-type: none"> ○ Presence of operating transmission line ○ Use of vehicles, machinery and helicopters during routine 	<ul style="list-style-type: none"> • Disturbance to or interference with traditional uses including plant harvesting, hunting, fishing, trapping and cultural sites • Avoidance of traditional use sites due to perceptions of potential impacts on human health 	8.6.8, 8.7.8

	Environmental Element	Participant(s) who Raised Concerns Regarding the Element*	Description of Interaction (or Why No Interaction is Expected)	Potential Adverse Environmental Effect	Mitigation and Participant(s) Concerns Addressed In:
			<p>maintenance, inspection patrols and vegetation management</p> <ul style="list-style-type: none"> ○ Vegetation management 		
	Heritage Resources	<ul style="list-style-type: none"> • Peguis • Sagkeeng • Wa Ni Ska Tan 	<ul style="list-style-type: none"> • Construction activities: <ul style="list-style-type: none"> ○ Use of heavy equipment and vehicles ○ Access route and bypass trail development ○ ROW clearing ○ Burning of slash ○ Set-up and use of marshalling yards, borrow sites and temporary camps ○ Geotechnical investigations ○ Transmission tower construction ○ Blasting (if required) ○ Clean-up, including decommissioning of temporary access and bypass trails • Operations and maintenance activities: <ul style="list-style-type: none"> ○ Use of vehicles and machinery during routine maintenance, inspection patrols and vegetation management 	<ul style="list-style-type: none"> • Disturbance to, or loss of previously recorded or unidentified heritage resource sites 	<ul style="list-style-type: none"> • Section 9.6.3 • Sections 8.5.9, 8.6.9, 8.7.9

	Environmental Element	Participant(s) who Raised Concerns Regarding the Element*	Description of Interaction (or Why No Interaction is Expected)	Potential Adverse Environmental Effect	Mitigation and Participant(s) Concerns Addressed In:
	Human Health	<ul style="list-style-type: none"> • AON • AWZ • BON • CAEPLA • NWA • Peguis • RRAFN • Sagkeeng • SCO • SSC • Wa Ni Ska Tan 	<ul style="list-style-type: none"> • Construction of Project <ul style="list-style-type: none"> ○ Access route and bypass trail development, including construction of temporary ice and snow fill bridges ○ ROW clearing ○ Geotechnical investigations ○ Transmission tower construction ○ Conductor stringing • Operations and maintenance activities: <ul style="list-style-type: none"> ○ Presence of operating transmission line ○ Vegetation management 	<ul style="list-style-type: none"> • Perceived health risks as a result of exposure to EMF • Perceived health risks as a result of exposure of humans and country foods to herbicides • Loss of food security as a result of increased access to land and clearing of vegetation • Contamination of drinking water 	<ul style="list-style-type: none"> • Section 9.6.3 • Sections 8.5.6, 8.6.6, 8.7.6 • Province of Manitoba's Environmental Assessment process
	Human Occupancy /Resource Use	<ul style="list-style-type: none"> • CAEPLA • SSC 	<ul style="list-style-type: none"> • Construction activities: <ul style="list-style-type: none"> ○ Use of heavy equipment, vehicles and helicopters ○ Access route and bypass trail development including construction of temporary ice and snow fill bridges ○ ROW clearing ○ Burning of slash ○ Set-up and use of marshalling yards, borrow sites and 	<ul style="list-style-type: none"> • Disruption of agricultural activities • Disruption of hunting, fishing, trapping, and recreational activities • Change in access for land and resource users 	<ul style="list-style-type: none"> • Section 9.6.3 • Section 9.6.5.1 • Province of Manitoba's Environmental Assessment process

	Environmental Element	Participant(s) who Raised Concerns Regarding the Element*	Description of Interaction (or Why No Interaction is Expected)	Potential Adverse Environmental Effect	Mitigation and Participant(s) Concerns Addressed In:
			<ul style="list-style-type: none"> temporary camps ○ Geotechnical investigations ○ Set-up and use of marshalling yards, borrow sites and temporary camps ○ Transmission tower construction ○ Blasting (if required) ○ Splicing of conductors using implosive sleeves ○ Conductor stringing ○ Clean-up, including decommissioning of temporary access and bypass trails ● Operations and maintenance activities: <ul style="list-style-type: none"> ○ Presence of operating transmission line ○ Use of vehicles, machinery and helicopters during routine maintenance, inspection patrols and vegetation management ○ Vegetation management 		
	Social and Cultural Well-being	<ul style="list-style-type: none"> ● AON ● BON 	<ul style="list-style-type: none"> ● Construction-related influx of temporary workers 	<ul style="list-style-type: none"> ● Disruption of community life by temporary workers ● Decrease in availability of local 	<ul style="list-style-type: none"> ● Section 9.6.3 ● Sections 8.5.6, 8.6.6, 8.7.6

	Environmental Element	Participant(s) who Raised Concerns Regarding the Element*	Description of Interaction (or Why No Interaction is Expected)	Potential Adverse Environmental Effect	Mitigation and Participant(s) Concerns Addressed In:
		<ul style="list-style-type: none"> • Peguis • Sagkeeng • Wa Ni Ska Tan 		services	<ul style="list-style-type: none"> • Province of Manitoba's Environmental Assessment process
	Aesthetics	<ul style="list-style-type: none"> • CAEPLA • Peguis • Sagkeeng 	<ul style="list-style-type: none"> • Construction activities • Presence of operating transmission line 	<ul style="list-style-type: none"> • Alteration of viewsheds • Change in visual quality 	<ul style="list-style-type: none"> • Section 9.6.3 • Province of Manitoba's Environmental Assessment process
Other	Accidents and Malfunctions	<ul style="list-style-type: none"> • AON • BON • MWL 	<ul style="list-style-type: none"> • Power Outage • Tower collapse/line breaks • Electrocutation • Erosion/sediment control failure • Spot spills of hazardous materials • Release of insulating gas • Interconnection of aquifers • Fire • Collisions 	<ul style="list-style-type: none"> • Risks to public safety, including injury or death • Loss, alteration, destruction or risks to valued environmental components 	<ul style="list-style-type: none"> • Section 9.6.3
	Effects of the Environment on the Project	<ul style="list-style-type: none"> • MWL 	<ul style="list-style-type: none"> • Tree contact with conductors • Extreme weather or climate conditions 	<ul style="list-style-type: none"> • Damage to infrastructure • Failure of erosion protection and sediment control measures 	<ul style="list-style-type: none"> • Section 9.6.3 • Province of Manitoba's Environmental

	Environmental Element	Participant(s) who Raised Concerns Regarding the Element*	Description of Interaction (or Why No Interaction is Expected)	Potential Adverse Environmental Effect	Mitigation and Participant(s) Concerns Addressed In:
			<ul style="list-style-type: none"> • Extreme hydrological conditions • Fire hazard • Geophysical and geotechnical hazards 	<ul style="list-style-type: none"> • Injury or mortality • Loss of electrical service 	Assessment process

9.6.2 Mitigation of Potential Adverse Environmental Effects

The Board has assessed Manitoba Hydro's Project design and the mitigation measures it has committed to in its Application, as well as during the CEC and NEB hearings.

An assessment of Manitoba Hydro's standard mitigation measures is provided in Section 9.6.3. Section 9.6.4 provides an assessment of Manitoba Hydro's mitigation measures as they relate to the Board's federal responsibilities under federal legislation and Memoranda of Understanding it has with other federal departments. Where there are outstanding issues related to key environmental elements and/or Manitoba Hydro's proposed mitigation may not be sufficient and additional mitigation may be necessary, a detailed analysis is presented in Section 9.6.5. A detailed analysis of Heritage Resources, Traditional Land and Resource Use, and Indigenous Social-Cultural Well-Being are presented in Chapter 8, Indigenous Matters, including an evaluation of the significance of residual effects of the Project.

Table 9-3 specifies the definitions for criteria used in evaluating the significance of residual effects. The Board adopted the geographic extent criteria ratings and definitions provided by Manitoba Hydro in its Application (e.g., PDA, LAA and RAA), which varied according to the valued component or receptor being considered. Refer to Manitoba Hydro's Application for definitions of all geographic extent criteria.

Table 9-3: Criteria, Ratings and Definitions Used in Evaluating the Likelihood of Significant Effects

Criteria	Rating	Definition
All criteria	Uncertain	When no other criteria rating descriptor is applicable due to either lack of information or inability to predict.
Temporal Extent	Short-term	An effect, either resulting from a single interaction or from infrequent multiple ones, whose total duration is usually relatively short-term, usually lasting in the order of weeks or months.
	Medium-term	An effect, either resulting from a single or infrequent interaction or from multiple interactions each of short duration and whose total duration may not be long-term but for which the resulting effect may last in the order of months or years.
	Long-term	An effect, either resulting from a single interaction of long lasting effect; or from multiple interactions each of short duration but whose total results in a long lasting effect; or from continuous interaction. An effect usually lasting in the order of years or decades.
Reversibility	Reversible	An effect expected to, at a minimum, return to baseline conditions (that is, conditions present when the interaction occurred). The effect would not persist for decades or generations.
	Permanent	An effect that would persist in the order of decades or generations. Some social or cultural effects that persist beyond a single generation may become permanent.
Geographic Extent	PDA	Effect would be limited to the applicable ROW or facility footprint and any associated temporary workspace.
	LAA	Effect would generally be limited to the area where direct Project interaction with the biophysical and human environment could occur. This area varies relative to the receptor being considered.
	RAA	Effect would be recognized in the area beyond the LAA that might be affected on the landscape level. This area also varies relative to the receptor being considered.
Magnitude	Low	Effect is negligible, if any; restricted to a few individuals/species or only slightly affects the resource or parties involved; and would impact quality of life for some, but individuals commonly adapt or become habituated, and the effect is widely accepted by society.
	Moderate	Effect would impact many individuals/species or noticeably affect the resource or parties involved; is detectable but below environmental, regulatory or social standards or tolerance; and would impact quality of life but the effect is normally accepted by society.
	High	Effect would affect numerous individuals or affect the resource or parties involved in a substantial manner; is beyond environmental, regulatory or social standards or tolerance; and would impact quality of life, result in lasting stress and is generally not accepted by society.
Evaluation of Significance	Likely to be significant	Effects that are either: (1) of high magnitude; or (2) long-term, permanent, and of regional extent.
	Not likely to be significant	Any adverse effect that does not meet the above criteria for “significant”.

9.6.3 Standard Mitigation

The Board recognizes that many adverse environmental effects that may occur as a result of construction and operation of a project are resolved through standard mitigation. Standard mitigation refers to a specification or practice that has been developed by industry, or prescribed by a government authority, that has been previously employed successfully and is now considered sufficiently common or routine that it is integrated into the company's management systems and meets the expectations of the Board.

Manitoba Hydro described its Environmental Protection Program for the Project as part of its submissions to the provincial hearing process and as part of the Application it then submitted to the Board. It said the program provides the framework for implementing, managing, monitoring and evaluating environmental protection measures, has been designed to be adaptive and responsive throughout the Project lifecycle and incorporates learnings from previous projects. Manitoba Hydro said the program will be executed through the use of environmental protection, management, and monitoring plans and that will apply to the construction, operation and maintenance, and abandonment phases of the Project.

Manitoba Hydro explained that routing and tower placement are some of the main mitigation measures applied to mitigate the Project's effects to people and the environment. It noted that a large portion of the Project has been routed through primarily developed lands, adjacent to existing and future transmission lines, with much of the line routed within existing transmission corridors to mitigate both Project and cumulative effects. It further indicated that the portion of the Project located in new ROW was routed in a manner which skirts large, intact natural areas and key heritage and culturally important sites, such as those east of the Watson P. Davidson Wildlife Management Areas, the core range of the Vita elk herd, and the Caliento, Piney and Sundown wetlands. With regard to tower placement, Manitoba Hydro noted that it used a design program to optimize the locations of towers based on numerous factors, including landscape based constraints and feedback received through its engagement programs and field surveys.

To reduce the Project's potential effects to the environment, Manitoba Hydro has scheduled construction to occur during frozen ground conditions, and committed to conducting Project-related clearing outside of sensitive timing periods for birds (breeding season) and ungulates (calving).

Manitoba Hydro included a draft construction-specific environmental protection plan (CEPP) with its Application, which includes the general and specific environmental protection measures that will be implemented during construction and comprises all environmental aspects of the work. It noted that all works, activities and areas associated with the Project are included in the CEPP and its associated management plans.

The CEPP specifies the environmental protection measures for the Environmentally Sensitive Sites (ESS) Manitoba Hydro identified during the Public Engagement Process (PEP) and the First Nations and Métis Engagement Process (FNMEP) and its assessment activities. ESSs are locations, features, areas, activities or facilities along or immediately adjacent to the transmission line ROW and other Project components that have been determined to be ecologically, socially,

economically or culturally important and sensitive to disturbance by the Project. Manitoba Hydro said that further ESS identified from Indigenous Knowledge will be incorporated into the EPP once it has reviewed mitigation measures with and discussed the confidentiality of such sites with Indigenous communities. Manitoba Hydro also said that, prior to construction, it will seek feedback from Indigenous communities, through the MMTP Monitoring Committee, on topics of interest to the committee regarding its CEPP and associated plans.

Manitoba Hydro said that it would update and finalize the CEPP after licensing and prior to construction, and include orthophoto map sheets with detailed site-specific environmental protection information.

Manitoba Hydro included an Access Management Plan in its CEPP and said that additional management plans would be developed and incorporated into the final CEPP including: Blasting; Emergency Preparedness and Response; Erosion Protection and Sediment Control; Rehabilitation and Weed Management; and Waste and Recycling. Manitoba Hydro provided the framework (e.g., scope and objectives) that would be used to develop each of these plans. Subsequently, as part of the provincial hearing process, Manitoba Hydro filed a copy of the draft Rehabilitation and Invasive Species Management Plan it had prepared. As well, Manitoba Hydro developed and submitted a Cultural and Resource Heritage Protection Plan and said it would be included in its updated CEPP.

Manitoba Hydro also said that an IVMP would be developed, as part of its Environmental Protection Program, to manage vegetation on the ROWs during Project operation and maintenance. It said that integrated vegetation management involves selecting and combining vegetation treatments to target specific plant species that pose a risk to system safety and reliability, while limiting effects on the environment and the public. Manitoba Hydro noted the concerns raised by Indigenous communities regarding the use of herbicides and was of the view that the development of an IVMP would provide a balanced approach for addressing these concerns through knowledge-sharing and mapping areas of concern. Manitoba Hydro provided the framework for the IVMP, and indicated that it would be completed prior to commencement of vegetation management activities for operation and maintenance of the Project.

Manitoba Hydro said that two main types of monitoring will be undertaken for the Project: environmental monitoring to verify accuracy of the predictions made and effectiveness of the mitigation measures implemented; and compliance monitoring to verify whether a practice or procedure meets regulatory requirements.

Manitoba Hydro submitted a draft Environmental Monitoring Plan (EMP) in its Application, and then filed an updated EMP during the provincial hearing process. The objectives of the plan are to: confirm the nature and magnitude of predicted environmental effects; assess effectiveness of mitigation measures implemented; identify mitigation measures to address unanticipated environmental effects, where required; confirm compliance with regulatory requirements; and provide baseline information to evaluate long-term changes and trends.

Manitoba Hydro selected environmental indicators for each valued component in its environmental assessment to focus monitoring efforts. These indicators include: stream crossings (riparian buffers, ground cover, erosion); wetlands; plant species of conservation concern;

non-native and invasive plant species; traditional use plant species; amphibians; common garter snake hibernacula; bird-wire collisions, sharp-tailed grouse lek sites; bird species of conservation concern; ungulates and predators (winter aerial and remote IR camera trap surveys); and black bear (camera trap surveys). The length of post-construction monitoring proposed by Manitoba Hydro ranges from 1 to 2 years for most indicators, and 1, 3 and 5 years after clearing for bird species of conservation concern. However, it said the duration of the monitoring program will remain flexible based on the program's findings and results of other Manitoba Hydro transmission projects under construction.

Manitoba Hydro said that First Nations and Métis involvement in the monitoring program is essential for the Project and that it would continue its work to develop mechanisms for their involvement. It said the MMTP Monitoring Committee will remain in place through Project construction and participation in the operations phase will be commensurate with the nature of activities occurring during that time.

During the Board hearing, in response to issues raised by CAEPLA, Manitoba Hydro provided an additional monitoring plan to be included in its EMP for agricultural lands. The monitoring objectives involve: monitoring crop productivity post-construction; inspecting agricultural fields for soil rutting and compaction issues; and confirming success of tile drainage reclamation. Manitoba Hydro also committed to mapping crop productivity along the ROW prior to construction.

Manitoba Hydro said that monthly construction progress updates will be publicly available and include reports of non-compliance events, and that reporting of environmental monitoring initiatives led by Manitoba Hydro will be provided annually. It said that, when an Indigenous community expresses interest in receiving in-person monitoring updates, Manitoba Hydro will provide those updates through the MMTP Monitoring Committee or its ongoing engagement processes.

Anishinaabeg of Naongashiing (AON) said that Manitoba Hydro should be required to integrate information obtained from Indigenous Knowledge studies, engagement and consultation with Indigenous communities into its CEPP and environmental protection planning. They said that Manitoba Hydro should include Indigenous communities in vegetation management and ecological restoration of the Project area.

Brokenhead Ojibway Nation (BON) said that a long monitoring program, as part of an environmental monitoring committee, should be established for wildlife, fish, and vegetation for species of importance to BON's traditional land-use.

Animakee Wa Zhing #37 (AWZ) and Northwest Angle #33 First Nation (NWA) said the Project should be subject to monitoring for the lifetime of Project and that they should play a direct role in ongoing monitoring.

AWZ said that Manitoba Hydro should be required to report the details of adaptive management, including measurable parameters of success. As well, they said the NEB should require Manitoba Hydro to include in its CEPP: maps showing the locations of Project activities; a

description of the criteria that would be used to implement the procedures, measures, and plans in the CEPP; and Manitoba Hydro's Cultural and Heritage Resource Protection Plan.

The Manitoba Branch of the Consumers' Association of Canada (CAC Manitoba) said that Manitoba Hydro's monitoring plans are insufficient and should be strengthened.

CAC Manitoba said the Board should adopt, as conditions, CEC licensing recommendations 12.6 (monitoring advisory group), 12.7 (website with monitoring reports) and 12.8 (monitoring), and non-licensing recommendation 12.11 (third-party audit). CAC Manitoba also recommended that Manitoba Hydro: develop a more standardized monitoring format across projects; remove baseline information from its monitoring program; expressly include adaptive management in its monitoring program; create monitoring plans for endangered fish species and medicinal and traditional plants; and, as part of its annual reporting, provide an assessment of whether monitoring programs need to be extended beyond the two year time frame.

Manitoba Wildlands (MWL) said that Manitoba Hydro's CEPP should not remain static with regard to Crown land and consider changes to Crown land designations, protected area designations, and land-use over the life of the Project. MWL said that environmentally-sensitive areas should be assessed separately and more vigorously than other areas. It also said that the CEPP should consider mitigation measures implemented for past Manitoba Hydro projects, as well as require a complete discussion of Project-related cumulative effects. MWL suggested that the Board add further conditions requiring: Manitoba Hydro to identify locations requiring site specific reclamation; use native species recorded in the Project area for restoration; and to have an emergency response plan specific to construction and operations.

MWL said monitoring should be conducted for the life of the Project, and that Manitoba Hydro should be required to update its EMP yearly with updates in federally and provincially-listed species of concern, as well as conduct annual surveys for these species. It said Manitoba Hydro should be required to have a rare plant specialist or species at risk biologist monitor and assess effectiveness of implemented mitigation measures for federal and provincial species of concern. MWL said the Board should adopt CEC's licensing recommendations 12.4 (annual reporting), 12.8 (integrated management practices and monitoring results) and 12.11 (third party audit).

Peguis First Nation (Peguis) submitted that Manitoba Hydro should provide maps of the final route, including tower locations, with a description of any changes made since the EIS was prepared, and include a discussion regarding what actions or process was followed if unanticipated adjustments occur during construction. They said that burning of trash and debris from clearing should be avoided, particularly during dry periods, and the methods of clearing chosen should be conducted with minimal effects to the forest. Peguis said that Manitoba Hydro's Access Management Plan should describe the location of trails, roads and water crossings required for access, and include plans for decommissioning temporary access on completion of construction.

Peguis said that Manitoba Hydro's CEPP should apply to all phases of the Project, and be expanded to include the other plans and processes committed to by Manitoba Hydro such as: access management; emergency preparedness and response; waste and recycling management; erosion and sediment control; cultural and heritage resources protection; and the FNMEP.

Peguis also said that Manitoba Hydro's biosecurity procedures should apply to non-agricultural lands to prevent spread of weeds between agricultural and non-agricultural lands. It said that weed control should occur for the life of the Project, with any incidents reported to the regulator and posted on Manitoba Hydro's website. As well, Manitoba Hydro should prepare and post weekly reports that confirm the efficacy of its biosecurity procedures.

Peguis said that plants inventoried during Manitoba Hydro's environmental surveys should be re-established in similar proportions to their distributions prior to construction, and disturbed areas revegetated using either site-specific seed mixtures that were derived from the seed of existing plants in the area prior to construction or native seed mixtures that have been approved by Manitoba Sustainable Development's Wildlife Branch and an advisory committee of First Nation plant experts. Peguis also said that wildlife trees should be left where possible and any existing shrubs/trees should be salvaged and replanted post-construction or replaced by the same species and sapling age. If native prairie is to be disturbed, Peguis said that native prairie revegetation specialists should plan and oversee reclamation of these areas, and include post-construction monitoring for at least three years. It said that re-seeding may be required over the Project's life in these areas.

Peguis said Manitoba Hydro should be required to conduct a post-construction monitoring program to determine if there were any changes to fish and fish habitat, aquatic species and migratory birds, as a result of construction, or as a result of an accident and malfunction during either construction or operation of the Project. It said that post-construction monitoring requirements should include an evaluation of the effectiveness of mitigation measures applied, and a schedule for implementing any adaptive measures. Peguis also said that the environmental monitoring plan should include: the advice and traditional knowledge of Indigenous Peoples through an Indigenous Monitoring/Advisory Committee; be updated every five years; and include independent monitoring and evaluation and a review by an independent auditor. Peguis said that Manitoba Hydro should report reclamation and other environmental issues annually for the life of the Project, and support research studies to understand the effects of its Project on natural areas, wildlife, and traditional land-use.

Roseau River Anishinabe First Nation (RRAFN) raised concerns related to the changes in air quality that may result from Project construction, operation and maintenance activities due to vehicle and equipment exhaust, burning of slash, dust, and potential adverse effects to human health.

Sagkeeng First Nation (Sagkeeng) said that waste and slash should be burned only during the winter and away from permanent human receptors, and that noise control techniques should be implemented during construction and operations in areas within 1.5 km of Indigenous hunting, gathering, cultural and religious sites. It also suggested Manitoba Hydro implement site-specific design to soften visual effects of the Project.

Sagkeeng said the condition requirement for an updated CEPP should include wording to ensure that the plan applies to all works and activities associated with the Project, and the criteria that Manitoba Hydro will use to implement mitigation measures. It said the CEPP should require Manitoba Hydro to include: the Cultural and Heritage Resources Plan, Access Management Plan; terms of reference for the MMTP Monitoring Committee; Indigenous community

monitoring programs; site-specific plans for sensitive sites identified by affected Indigenous communities; and wildlife monitoring and management plans (including moose). Sagkeeng said Manitoba Hydro should be required to develop a plan that indicates how construction techniques and mitigation strategies will be communicated to Manitoba Hydro's contractors, field staff and participating Indigenous monitors, implemented, monitored, and evaluated.

Sagkeeng said that Indigenous-led community-based environmental monitoring is needed and suggested that Manitoba Hydro be required to develop a plan indicating how affected Indigenous communities would be provided with equal opportunities to participate in monitoring on Crown lands for the life of the Project. It said environmental monitoring should be empowered to act, be independent of the Proponent, and be tied to agreed-upon thresholds of acceptable change. Sagkeeng said that Manitoba Hydro should be required to include updates on both Indigenous Monitoring Committee progress and results of any recent studies, surveys or monitoring programs conducted by the Committee, including any newly proposed mitigation or monitoring measures, in its reporting.

Southern Chiefs' Organization Inc. (SCO) said that First Nations should be included in designing the mitigation processes to ensure minimum damage to the environment and species, including humans. SCO raised concerns regarding the amount of biomass (e.g., stumps, mulch) that will be left on the Project ROW after construction, causing contamination of surface and potable water sources and impacting bird, aquatic, insect and plant life. SCO suggested that signs should be posted restricting vehicle traffic on the ROW, particularly during times of high fire hazard. As well, protocols for cleaning equipment, boots, and other gear must be made clear to contractors, harvesters and other users to minimize introduction of invasive plant species to the ROW. SCO said that annual reviews of Manitoba Hydro's integrated management practices should be required for the life of the Project, and that Manitoba Hydro's Access Management Plan should be reviewed in consultation with traditional Indigenous harvesters.

SCO said Manitoba Hydro should monitor and document any changes to species such as birds, insects and reptiles, including species at risk, on the ROW and at least 100 m on either side of the ROW for ten years post-construction. Further, that Manitoba Hydro monitoring should be conducted for the life of the Project, include participation by Indigenous communities, and be reported annually.

Southern Stakeholders Coalition (SSC) said restrictions on Project-related slash burning should be expanded near communities and places frequented by people.

Wa Ni Ska Tan were of the view that more care needs to be taken during construction to protect the environment. Further, the Board's draft **Condition 8** (CEPP) fails to allow for the incorporation of ongoing concerns that may be raised prior to or during construction, and that there must be an ongoing process, for the lifetime of the Project, to allow for adaptive management and updates to the CEPP as a result of ongoing engagement with Indigenous communities. It said that mitigation and rehabilitation plans submitted by Manitoba Hydro are presented in a very preliminary form and are deficient in data and insights from other projects. It said that adaptive management has not been actively or effectively employed by Manitoba Hydro and was rarely demonstrated in its Application. It was of the view that the Board should impose a condition requiring Manitoba Hydro to assess opportunities for adaptive management and

learning that might be proactively built into the Project, and be meaningfully shared with stakeholders and impacted Indigenous communities. Wa Ni Ska Tan also suggested that the Board adopt CEC non-licensing recommendation 12.11 for a third-party audit.

Wa Ni Ska Tan said that Manitoba Hydro's EMP exists only in draft form and does not address concerns of stakeholders and Indigenous communities. They said that ten years of monitoring is insufficient, and that annual reporting should occur for the lifecycle of the Project and include input from Indigenous communities. They also said that an independent body should prepare monitoring reports, based on independent evaluation.

With respect to concerns raised by participants regarding third-party oversight, Manitoba Hydro said it is already subject to extensive third-party oversight, including: involvement of multiple federal and provincial authorities; auditing by the International Organization for Standardization (ISO) for its environmental protection program; third-party biosecurity and environmental monitoring specialists; and the MMTP Monitoring Committee and associated monitors hired by that committee.

Environment and Climate Change Canada (ECCC), in its letter of comment, noted that the list of plans in the Board's draft **Condition 8** (CEPP) did not include a requirement for inclusion of Manitoba Hydro's Erosion Protection and Sediment Control Plan. ECCC said this plan should be referenced in the condition given the importance of such measures in establishing buffer zones around waterways, avoiding sensitive areas, and carrying out construction in certain areas while the ground is frozen to mitigate potential impacts to surface waters.

Views of the Board

The Board acknowledges the extensive number of comments received from participants regarding Manitoba Hydro's Environmental Protection Program. The Board has considered each comment in the context of the plans provided by Manitoba Hydro and additional commitments it has made during the provincial and NEB hearing processes, as well as the CEC Panel's views and its licensing and non-licensing recommendations.

Manitoba Hydro has identified routine design and standard mitigation measures, including certain best practices, which mitigate most of the Project's potential adverse environmental effects, as identified in Table 9-2.

The Board notes that the CEPP submitted as part of Manitoba Hydro's Application has not been updated since it was originally submitted to the Province of Manitoba for the provincial review process. Since that time, there have been numerous changes to the Project's scope and activities, including updated Indigenous Knowledge studies and field survey results, as well as commitments made by Manitoba Hydro during both the CEC and NEB hearing processes regarding various mitigation measures and plans to be included in the CEPP. As a result, the Board imposes **Condition 10** requiring Manitoba Hydro to file an updated Project-specific CEPP for approval 90 days prior to the commencement of construction which reflects all of these changes and commitments.

The CEPP must include evidence and a summary of Manitoba Hydro's consultation with potentially affected persons, organizations, Indigenous communities and provincial and

federal authorities regarding the updated CEPP, including any concerns that were raised, steps that Manitoba Hydro has taken or will take to address those concerns, or an explanation as to why no further action is required.

The CEPP must also include updated management, protection and monitoring plans, as committed to during the provincial and NEB hearings. As well, the CEPP must include orthophoto map sheets detailing the location of ESSs and the mitigation measures to be applied at these locations to lessen potential Project effects.

The Board notes the concerns raised related to the absence of a fully-developed Erosion Protection and Sediment Control Management Plan in Manitoba Hydro's CEPP. The Board is of the view that, such plans are crucial for avoiding and minimizing adverse environmental effects, and are standard in the construction industry. The Board expects Manitoba Hydro to review the concerns raised by Parties and to submit a more detailed and fulsome Erosion Protection and Sediment Control Management Plan with mitigation measures that are sufficiently robust to protect valued environmental components. The Board notes that it will assess the Erosion Protection and Sediment Control Management Plan as part of Manitoba Hydro's updated CEPP, as per the requirements of **Condition 10**.

The Board acknowledges participants' suggestions for additional information to be included in Manitoba Hydro's CEPP. The Board is of the view that Manitoba Hydro's Application and subsequent filings have shown that the mitigation measures to be implemented for the Project are based on extensive assessment of the Project's potential adverse environmental effects, learnings from past projects, are sufficiently detailed to ensure that the environment will be adequately protected, and include measures and processes to address most concerns raised by participants. Consequently, the Board does not share the view that further information requirements for the CEPP are warranted. However, the Board has updated the wording and structure of **Condition 10** to ensure all relevant plans are included in the document as well as criteria for how mitigation measures will be chosen.

The CEPP is important for communicating environmental protection procedures and mitigation measures to Manitoba Hydro's employees, contractors, and regulators. The commitments in the CEPP should be as clear and unambiguous as possible to minimize errors of interpretation. As well, in cases where there may be multiple ways to achieve the desired outcome, the CEPP should state the goal, mitigation options and clear decision-making criteria for choosing which specific option to apply under given circumstances. For circumstances where a mitigation option is mandatory, it should be clearly stated as such. The updated CEPP will be made publicly available on the Board's website.

With regard to post-construction monitoring, the Board has considered participants' views and the commitments made by Manitoba Hydro, and finds Manitoba Hydro's post-construction monitoring program sufficient and focused on appropriate valued components. The Board requires that Manitoba Hydro include an updated Environmental Monitoring Plan in the CEPP, as per the requirements of **Condition 10**.

With respect to the requests that the CEPP and the EMP should apply to the life of the Project, the Board notes that oversight of the operation of the power line is best addressed by the provincial agency with the authority to ensure environmental compliance over the life of the Project. The same applies for the requests that the Board adopt the CEC's non-licensing recommendation 12.11; the Board finds that the CEC's recommendation is appropriately directed towards Manitoba Sustainable Development.

Regarding the length of post-construction monitoring reporting required, the Board notes the CEC Panel's concerns related to Manitoba Hydro's proposed time frame for post-construction monitoring, and CEC's licensing recommendation 12.8 requiring Manitoba Hydro to provide annual monitoring reports for a period of at least 10 years. In its report, the CEC Panel indicated that it may take time to understand if access management measures are effective, or if Manitoba Hydro's efforts to provide golden-winged warbler habitat on the ROW are fully effective. It was of the view that the ROW will be a permanent feature of the region, so the period of monitoring should be long enough to conclude what the long-term effects will be, with some confidence.

The Board concurs with the CEC Panel's views, and imposes **Condition 23** requiring Manitoba Hydro to file post-construction monitoring reports with the Board annually for at least 10 years. The Board expects that, if there are any outstanding issues at the end of monitoring year 10, Manitoba Hydro will apply adaptive management strategies, appropriately extend the monitoring period for those environmental indicators, and continue reporting monitoring results to the Board.

The Board recognizes that **Condition 23** will overlap with provincial requirements for annual reporting (if imposed). Any requirements of the Board's **Condition 23** which differ from that of the Province should be considered additional to, rather than in conflict with, the Province's licensing requirements.

9.6.4 Federal Responsibilities: Detailed Analysis of Manitoba Hydro's Mitigation Measures on Environmental Issues and any Residual Effects

The Board has responsibilities to assess environmental impacts of the Project as they relate to federal legislation and policy. This section of the EA report provides that assessment, including an assessment of the significance of any residual environmental effects.

9.6.4.1 Fish and Fish Habitat

The Board has responsibilities to assess the Project's impacts to fish and fish habitat, as per a Memorandum of Understanding between the NEB and Fisheries and Oceans Canada (DFO) signed on 16 December 2013 for cooperation and administration of the *Fisheries Act* and the SARA. Pursuant to the Memorandum of Understanding, the Board reviews Project activities and refers to DFO any works that will likely result in serious harm to fish and therefore require authorization under paragraph 35(2)(b) of the *Fisheries Act*.

Manitoba Hydro said that it conducted a desktop review of existing fish and fish habitat data for the Project area, including species of conservation concern (e.g. species at risk) and fish that

support commercial, recreational and Indigenous fisheries, which could potentially inhabit watercourses crossed by the Project.

As set out in the Environmental Setting in Section 9.5, Manitoba Hydro indicated that seven aquatic species at risk have the potential to occur within the RAA, and the Project's crossing of the Assiniboine River is located within an ecological reserve candidate which has eleven species of clam, as well as mapleleaf mussels, which are listed as Endangered on SARA. Manitoba Hydro noted that there are no current restrictions or protections for this area, and filed evidence about its consultations with Manitoba Sustainable Development indicated that it had no concerns with the Project's potential effects or the associated mitigation measures related to species within the designated ecological reserve.

Manitoba Hydro said its desktop analysis indicated that twenty-three of the Project's seventy-five watercourse crossings have moderate to high sensitivity habitat (i.e., Type A to C fish habitat characteristics, based on DFO's habitat classification system). These watercourses were carried forward into Manitoba Hydro's 2014 field program for further assessment, which included characterization of fish habitat, in-water and riparian environment conditions and water quality. Manitoba Hydro said that, if a watercourse supported habitat for species of concern or sustaining a commercial, recreational and Indigenous fishery, it was ranked a high sensitivity. Low sensitivity habitat was considered to have poor spawning and rearing habitat and substantial habitat limitations for contributing to a fishery.

Manitoba Hydro said the Project's potential effects to fish and fish habitat, including species at risk, are expected to be limited since no in-water work is planned at watercourse crossings. It said that all waterways would be spanned by the Project with the closest tower greater than 30 m from the high water mark. In addition, Project activities in the vicinity of watercourses would be limited to selective removal of riparian vegetation, except where existing access is not available. In those locations, clearing would be required for trail access, and temporary ice and snowfill crossings would be constructed on the frozen watercourses. As a navigation precaution, boats with flag persons are required during conductor stringing at navigable watercourse crossings, but Manitoba Hydro indicated that it would launch the boats at authorized boat launches and remain in deep water to avoid disturbance to bed and banks of watercourses, including clam and mussel habitat.

Manitoba Hydro said it would implement provincial guidelines for watercourse crossings and the protection principles outlined in DFO's Fisheries Protection Policy Statement and *Measures to Avoid Causing Harm to Fish and Fish Habitat*. To further reduce any potential effects to fish and fish habitat, Manitoba Hydro committed to the following mitigation measures: retain riparian vegetation to the extent possible within 30 m of watercourses including establishing a 7 m machine-free zone (except at trail crossings); minimize the number of temporary vehicle crossings required by using existing access where available; limit disturbance to bed and banks of the watercourses by not grading and using protection methods (e.g., swamp mats, pads); implement erosion and sediment control measures; and rehabilitate any disturbances immediately upon completion of construction. Manitoba Hydro further noted that, while turbidity monitoring is not proposed during construction, monitoring of the implementation of environmental protection measures would be performed by its Environmental Inspectors and aquatic

environment specialists, and if required, further mitigation measures would be implemented (e.g., erosion control measures).

Manitoba Hydro's environmental monitoring plan indicates that it will monitor riparian buffers, ground cover and erosion at watercourse crossings during construction and one year post-construction to verify the effectiveness of its mitigation measures.

AON raised concerns related to the Project's effect to the health of fish and fish populations, as well as to spawning grounds, in watercourses crossed by the Project.

AON and BON said Manitoba Hydro's field surveys were insufficient, suggesting that the surveys should: be multi-season; have greater survey extent both upstream and downstream of crossings; include all watercourse crossings (including Class D and E watercourses); and require collection of such data as fish habitat, riparian vegetation composition, channel morphology, water quality, water flow and benthic invertebrates. BON also said that all watercourse crossings should be considered fish-bearing and mitigation measures be assigned accordingly.

AON and BON noted the importance of baseline data collection to detect and manage effects associated with the Project and to ensure appropriate follow-up monitoring. They said Manitoba Hydro should provide a water quality sampling plan for construction and operations at all watercourse crossings, including sampling of metals, hydrocarbons, pesticides and other chemicals of concern to traditional land users.

AON and BON raised concerns related to the lack of detail in Manitoba Hydro's Application regarding transmission tower placement and temporary watercourse crossings, the measures that would be implemented to protect watercourses and riparian areas from sedimentation and erosion, as well as impacts to fish and fish habitat. BON said Manitoba Hydro's riparian zone plan should be for a wider area, and that offsetting should be implemented to mitigate any effects to riparian areas. As well, they said that Manitoba Hydro should complete at least one round of monitoring post-construction to ensure adequacy of mitigation measures, confirm restoration, and to ensure the environmental assessment predictions were realized.

AWZ and NWA raised concerns that Manitoba Hydro's use of herbicides during operations may contaminate waterways and fish.

CAC Manitoba raised concerns related to fish species at risk and the Project's potential effects to these species and their habitats. They were of the view that Manitoba Hydro's field studies should have included fish sampling, especially for species at risk such as the bigmouth buffalo and mapleleaf mussel.

MWL said Manitoba Hydro should be required to provide details regarding watercourse crossing, including: crossing method; information on the presence of fish and fish habitat; fisheries timing of least risk; identification of those crossings where DFO's *Measures to Avoid Causing Harm to Fish and Fish Habitat* would not be implemented; any changes to surface water flow/drainage; and a description of any flooding events that affected the Project during construction.

Peguis said Manitoba Hydro should be required to report to the Board the locations where herbicide application, disturbance to bed and banks of watercourses and riparian areas occurred during construction, and any adaptive management measures implemented. As well, Peguis requested that Manitoba Hydro provide further verification for the 33 crossings that it stated would have no residual effects to fish and fish habitat, and provide annual reports as to the continued accuracy of its predictions. Peguis said works should not be conducted in water or near shorelines between April 1 and June 30, or during periods of high streamflow. Further, that Manitoba Hydro should be required to develop a plan to mitigate the effects to treed and shaded habitat along waterways in riparian areas which includes monitoring and inspection for the life of the Project.

RRAFN raised concerns related to the use of herbicides near rivers, creek and streams, and the sufficiency of Manitoba Hydro's 30 m buffer zone in protecting those watercourses and fish and fish habitat. It said that it had concerns related to the measures Manitoba Hydro will take to mitigate treed canopy and vegetation loss within riparian zones, the effects vegetation loss may have on vegetation and fish populations, and how Manitoba Hydro intends to monitor riparian vegetation and fish populations during operations and maintenance.

SCO said a 30 m riparian buffer zone may be inadequate in preventing herbicides from leaching into watercourses and were of the view that a minimum 100 m or greater buffer zone should be established to further reduce such risks. SCO said Manitoba Hydro should be required to file pre-construction watercourse crossing inventory information with the Board, conduct water quality testing prior to construction and periodically thereafter, and prepare a riparian habitat management plan which includes an offset plan for all watercourse crossings with high fish habitat sensitivity or where riparian habitat disturbance is greater than 18 per cent.

Sagkeeng suggested that Manitoba Hydro should minimize watercourse crossing disturbance by using already-disturbed areas and crossing waterways perpendicularly.

In its reply, Manitoba Hydro said it did not plan on conducting further field assessments at watercourses and that fish sampling is unnecessary. It said that gathering detailed information on fish habitat for every crossing site and monitoring species at risk is unnecessary to assess and monitor the effects of the Project because it used a precautionary approach. Where information is incomplete, Manitoba Hydro said it conservatively assumed fish presence and habitat type was assumed to be sensitive. It reiterated that no in-water work was planned and that herbicides would not be used within 30 m of watercourses or riparian areas. As such, in its view, there would be no net change in fish habitat, survival, or health anticipated as a result of the Project.

Views of the Board

The Board is of the view that the information included in Manitoba Hydro's Application is sufficient for the Board to assess the potential impacts of the Project to fish and fish habitat. The Board has considered the concerns raised by participants in the context of Manitoba Hydro's planned activities at watercourse crossings spanned by the Project. The Board notes that the interaction of the Project with fish and fish habitat, including any species at risk, is limited and it is of the view that Manitoba Hydro's proposed mitigation measures will effectively mitigate any potential adverse effects. The Board notes that Manitoba Hydro has

committed to follow DFO's *Measures to Avoid Causing Harm to Fish and Fish Habitat*, and is of the view that there is a low likelihood of the Project causing serious harm to fish or fish habitat, and no authorization under paragraph 35(2)(b) of the *Fisheries Act* is required.

Condition 10 requires Manitoba Hydro to submit, for approval, a CEPP for the Project. The Board expects Manitoba Hydro to ensure that the CEPP clearly documents the measures it has committed to implementing in order to protect fish and their habitat from the effects of the Project. The condition requires the CEPP to include an Erosion Protection and Sediment Control Management Plan, Rehabilitation and Invasive Species Management Plan, Emergency Preparedness and Response Plan, and Environmental Monitoring Plan. The Board is of the view that the measures in these plans will further protect watercourses and the fish that inhabit them.

The Board notes that Manitoba Hydro intends to verify the effectiveness of its mitigation measures prescribed for areas adjacent to watercourses during construction and post-construction. **Condition 23** requires Manitoba Hydro to submit annual post-construction monitoring reports for 10 years and the Board expects that the results of monitoring at watercourses to be included in those reports.

With the mitigation measures proposed and the Board's conditions, the Board finds that any residual effects of the Project to fish and fish habitat are not likely to be significant. Effects would be short to medium term in temporal extent, given that interactions would occur at multiple crossings but each would be of short duration (e.g., weeks to months) and limited to the construction and restoration periods, as well as brief periods during operations. Further, the effects would be reversible, limited to the fish and fish habitat LAA, and be of low to moderate magnitude, depending on the specific crossing location, sensitivity of the species present, and habitat quality.

9.6.4.2 Migratory Birds

In conducting a Project EA, the Board assesses potential effects of the Project to migratory birds protected under the *Migratory Birds Convention Act, 1994* (MBCA).

Manitoba Hydro said construction activities' effects on migratory birds may result in a change to habitat use and the potential for increased mortality risk. To reduce potential effects, Manitoba Hydro said it would not clear trees or construct during the breeding period (April-August) when migratory birds are present, without conducting pre-activity nest sweeps. Manitoba Hydro said that, if nests were found to be active, appropriate buffers/setbacks would be implemented, depending on the level of disturbance expected.

Manitoba Hydro said the Project may elevate mortality risk of migratory birds during operation of the Project due to the presence of overhead wires. It said collisions with transmission lines are among the top causes of human-related bird mortality in Canada. Heavy-bodied waterbirds such as ducks, geese, cranes and herons are considered most susceptible to transmission line collisions due to their relatively poor ability to perform evasive manoeuvres. As well, birds that flock are at a higher risk of collision than are solitary birds.

In 2014, Manitoba Hydro conducted pre-construction field studies which included spring and fall bird migration surveys, and summer breeding bird surveys. Manitoba Hydro said the results of those surveys indicate that waterbirds are the most common birds observed in the RAA and that waterbird abundance is greatest during the fall migration period. The field studies identified seven areas in the LAA where waterbirds congregate and two of these sites (Assiniboine and Red River crossings) fall within the PDA.

Since transmission lines in areas where bird activity is concentrated (e.g., lakes and open water wetlands) can have higher risk of bird-wire collision, Manitoba Hydro said that in these areas bird flight diverters would be installed on the shield wires to reduce collision risk. Manitoba Hydro said that applying bird diverters to shield wires has been shown to reduce bird mortality rates by 50 per cent to 80 per cent. Manitoba Hydro said it will monitor avian mortality as a result of bird-wire collision post-construction bi-annually for two years to determine the effectiveness of the mitigation measures and, if appropriate, apply further mitigation strategies to reduce or prevent future mortality events.

AWZ and NWA raised concerns related to the Project's effects to bird populations and migration patterns.

MWL said the Board should require Manitoba Hydro to conduct breeding bird surveys if activities will occur during restricted activity periods.

Peguis said Manitoba Hydro should report the locations where bird diverters were installed and include mitigation measures to protect birds that perch or nest on the transmission line (e.g., perch discouragers, component covers). Peguis said that, during operations, equipment should not be driven on the ROW during the restricted breeding bird season to protect ground-nesting migratory birds. They further suggested that Manitoba Hydro be required to develop an Avian Protection Plan and carry out a follow-up program to determine any changes to migratory birds.

SCO raised concerns regarding the sufficiency of Manitoba Hydro's measures for mitigating bird strikes.

In its reply, Manitoba Hydro said it conducted a broad set of field and desktop studies to understand the current condition and potential effects of the Project on birds. In addition to breeding bird, nocturnal, waterbird movement, and mortality surveys, it assessed the migration of birds using driving surveys and drawing from current literature on migratory patterns of local species. Manitoba Hydro reiterated its commitment to conduct Project-related clearing outside of sensitive timing for birds.

Views of the Board

The Project has the potential to have adverse effects to migratory birds protected under the MBCA. The Board has examined Manitoba Hydro's mitigation measures and is of the view that the following measures proposed by Manitoba Hydro are key to avoiding or minimizing effects to migratory birds: conducting most Project work during the winter when migratory birds are not present, conducting nest sweeps prior to activities that occur during the

breeding bird period, and installing bird diverters on wires where the risk of collisions is expected to be highest.

Manitoba Hydro has committed to monitoring avian mortality post-construction and the Board expects Manitoba Hydro will include the monitoring results, as well as any necessary adaptive management measures implemented to further reduce avian mortality, in the post-construction monitoring reports to be filed annually by Manitoba Hydro, in accordance with **Condition 23** (see Section 9.6.3).

The Board finds the potential residual adverse environmental effects of the Project to migratory birds are not likely to be significant. The Board notes that effects to migratory birds may be permanent if mortality occurs as result of destruction of nests during construction or as a result of bird-wire collisions during operation of the Project. However, other potential adverse effects would be reversible. Most residual effects would be expected to be short-term in temporal extent (e.g., during construction, brief periods during operations); however, others may be long-term (e.g., bird-wire collisions since multiple interactions may occur throughout the life of the Project, loss of wildlife habitat for the duration of the Project). All effects are expected to be low to moderate magnitude and limited to the Wildlife and Wildlife Habitat LAA.

9.6.4.3 Species at Risk

In conducting a federal Project EA, the Board has assessed the effects of the Project on federal species at risk, as listed on Schedule 1 of SARA. This section is specific to plant species at risk and non-aquatic wildlife species at risk (terrestrial invertebrates, herptiles, birds and mammals). The Project's potential effects to aquatic species at risk are discussed in Section 9.6.4.1.

As set out in the Environmental Setting in Section 9.5, Manitoba Hydro said that five plant species at risk and 29 wildlife species at risk have the potential to occur within the RAA, and that golden-winged warblers are the only SARA-listed species within the RAA to have defined critical habitat. In its assessment of Project effects to species at risk, Manitoba Hydro said it assumed that the RAA has the potential to support species at risk, even if none were detected during its field surveys.

In 2014, Manitoba Hydro conducted spring and summer field surveys for areas dominated by native vegetation and pasture in the PDA that had the potential to support plant species at risk. In 2017, Manitoba Hydro conducted further botanical and vegetation surveys to search for rare plants in selected habitats on the ROW. The 2017 surveys were conducted at various times during the summer to capture the flowering times of different species, and as a result, many sites were surveyed on more than one occasion. Manitoba Hydro said that no SARA-listed plant species were observed during either the 2014 or 2017 surveys.

In 2014, Manitoba Hydro also conducted field surveys and studies which targeted mammals, birds and herptiles, including species at risk. These included: a mammal camera trap study; aerial winter track survey; breeding bird survey; nocturnal nightjar surveys (for common nighthawk and eastern whip-poor-will); yellow rail survey; bird migration survey; waterbird movement survey; bird mortality monitoring; aerial stick nest survey; wetland herptile surveys; nocturnal

roadside amphibian call counts; and late summer visual encounter surveys. Manitoba Hydro said that ten wildlife species at risk were observed during the 2014 surveys, including northern leopard frog, common snapping turtle, least bittern, yellow rail, eastern whip-poor-will, common nighthawk, short-eared owl, peregrine falcon, olive-sided flycatcher, and golden-winged warbler.

Manitoba Hydro said it conducted further pre-construction wildlife field studies in 2017. These studies included: focussed spring (call survey and visual encounter survey), summer (visual encounter survey, larval survey) and fall (visual encounter survey) surveys of wetlands and streams known to support amphibians, including northern leopard frogs; and a golden-winged warbler study to establish a baseline estimate of the local population by locating individuals and mapping their distribution, and reference sites for future monitoring purposes. Manitoba Hydro confirmed the presence of northern leopard frogs in the PDA during these surveys.

Manitoba Hydro said that raptor nest surveys were scheduled to be conducted in May 2018.

Manitoba Hydro said that, while little brown myotis and northern myotis range throughout southeastern Manitoba where suitable forage and roost sites exist, it did not conduct bat surveys for the Project because it was of the view that such surveys would not have provided meaningful data. Rather, its assessment assumed that these species would occur in the RAA, including parts of the PDA. It also said that the availability of hibernacula strongly constrains the distribution of these species but, while many bat hibernacula in Manitoba have been mapped, there are no records of hibernacula or other evidence to show that suitable environments for hibernacula exist in the RAA. Manitoba Hydro said that if a bat hibernaculum is discovered prior to construction, mitigation measures would be prescribed.

Manitoba Hydro said it anticipates 475 ha of critical habitat for golden-winged warblers could be affected by Project clearing. As part of the provincial hearing process, in response to an information request from ECCC, Manitoba Hydro provided a plan for managing critical golden-winged warbler habitat during construction and operation of the Project. The plan applies to the portion of the ROW that intersects the five 10 x 10 km critical habitat grid squares outlined in ECCC's 2014 proposed *Recovery Strategy for the Golden-Winged Warbler*. During construction and operation of the Project, ROW vegetation will be selectively cleared and maintained using an integrated vegetation management strategy to enhance the long-term habitat suitability for golden-winged warbler. Manitoba Hydro anticipates that it will regenerate 473 ha of disturbed lands into shrubby habitat likely suitable for the warbler. Manitoba Hydro said it would assess vegetation diversity, distribution and height during operations and use adaptive management to maintain or enhance the warblers' habitat. It also said that monitoring of the response of the local golden-winged warbler population to the measures would be conducted at one, three and five years post-construction.

Manitoba Hydro's mitigation measures to avoid or minimize sensory disturbance, injury/mortality risk, and habitat loss for wildlife species at risk include: identifying and mapping wildlife features prior to construction in its CEPP and applying buffers and/or setbacks as appropriate; not carrying out clearing activities during reduced risk timing windows, without additional mitigation measures such as nest searches; restricting construction activities to established roads, trails and cleared construction areas; and placement of bird diverters on the transmission wires at locations with high bird activity.

In the event that a plant or wildlife species at risk is identified or suspected along the ROW prior to clearing, Manitoba Hydro said it would suspend work immediately in the vicinity of the species and work at that location would not resume until protection measures have been implemented in consultation with a qualified biologist or appropriate provincial and federal regulatory authorities.

In its draft Environmental Monitoring Plan, Manitoba Hydro said it will monitor for the presence of northern leopard frogs at wetland sites, and avian mortality as a result of bird-wire collision post-construction, on a bi-annual basis for two years.

AON and BON raised concerns related to the lack of multi-season or multi-year rare plant surveys, field surveys for little brown myotis and northern myotis, and pre-construction mammal denning surveys. AON said Manitoba Hydro should conduct pre-construction surveys for bat maternity colonies, and roost and hibernacula presence. If such features were found, they said Manitoba Hydro should be required to implement a reduced risk timing window and setback distance of 200 m and retain maternity roost habitat trees.

AON and BON said that increased mortality of reptiles, amphibians, and mammals could occur as a result of increased road traffic and wildlife-vehicle collisions during construction. AON said Manitoba Hydro should be required to install reptile and amphibian exclusion fencing at sensitive wildlife habitat locations, along with monitoring to quantify reptile and amphibian mortality to determine if mitigation was successful.

AON and BON said that Manitoba Hydro's CEPP did not clearly indicate wildlife timing windows and the criteria that would trigger implementation of the measures.

AWZ and NWA said that Manitoba Hydro used northern leopard frogs as an indicator species for the ecological health and function of wetlands, and said that risk of mortality as a result of cumulative interactions of contaminants, such as fertilizer and pesticides, should have been considered a pathway of effect.

CAC Manitoba said the Board should adopt CEC licensing recommendation 8.2 requiring Manitoba Hydro to conduct pre-construction field studies for least bittern and short-eared owl.

MWL raised concerns related to land degradation and potential losses to wildlife habitat, species, biodiversity, and natural capital. It said that Manitoba Hydro should be required to develop habitat management plans for the life of the Project for all species of concern known to occur in the Project area, including historically, and that a no-net-loss approach be taken. MWL also said the Board should require Manitoba Hydro to conduct breeding bird surveys if Project activities occur during restricted activity periods. Further, if the NEB adopted the CEC Panel's licensing recommendation 8.2, it should include information regarding reporting of survey results and actions to be taken.

Peguis said Manitoba Hydro should be required to report to the Board during construction any locations where rare plants are encountered and the adaptive management measures implemented.

Sagkeeng suggested that Manitoba Hydro be required to develop a plan to manage rare plant populations and ecological communities, including any critical habitat for species at risk that may be affected by the Project during construction and operations. Such a plan should require consultation with Indigenous communities and incorporation of their knowledge, and include offsets for plants which have not achieved reclamation success.

SCO suggested that heavy construction be restricted to times when plant species are dormant and bird species are not nesting to protect species at risk. Further, that Manitoba Hydro be required to file mitigation and habitat restoration plans for each species whose critical habitat is directly or indirectly affected by the Project. SCO said field studies for the least bittern and short-eared owl, as referred to in the CEC Panel's licensing recommendation 8.2, should already have been completed and results incorporated into Manitoba Hydro's Environmental Impact Statement.

Wa Ni Ska Tan raised concerns related to the Project's potential impacts to the Manitoba Tall Grass Prairie Reserve. Manitoba Hydro indicated that the Manitoba Tall Grass Prairie Preserve, located near Tolstoi and Gardenton, is outside of the RAA and approximately 18 km from the Project.

ECCC, in its letter of comment, stated that it supported NEB draft Condition 8c) which requires Manitoba Hydro to include its golden-winged warbler habitat management plan in the CEPP.

Views of the Board

The Board acknowledges the concerns raised by Parties, as well as those raised by the CEC Panel during the provincial process, regarding Manitoba Hydro's pre-construction surveying effort for some species at risk (e.g., least bittern, short-eared owl, bats). The Board notes that some additional pre-construction wildlife and vegetation surveys (e.g., amphibian survey, golden-winged warbler survey, raptor nest survey, botanical survey) have been conducted by Manitoba Hydro since the conclusion of the provincial process and preparation of its Application which may address in part some of the concerns raised.

With respect to plant species at risk, the Board is of the view that the pre-construction surveying effort is satisfactory since several years of multi-season surveying have been conducted. While no SARA-listed plants have been found to date, Manitoba Hydro committed to implement protective measures if such plants are observed or suspected to occur on the ROW prior to clearing.

With regard to wildlife species at risk, Manitoba Hydro's 2014 and 2017 surveys, while not necessarily detailed or conducted over multiple seasons, were appropriately broad-scoped to capture the presence of many wildlife species at risk. The Board recognizes that Manitoba Hydro has used a precautionary approach in its assessment and assumed the presence of all species at risk when developing its mitigation measures. The Board is of the view that this is an acceptable approach, particularly since Manitoba Hydro plans to construct during winter when the risk of disturbance to wildlife species at risk is limited. The Board is of the view that further surveying effort will not necessarily provide further

value in identifying appropriate mitigation measures to protect wildlife species at risk. Manitoba Hydro has committed to implement appropriate protection measures if plant or wildlife species at risk are found, or suspected to occur, on the ROW prior to or during construction, or if construction activities will occur during sensitive timing windows for wildlife species at risk. The Board expects Manitoba Hydro to follow through on that commitment.

Participants made suggestions and shared views regarding various mitigation measures which they thought should be implemented to minimize the Project's effects to species at risk. The Board is of the view that such measures are best determined based on site-specific circumstances. It finds that Manitoba Hydro's commitment to having biologists and appropriate provincial and federal authorities involved in the decision making process, as needed, will ensure appropriate measures for those circumstances are being implemented.

With regard to the Project's effects to critical habitat for the golden-winged warbler, the Board notes ECCC's support of Manitoba Hydro's Golden-Winged Warbler Habitat Management Plan. The Board is of the view that the Manitoba Hydro's plans to use integrated vegetation management techniques during construction and operations to provide habitat suitable for golden-winged warblers is appropriate and will minimize the Project's adverse environmental effects to this species. The Board expects Manitoba Hydro to monitor and report the effectiveness of these measures post-construction as per the requirements of **Condition 23** (see Section 9.6.3).

If any species at risk are newly identified during construction, the Board expects Manitoba Hydro to report on any protective measures implemented during construction, and monitor the success of those measures post-construction, as per the requirements of **Condition 23** (see Section 9.6.3). In addition, the Board expects Manitoba Hydro to periodically check for updates to SARA Schedule 1 listings prior to and during construction, including any issuance or updating of management plans and recovery strategies by ECCC, for species at risk that may occur in the Project area, and implement mitigation strategies accordingly.

The Board finds the potential residual adverse environmental effects of the Project to species at risk are not likely to be significant. The Board notes that the Project's effects to species at risk will be permanent if loss or injury occurs during construction or operations, but likely reversible for other predicted adverse environmental effects. Most residuals effects would be expected to be short-term in temporal extent (e.g., sensory disturbance to wildlife species of concern during construction and for brief periods during operations); however, others may be long-term (e.g., bird-wire collisions at multiple times through the life of the Project, loss of rare plant, loss of wildlife species at risk habitat for duration of Project). With mitigation applied, residual effects are expected to be of low to moderate magnitude, and limited to the LAA.

9.6.4.4 Wetlands

As a federal authority authorizing the Project, the Board has the duty to assess the Project for its adherence to the *Federal Policy on Wetland Conservation*.

As noted in the Environmental Setting in Section 9.5, Manitoba Hydro's desktop assessment indicated that 457.7 ha of wetlands will be intersected by the Project (14.9 per cent of the PDA), including the Caliento, Sundown and Piney bog complexes which are located in the southeastern part of the PDA. In 2014, Manitoba Hydro conducted field surveys for a subsample of the wetlands along the route to collect information about general wetland conditions. As well, in 2017, it said it conducted further pre-construction baseline surveys at 32 wetland sites.

While the Project has the potential to change wetland cover class abundance, distribution, structure and function, Manitoba Hydro predicted that the Project's effects to wetlands would be limited. While Manitoba Hydro said vegetation clearing will be required, it expected areas of surface disturbance to be localized and limited to the locations of permanent structures (e.g., transmission towers). Manitoba Hydro said there is a limited potential for construction activities to influence functional elements of wetlands, but acknowledged that vegetation clearing will alter vegetation structure in some wetlands and may affect wetland plant and wildlife habitat.

Manitoba Hydro said the Project routing considered effects to wetlands, and transmission towers would not be placed directly in wetlands unless the distance between towers is too great to span. It said that, while the exact locations of towers would not be known until the route is finalized, it estimated that 56 of the approximate 558 transmission towers would need to be placed within wetlands. Where the Caliento, Sundown and Piney bog complexes are intersected, it said the ROW intersects only a small area along the edge of each of these complexes.

Manitoba Hydro said its key mitigation measures to avoid or reduce effects to wetlands are: the ROW will be cleared when the ground is frozen or dry, or alternative methods (e.g., construction mats) will be employed to limit rutting and erosion; riparian buffers will be established around wetlands within which clearing and equipment use will be limited; and screw or micro pile foundations would be used for the transmission towers to reduce the permanent footprint in wetlands.

Manitoba Hydro indicated that the Project would result in permanent wetland loss of 0.14 ha at the Dorsey Converter Station, and approximately 0.5 ha as a result of tower foundation placements within wetlands.

Manitoba Hydro said that, currently, there is no regulation in Manitoba with respect to the offset of permanent effects to wetlands; however, it said the Government of Manitoba has issued draft no-net-loss guidelines for wetlands. Manitoba Hydro explained that it considered and incorporated the guidelines into its Project design and CEPP mitigation measures. As well, it said it intended to address permanent wetland loss associated with the Dorsey Converter Station through offset mitigation, by protecting an equivalent or greater amount of similar wetland class on its own property or through a third-party conservation easement. With regard to tower locations, Manitoba Hydro said that it is currently in discussion with the Province of Manitoba

about offsets for permanent wetland loss on its Bipole III Transmission Project, and that it anticipated having similar discussions with regard to the Project.

In its draft Environmental Monitoring Plan, Manitoba Hydro committed to conducting ground surveys to monitor wetland protection measures during construction, and identify wetland changes during construction, and annually for two years post-construction.

AON and BON raised concerns related to the placement of transmission towers and other Project components within wetlands supporting sensitive aquatic habitats and traditionally-important plant species. Both said that Manitoba Hydro should provide detailed plans, surveys, mitigation measures and contingency plans for all tower locations within wetlands of potential significance to their communities, including a rationale for siting towers at these locations. AON also raised concerns about changes in water levels affecting cranberry wetlands.

AWZ and NWA said it is critical that Manitoba Hydro conduct an appropriate assessment of effects to wetlands, since First Nations harvest a multitude of species that rely heavily on wetland distribution, abundance and quality.

MWL raised concerns regarding fragmentation, and potential loss of wetland and aquatic health and biodiversity as a result of the Project. It noted the historic loss of Manitoba's wetlands and said the Board should require Manitoba Hydro to include provisions for no-net-loss of wetlands and that any loss should be replaced by the same class of wetland.

Peguis said Manitoba Hydro should be required to develop a plan to mitigate the effects of the removal of treed and shaded habitat adjacent to wetlands. As well, it said the riparian buffer zone should be 50 m in width and be established for the life of the Project.

SCO said the Board should require Manitoba Hydro to conduct a pre-construction wetland survey of all wetlands potentially affected by the Project, and prepare a mitigation plan which includes reporting the results of post-construction reclamation and the offsets implemented to achieve no-net-loss to wetlands.

In its reply, Manitoba Hydro said it would consider any additional feedback from Indigenous Knowledge studies, the MMTP Monitoring Committee, or other sources, and decide whether any requests for tower location changes can be accommodated. It said, however, that any shifts in tower placement would likely be minor as changes in location may have implications for adjacent towers.

Views of the Board

The Board is of the view that Manitoba Hydro's pre-construction survey effort, environmental protection measures, and monitoring commitments are sufficient to avoid and minimize most effects the Project may cause to wetlands in the PDA. While Project design is still occurring and exact transmission tower placement locations in wetlands are not yet known, Manitoba Hydro has demonstrated that it will consider feedback from Indigenous Knowledge studies and the MMTP Monitoring Committee when finalizing siting of towers to see if requests can be accommodated.

The Board is mindful that permanent wetland loss is expected to occur at the Dorsey station and locations where transmission tower foundations are placed within wetlands. Also, permanent loss may occur accidentally at other wetland locations where mitigation efforts are not as effective or successful as predicted. As a result, the Board imposes **Condition 26** for Manitoba Hydro to submit a Wetland Offset Measures Plan to offset or compensate for any permanent loss of wetlands as a result of the Project. In addition, the Board requires Manitoba to report, as part of its requirement for post-construction monitoring reporting (see **Condition 23** in Section 9.6.3), the total area of permanent loss of wetlands resulting from construction of the Project and an explanation of how that loss will be offset or compensated for, as per the Wetland Offset Measures Plan.

With the implementation of **Condition 26** for offsetting any areas of permanent loss, the Board finds that any remaining potential adverse residual environmental effects to wetlands would not be significant. The Project's residual effects to wetlands would extend to the RAA, but be short to medium term in duration, reversible, and of low magnitude.

9.6.4.5 Navigation and Navigation Safety

In accordance with its responsibilities under the *National Energy Board Act*, the Board has assessed the Project's potential effects to navigation and navigation safety.

Manitoba Hydro said that six watercourses spanned by the Project are considered navigable. The Assiniboine and Red Rivers are both scheduled waters under the *Navigation Protection Act*, and navigation is also possible in Cooks Creek, La Salle River, Seine River and Rat River.

Manitoba Hydro said that, given there are no temporary or permanent in-water works or structures planned for the Project, there is limited potential for the Project to cause effects to navigation and navigation safety. During the NEB hearing, Manitoba Hydro said it had revised its approach for conductor stringing across navigable waters, and that helicopters, rather than boats, would be used for stringing. During these activities, flag persons in boats would be situated both upstream and downstream of the ROW as a navigation safety precaution.

Manitoba Hydro said ice bridges may be used at navigable crossings, and that impacts to navigation and navigation safety would be eliminated as a result of the mitigation measures that would be implemented. These measures included: ensuring the crossings will not impede water flow; creating a v-notch in the centre of the ice bridge at the end of the crossing season to allow it to melt from the centre; and securing any logs used to stabilize the shoreline approaches and removing them either before or immediately following the spring freshet. Manitoba Hydro said the mitigation measures would be included in its CEPP and that a Project-specific navigation and navigation safety plan would not be prepared.

AON indicated that the Project crosses the Red River, which it uses for navigation to access commercial hunting and fishing areas and to reach cultural sites. AON said Manitoba Hydro had not provided an adequate assessment of how the Project would affect or change navigation routes used by First Nations.

Wa Ni Ska Tan said Manitoba Hydro should be required to provide a Navigation and Navigation Safety Plan which applied to all waters crossed by the Project, including those in Manitoba Hydro's greater integrated system. It said the plan should include effects to water and water safety, and require consultation with Indigenous Peoples regarding impacts to water. Wa Ni Ska Tan noted that the 90-day timing of the Board's draft Condition 9 (requirement for the filing of a Navigation and Navigation Safety Plan) would not provide them enough time to assess the adequacy of the plan in terms of Indigenous rights and interests.

In its comments regarding the Board's draft Condition 9, Manitoba Hydro requested that the 90 day time frame be reduced to 60 days to allow construction to start in winter 2018, so it could meet its in-service date of 2020.

Views of the Board

The evidence shows that navigation and navigation safety may be adversely affected by the use of temporary crossing structures constructed across navigable watercourses for winter construction access, as well as during overhead conductor stringing. While the temporary crossing structures would only be in place during the winter months when navigation is not expected to occur, there is some potential for Project interactions to occur when the watercourses are flowing in the spring and potentially navigable. As well, depending on the time of year the work is conducted at these locations, overhead conductor stringing activities could affect navigation and navigation safety for short periods of time.

As a result, the Board imposes **Condition 9** requiring Manitoba Hydro to file, for approval, a Navigation and Navigation Safety Plan ninety (90) days prior to commencing construction. This timing coincides with required filing of the CEPP (**Condition 10**), of which the Navigation and Navigation Safety Plan is a part. The 60-day timing requested by Manitoba Hydro would not allow the Board sufficient time to review Manitoba Hydro's **Condition 9** submissions. However, the Board has taken into account Manitoba Hydro's comments on timing by allowing for Manitoba Hydro to submit the Navigation and Navigation Safety Plan at the same time as the CEPP, rather than 30 days prior to submission of the CEPP as described in the draft conditions.

This plan must consider and appropriately avoid or minimize any potential adverse effects to navigation and navigation safety that could result from construction of the Project to any navigable water (including those that may not be listed on Schedule of Navigable Waters in the *Navigation Protection Act*). The plan must also include consideration of activities conducted during the winter which may impact navigation and navigation safety, and in the spring during and immediately after ice break-up. Manitoba Hydro must consult with potentially affected waterway users and Indigenous communities regarding navigation use, including reporting on any concerns that were raised and how those concerns have been addressed. The Navigation and Navigation Safety Plan must also be included in the CEPP, as per **Condition 9**.

With the implementation of **Condition 9**, the Board finds that any potential adverse residual environmental effects to navigation and navigation safety would not be significant. Any

residual effects are expected to be short-term in duration, reversible, low magnitude and limited in extent to the PDA.

9.6.5 Detailed Analysis of Key Environmental Issues Raised During NEB Hearing

The following subsections provide more detailed analyses of outstanding issues of public concern related to key environmental elements and whether further mitigation is required by way of Board conditions on any potential Project authorization, in order to ensure any potential effects would not be significant.

9.6.5.1 Sufficiency of Mitigation for Potential Effects on Agricultural Lands

CAEPLA raised concerns that the Project, as proposed, falls short of many important industry standards for the protection of agricultural properties and farming operations. It was of the view that the shortcomings will leave affected landowners and their properties vulnerable to environmental damage and economic loss during both construction and operation of the Project. CAEPLA said its members' experiences as related to Manitoba Hydro's Bipole III project have caused it to intervene in this proceeding to ensure that Manitoba Hydro is held to industry standards in terms of environmental protection and mitigation of adverse impacts to MMTP landowners and their farming operations.

CAEPLA said that, while individual projects may have some unique features, all linear projects affect agricultural lands and landowners in predictable ways, which in its view could be addressed through standard agreements and practices. It said landowner issues common to all linear projects include, but were not limited to: interference with farming operations, construction monitoring, resolution of site-specific concerns, soils handling and protection, property remediation, wet soils shutdown requirements, prevention of weed and soil pest contamination, effects on drainage and irrigation, post-construction operations and maintenance, and safety. It said landowners should receive specific, detailed commitments from proponents that they can rely upon and, where necessary, enforce against the proponent.

CAEPLA provided a list of requirements that it said the Board should require Manitoba Hydro to implement to protect affected landowners. The list included, but was not limited to:

- forming a Joint Committee consisting of Manitoba Hydro and landowner representatives to resolve issues of concern;
- implementing soil sampling and mitigation measures for clubroot as done for Enbridge Pipeline Inc.'s Line 3 Replacement Program;
- not allowing construction in soils that are saturated or non-frozen;
- conducting pre- and post-construction soil fertility and compaction testing; and,
- engaging independent third-party construction monitors during construction and post-construction remediation.

MWL recommended that Manitoba Hydro be required to develop a Project-specific biosecurity management plan as part of its CEPP.

As part of its Application, Manitoba Hydro provided a draft CEPP which includes the standard and site-specific mitigation measures it would implement to avoid and reduce Project effects during construction.

With regard to biosecurity, as part of its draft Rehabilitation and Invasive Species Management Plan, Manitoba Hydro filed an updated corporate *Agricultural Biosecurity Standard Operating Procedure* for preventing the introduction and spread of disease, pests and invasive plant species in agricultural land and livestock operations. Manitoba Hydro said the procedure had been revised to reflect feedback from stakeholders of its Bipole III project.

As part of the NEB hearing process, Manitoba Hydro provided the biosecurity procedures that would be implemented for the Project, which included conducting soil sampling and testing based on methods recommended by Manitoba Agriculture. It also provided a decision-making framework that will be used to establish biosecurity requirements based on testing results (low risk versus high risk sites). Manitoba Hydro said it was developing a Project-specific Biosecurity Management Plan that would be included in its CEPP prior to construction. Manitoba Hydro said it consulted with Manitoba Agriculture in September 2017 with respect to the pests to include in its sampling program, and that it planned further consultation with the department regarding its Project-specific plan. Manitoba Hydro said its pre-construction sampling program would be carried out by an independent contractor and done in accordance with industry standards. It said that individual results will be shared with landowners.

Manitoba Hydro said that biosecurity issues for the Bipole III project were first raised during surveying and biosecurity protocols were developed before construction took place. It said that it updated the protocols as new information came available, whether raised directly by landowners or through consultation with industry stakeholders. Manitoba Hydro said that, where landowners expressed concerns that biosecurity requirements were not being followed, it retained a third-party firm to carry out monitoring, particularly for those sites deemed as higher risk. Manitoba Hydro said its compliance rate averaged 99.8 per cent and all instances of non-compliance were jointly investigated by the third-party monitor and Manitoba Hydro, and actions were taken to address the breaches.

In reply to CAEPLA's request that it not work in soils that are saturated or non-frozen, Manitoba Hydro said that, while it could not accommodate this request, it would commit to assessing lands in a saturated condition on a case by case basis. It said work stoppage is one of the many potential mitigation options in the event of saturated soils and that other measures may be implemented instead. Manitoba Hydro indicated that, if soil productivity issues persist post-construction, soils could be rehabilitated or compensation to the landowner could be provided.

With regard to pre- and post-construction soil fertility and compaction testing, Manitoba Hydro said that such testing is not necessary since it has proposed measures to mitigate rutting and biosecurity. It further said that areas of notable compaction identified by a monitor or landowner would be assessed on a site-specific basis post-construction, with compaction measurements taken on and off the ROW. Manitoba Hydro said soil density has natural variability and may vary significantly from year to year depending on crops planted and equipment activities.

In reply to CAEPLA's request for third-party construction monitors, Manitoba Hydro said it is committed to retaining resource specialists (e.g., soil scientists, professional agrologists) to conduct monitoring of construction activities during periods when there is a need for their specialized services. This may include monitoring during wet soil conditions that are at high risk of compaction, or crop performance and biosecurity monitoring if site-specific issues arise. It said its environmental inspectors and officers would be on-site during the construction process to monitor the contractor's compliance with all mitigation measures, particularly if such activities are occurring during saturated soil conditions. Manitoba Hydro said its consulting environmental specialists are independent third-party monitors, as they validate and analyze information collected, and author and sign their own reports regarding Manitoba Hydro's compliance with its mitigation measures.

Manitoba Hydro said it uses commitment letters as a means of documenting landowner commitments and actions it will take when undertaking a project on their land. Further, Manitoba Hydro said it has dedicated landowner liaisons assigned to each landowner who act as the main point of contact for landowners from the beginning to the end of the Project. Manitoba Hydro said its existing policies and procedures satisfactorily address CAEPLA's concerns.

Views of the Board

The Board is of the view that many of CAEPLA's requested mitigation measures are currently addressed to some degree by: standard mitigation measures in Manitoba Hydro's CEPP and its associated management plans; the commitments made by Manitoba Hydro during the hearing processes for the Project; and other procedures and mechanisms Manitoba Hydro uses to carry out its consultation with landowners.

The Board is of the view that clear communication with landowners is essential for ensuring the Project's effects are minimal and Manitoba Hydro's proposed mitigation measures and monitoring activities are understood by potentially affected landowners. As noted in Chapter 7, Public Consultation, of this Decision, the Board is of the view that a landowner-specific advisory committee (Landowner Advisory Committee) may be an appropriate mechanism for fostering effective communication and responding to any issues that may be raised by affected landowners. The Board imposes **Condition 17** requiring Manitoba Hydro to provide a plan to the Board which discusses Manitoba Hydro's consultation with affected landowners to determine their interest in establishing such a committee, a description of how input from the committee would be incorporated into Manitoba Hydro's activities during construction and post-construction monitoring, and the types of activities that could be undertaken by the Landowner Advisory Committee, should landowners be interested in participating.

CAEPLA requested a third party monitor during construction to ensure protection of landowner's rights and interests, as well as soil productivity. Manitoba Hydro has committed to having third party biosecurity monitors during construction on agricultural lands, and third party consultants (e.g., agrologists, soil scientists) on-site when required. The Board understands that affected agricultural landowners may wish to have input regarding the third party monitors chosen by Manitoba Hydro and the circumstances for

when they would be present during construction and post-construction. The Board is of the view that this is the type of activity that could be discussed as part of the Landowner Advisory Committee, as previously noted in Chapter 7, Public Consultation.

The Board is mindful of concerns raised by Indigenous Peoples and others affected by the Project, and imposes **Condition 21** (Issues Tracking Table) requiring Manitoba Hydro to create and maintain records that chronologically track complaints by Indigenous communities, landowners, and municipal and regional governments relating to the Project.

With regard to biosecurity, the Board imposes **Condition 10** requiring Manitoba Hydro to file, for approval, an updated Project-specific CEPP, which includes a Project-specific Biosecurity Management Plan (see Section 9.6.3). This requirement will provide the opportunity for the Board to fully review and ensure the sufficiency of Manitoba Hydro's planned mitigation measures to prevent the spread of clubroot during its Project activities.

The Board notes that Manitoba Hydro's Environmental Monitoring Plan includes monitoring for soil productivity issues. The Board's **Condition 23** requires Manitoba Hydro to report the results of its post-construction monitoring annually for a period of at least ten years (see Section 9.6.3). The Board is of the view that any remaining effects of the Project to agricultural operations will likely have been discovered in the first decade after construction and have been appropriately mitigated, as per Manitoba Hydro's commitments to agricultural landowners.

With Manitoba Hydro's mitigation measures and the above conditions, the Board finds that any remaining potential adverse residual environmental effects to agricultural activities would not be significant. Most of the Project's residual effects to agriculture are expected to be low magnitude, reversible in the short to medium term duration and confined to the PDA. Where land is removed from agricultural use for the life of the Project (e.g., tower locations), residual effects are expected to be long-term and permanent (but reversible at time of abandonment). If spread of soil-borne disease occurs, residual effects are expected to be of low to moderate magnitude and limited to the LAA, but long-term and permanent (extend beyond life of Project).

9.6.5.2 Sufficiency of Mitigation for Potential Effects on Human Health as a Result of Herbicide Use and Electric and Magnetic Fields (EMF)

Herbicide Use

Manitoba Hydro said it assessed quantifiable human health risks for people who live, work or engage in traditional or recreational activities along the ROW and Project assessment areas. The assessment included changes in the quality of country foods (e.g., wild meat, fish, berries, and traditional use vegetation) resulting from Manitoba Hydro's proposed vegetation management activities, including application of herbicides on the ROW.

Manitoba Hydro said it intends to use herbicides as part of its Integrated Vegetation Management Program to control tree growth or to control invasive and noxious weeds, and that herbicides will not be used to clear the ROW. It said vegetation management is required on an ongoing basis to

ensure that regrowth in the cleared ROWs does not interfere with transmission line operations. Integrated vegetation management may involve a variety of methods including handcutting, mechanical shear blading, brush mowing, and herbicide treatment. Manitoba Hydro said the focus of vegetation management is on the tall growing tree species that have the potential to grow or fall into, or within the arcing distance of transmission lines or facilities.

In addition to tree control, Manitoba Hydro said it may use herbicides to control weeds, including: when weed density and distribution have reached levels where other management options are not viable as a control method; mechanical and biological methods are not feasible or practical; and where chemical management is the preferred option of a landowner or Weed Supervisor, as designated under the *Manitoba Noxious Weeds Act* regulations.

Manitoba Hydro explained that herbicide treatments are formulated to target undesirable, tall growing trees, but are also effective on broadleaf weeds, leaving grasses unaffected. Foliar applications of herbicides are applied during the warmer months, while dormant stem applications are typically applied in the fall and winter.

Manitoba Hydro explained that it uses herbicides judiciously. It said it would not apply herbicides within 30 m of watercourses and wetlands, and for other ESSs that are sensitive to herbicide application, including areas designating traditional use plant species identified through Indigenous Knowledge, it indicated that it would apply a 30 m herbicide-free buffer, unless directed otherwise by a Weed Supervisor or a landowner.

Manitoba Hydro indicated that herbicide registration, and premarket approval and regulations governing herbicide application, follow the federal *Pest Control Products Act* (Health Canada 2006), which is reviewed by Health Canada to confirm that human health is adequately protected. Manitoba Hydro said the sale and use of herbicides, including applicator licensing, follows *The Pesticides and Fertilizers Control Act* (Province of Manitoba 2012).

Manitoba Hydro explained that Pesticide Use Permits are obtained as required from Conservation and Water Stewardship's Pesticide Approvals Branch, and involve public notification as part of the permit application process. In accordance with conditions specified in the permit, all herbicide applications are completed and supervised by licensed applicators. Manitoba Hydro said that all herbicide application rates are established in accordance with product label instructions, and only herbicides that are listed in the permit are used. It said it has developed a pesticide applicator requirements document for its employees which provides: regulatory and applicator licensing information; technical guidance; safety requirements; and checklists for line managers responsible for pesticide application for ensuring compliance with legal requirements.

Both AON and BON said the application of herbicides represents a substantial concern for land users who harvest and consume edible and medicinal plants and berries throughout their traditional territory. If the use of chemical vegetation management is absolutely necessary, they said that Manitoba Hydro must provide the First Nations with a complete IVMP, including detailed information on the types of vegetation treatments to be used, the list of any chemicals to be used, the specific plants that will be targeted, and Manitoba Hydro's approach to preventing and mitigating negative impacts to the environment and Indigenous land use rights when using

herbicides. Further, AON and BON requested that Manitoba Hydro work closely with the First Nations to identify important edible and medicinal plant gathering areas and either prohibit herbicide application within them or establish setback distances or buffers around them.

AWZ and NWA raised concerns regarding the contamination of plants, medicines and animals due to spraying of herbicides, and the resulting impacts to human health due to contamination of plants, medicines, animals, waterways and fish. AWZ and NWA said Manitoba Hydro had not identified appropriate mitigation to address impacts to harvesting plants, medicines, and animals as a result of herbicide use, and potential and perceived effects to human health.

RRAFN said there is a strong likelihood that areas traditionally frequented by RRAFN members for the purpose of gathering food and medicines would be negatively impacted if chemical management occurs. It said that Manitoba Hydro should only use non-chemical management or at least commit to not using chemicals that have been clearly identified as toxic.

Sagkeeng said members who harvest medicines and other plants will avoid the transmission lines because the plants there are considered unhealthy due to the use of chemicals for keeping the ROW clear. Members were also concerned about the contamination of water due to the use of herbicides.

SCO said it is not clear how sites of importance to Indigenous communities will be clearly identified and protected from herbicides. It said it was difficult to trust that Manitoba Hydro would do the right thing without some form of certificate condition. SCO also said that wind, rainwater, groundwater, leaching through soil or tree roots, and/or other causes can move herbicides great distances, and the riparian buffer zone may be inadequate in preventing herbicides from leaching into water. It noted that no distance would be completely safe from these risks, but recommended at minimum a 100 m wide buffer zone. Finally, SCO said it was improper for Manitoba Hydro not to conduct an independent health assessment with respect to herbicides, and rely instead on the assessments done by the Pesticide Management Regulatory Agency of Canada.

Wa Ni Ska Tan raised concerns related to the use of herbicides and First Nations' concerns regarding contamination of water, traditional use plants and country foods, and potential impacts to health and well-being.

In response to concerns raised, Manitoba Hydro reiterated its commitment to develop an IVMP, to be included in its CEPP, prior to construction. It said this plan would enable a balanced approach to addressing concerns through knowledge sharing and mapping of areas of concern. Manitoba Hydro said integrated vegetation management involves selecting and combining vegetation treatments to target specific plant species that pose a risk to safety or reliability, while limiting effects on the environment and people. It said the scope of the plan would include a description of vegetation control methods, criteria for application of control methods, and communication protocols to the public and Indigenous communities.

Manitoba Hydro said the herbicides it uses are selective and only affect broadleaf plants, leaving other nearby trees and plants to grow and thrive. Manitoba Hydro indicated that it does not apply herbicides annually to a ROW, rather they are generally applied at a five to eight year interval.

Manitoba Hydro said it considers selective herbicide application to be a more effective means of controlling aspens and other fast-growing trees while encouraging the establishment of bushes and shrubs, than the use of mechanical equipment or manual clearing. Over time, developing healthy communities of bushes and shrubs on the ROW, coupled with the selective use of herbicides, will decrease the number of tall fast growing trees within the ROW. Manitoba Hydro said this, in turn, could decrease the need for regular application of herbicide and increase the time between herbicide treatments to periods of 15 years or more.

Manitoba Hydro said it is aware that some Indigenous community members may not use the ROW after construction due to concerns about herbicide contamination and its impacts on human health and the plants and animals that they harvest. It said if areas of concern are identified it would prevent spraying in those sites. Manitoba Hydro said the application of herbicides for the Project would not result in concentrations in traditionally harvested foods such that the consumption of these foods would result in exposures that would exceed allowable daily intakes.

Manitoba Hydro said it uses herbicide formulations that present negligible risk to humans, fish, aquatic invertebrates, terrestrial insects, mammals and birds. It said the U.S. EPA, Health Canada, and the Canadian Pesticide Management Regulatory Agency have evaluated the potential toxicity to both aquatic and terrestrial systems of the active ingredients in the herbicides it uses. Manitoba Hydro indicated that these ingredients are considered by these agencies to represent negligible risks to health and are considered safe for use, provided that all guidelines for herbicide application are followed. Manitoba Hydro further explained that the herbicide registration process includes establishing appropriate herbicide application rates.

Manitoba Hydro committed to holding meetings with Indigenous communities to review any concerns raised regarding potential health effects caused by changes in subsistence food and traditional medicine consumption, and to discuss site-specific environmental protection measures that could be incorporated into its IVMP. It said that it is committed to working with Indigenous communities to determine appropriate mechanisms for communicating about vegetation control programs, including providing an opportunity for members to provide feedback.

In response to concerns regarding Manitoba Hydro's assessment of impacts to human health from the application of herbicides was not sufficient, Manitoba Hydro said that all pesticides approved for use by Health Canada, including the herbicides proposed for use in the Project, have already undergone human health risk assessments by Health Canada and are considered safe for use, provided that all guidelines for herbicide application are followed.

Electric and Magnetic Fields (EMF)

Manitoba Hydro said its transmission routing methodology took into consideration the proximity of the proposed IPL to potential human health receptors such as houses, schools, daycares, sites of worship, campgrounds, and recreational and picnic areas.

Manitoba Hydro provided an overview of the current scientific understanding of EMF and health risk. It said that EMF diminishes rapidly with distance from the transmission line, and physical buffers such as trees and buildings will reduce the intensity of the electric fields.

Manitoba Hydro said that numerous reviews of research literature on exposure to EMFs from transmission lines, and possible adverse health effects, have been conducted by international and national scientific and governmental agencies, including Health Canada and the World Health Organization. It said that none of these agencies has concluded that exposure to EMFs from transmission lines is a demonstrated cause of any long-term adverse health effect. The only direct adverse biological or health effects are those produced by very high field levels, which can stimulate nerves; however, the EMF intensities required to produce this level of stimulation are not encountered in environments accessible to the public. According to Manitoba Hydro's calculations, the highest estimated EMF levels at the edge of the ROW will be well below the recommended reference levels for public exposure.

Manitoba Hydro said there is no conclusive evidence of any harm caused by EMF exposures at levels found in Canadian homes and schools, including those located just outside the boundaries of power line corridors. It noted that Health Canada does not recommend any precautionary measures for daily exposures to EMFs at the low frequencies resulting from transmission of electricity.

AON and BON expressed concerns regarding the potential health impacts of the Project which could be related to EMF, (e.g., sickness and cancer risk). Both AON and BON members questioned whether their health would be protected if they were employed to help construct the transmission line, or used the ROW for hunting and gathering as part of their traditional land use activities, given the potential for greater EMF exposure times.

AWZ and NWA raised concerns regarding psychosocial impacts of EMF and the potential for land users to avoid use of areas near the Project.

CAEPLA suggested that Manitoba Hydro conduct baseline testing of EMF in advance of the Project so that, to the extent that there is any effect, it could be determined once the Project is in operation.

Sagkeeng expressed concerns that its members would avoid the Project area as a result concerns related to EMF exposure.

SCO expressed concerns regarding Manitoba Hydro's lack of monitoring of EMF, and suggested that effects of EMF be monitored during the first ten years of operation of the Project.

SSC suggested that Manitoba Hydro be required to complete pre-construction measuring and post-construction monitoring of EMF, upon request, for residences within the vicinity of the ROW, as well as monitor for any health effects of EMF and provide that information to potentially affected residents.

Wa Ni Ska Tan suggested that Manitoba Hydro's study on EMF impacts did not take into account all the literature regarding potential adverse impacts.

In its reply, Manitoba Hydro said the conclusions of its EMF assessment reflected the conclusions of the numerous national and international health and scientific agencies that have reviewed the extensive body of research on the possible adverse health effects of exposure to EMF. It said the current consensus among these agencies is that there are no known adverse

health consequences of exposure to EMF at the levels generally found in residential and occupational environments, including proximity to electric transmission and distribution facilities, to humans, vegetation and wild or domestic animals.

Manitoba Hydro said it would design and maintain exposure levels from the Project's transmission lines within the guidelines set forth by the International Commission on Non-Ionizing Radiation Protection, which have been adopted by the World Health Organization and Health Canada. It said it has retained experts in this field to undertake modeling and assisted in the development of material to aid in assessment, and to share information with the public regarding EMF.

With regard to post-construction monitoring of EMF, Manitoba Hydro explained that other sources of EMF may also be present, so not all resulting EMF will be as a result of the Project. Manitoba Hydro said it would continue to listen to concerns and answer questions through its ongoing engagement program. It said that it is committed to working with Indigenous communities, as well as the MMTP Monitoring Committee, to develop additional resources that discuss the perceived risks from EMF.

Views of the Board

The Board acknowledges the concerns raised by Indigenous Intervenors regarding the perception of risk to human health, as well as the health of plants and animals harvested, as a result of exposure to herbicide use and EMF.

With regard to herbicides, the Board is of the view that Manitoba Hydro's approach to integrated vegetation management, including the application of herbicides, is appropriate. Herbicide use is a necessary tool in a larger integrated vegetation management toolbox. The Board notes that Manitoba Hydro has committed to not using herbicides indiscriminately, and that "herbicide-free" buffers will be established and maintained adjacent to watercourses, wetlands, and as best possible around sites identified as being of concern to Indigenous communities. Given the number of concerns raised, the Board encourages Manitoba Hydro to keep communicating with Indigenous communities and other interested parties regarding these concerns through ongoing engagement activities, as well as the MMTP Monitoring Committee.

Manitoba Hydro has said that herbicides will not be applied annually, but rather in intervals of five to eight years or greater. In addition, herbicide use is highly regulated by provincial and federal authorities and Manitoba Hydro has committed to follow all applicable guidelines and regulations. The Board accepts Manitoba Hydro's reliance on the use of exposure limits developed or recommended by authorities such as Health Canada and the US Environmental Protection Agency, as well as its commitments to follow all provincial and federal guidelines when applying herbicides. The Board finds this approach acceptable, as these guidelines are broadly protective of human health. The Board is of the view that additional assessment of the herbicides used, as recommended by some Intervenors, is not required.

As detailed in **Condition 10**, the Board requires Manitoba Hydro to file its IVMP, as part of its updated CEPP. The Board expects Manitoba Hydro to consider and address, where possible, the concerns raised by Parties when developing its IVMP.

With regard to EMF, the Board finds Manitoba Hydro's assessment of EMF and EMF-related exposure acceptable. The assessment indicates that health impacts are not expected to occur for those who may be exposed to EMF while in the vicinity of the transmission line ROW. The Board notes that Project design will meet international and national guidelines regarding exposure levels from transmission lines. The Board further notes that Manitoba Hydro will continue to work with Indigenous communities to develop relevant educational materials to assist in alleviating concerns regarding EMF and their impacts. Additional information regarding potential impacts to the social and cultural well-being of Indigenous Peoples as a result of concerns regarding EMF is found in Chapter 8, Indigenous Matters.

Based on the balance of the evidence, the Board finds that exposure to EMF or herbicides as a result of the Project is not likely to cause significant adverse effects to human health, including the health of Indigenous Peoples. With the application of Manitoba Hydro's mitigation measures, any residual adverse effects to health are expected to be of low to moderate magnitude, short to medium term in duration, reversible and, limited to the LAA.

9.7 Cumulative Effects Assessment

The Board's assessment of cumulative effects considers the impacts of adverse residual effects (i.e., the effects remaining after mitigation and any conditions have been implemented) associated with the Project in combination with the residual effects from other projects and activities that have been or will be carried out, within the appropriate temporal and spatial boundaries and ecological context.

The Project can reasonably be expected to affect several bio-physical and socio-economic elements for the duration of the Project, even after Project mitigation. The Project can also reasonably be expected to have effects that will remain after mitigation and after construction. Longer lasting effects that could cumulate with residual effects from other projects or activities may affect the following valued environmental components:

- Biophysical elements - soil and soil productivity, vegetation, wetlands, wildlife and wildlife habitat; and,
- Socio-economic elements – traditional land and resource use, and human occupancy and resource use.

Manitoba Hydro provided a list of reasonably foreseeable developments with the potential to contribute to further cumulative effects. They include:

- transmission line developments, including St. Vital Transmission Complex, Bipole III Transmission Project, Dorsey to Portage South Transmission Project, and Richer South Station to Spruce Station Transmission;

- Northwest Winnipeg Natural Gas Project and various natural gas pipeline upgrades;
- road and highway development projects, including provincial road improvements and replacements, Oakbank Corridor, St. Norbert Bypass, Headingley Bypass;
- Southend Water Pollution Control Centre Upgrade; and,
- Piney-Pinecreek Border Airport Expansion.

Manitoba Hydro said the existing landscape in which the Project is situated has been highly altered by past activities, mainly as a result of agriculture. Other past developments include: residential sub-division development; linear developments (e.g., roads, railways, the Red River floodway, transmission lines, pipelines); commercial resource use activities (e.g., quarries, aggregate mines, peat mines, forestry); domestic resource use activities (e.g., hunting, fishing, trapping); and recreational activities (e.g., all-terrain vehicle and snowmobile use, multi-trail use, boating).

Manitoba Hydro described the extent of alteration to the Project landscape, noting that approximately 62 per cent of the RAA has been modified by agriculture and other developments. It provided the following:

- Vegetation – 33 per cent (236, 321 ha) of the RAA is currently comprised of native vegetation and the Project will cause a 1 per cent loss of native vegetation due the transmission tower structures. The Project’s contribution to cumulative effects of native vegetation cover class is expected to result in a change of 753 ha (0.1 per cent) of existing cover classes in the RAA, and the Project’s contribution to cumulative levels of landscape intactness has been estimated to be a loss of 0.4 per cent of total patch area (for patches greater than 200 ha) within the RAA. The contribution of the Project residual effects to cumulative effects are not expected to threaten the long-term persistence or viability of native vegetation in the RAA relative to current conditions and the Project is unlikely to have a measurable effect on landscape intactness, native vegetation, rare plant species, traditional use plant species, or invasive plant species within the LAA.
- Wetlands – wetlands occupy approximately 3 per cent (39, 816 ha) of the RAA. Due to the numerous prairie pothole marsh wetlands in the RAA, most future projects and activities in the RAA are likely to act cumulatively with the Project and cause effects to wetland abundance, distribution, structure and function. It is estimated that the Project would contribute 56 ha (0.2 per cent) in change in wetland cover class within the RAA. The Project is not expected to eliminate wetland classes from the LAA or RAA and most effects are expected to be highly localized and temporary.
- Wildlife and Wildlife Habitat – It is estimated that the Project would disturb an additional 550 ha of natural wildlife habitat (4.8 per cent of the forest habitat in the LAA) and contribute an additional 0.04 km/km² of new linear disturbance (approximately 1.3 per cent increase above existing fragmentation levels of 2.38 km/km²). The Project’s contribution to cumulative effects on change in wildlife mortality risk and wildlife habitat is anticipated to be small (0.1 per cent for wildlife habitat) relative the proportion of overall change in the RAA as a result of past, current and future projects, and is not

expected to measurably affect long-term persistence or viability of wildlife and wildlife habitat in the RAA.

- Agriculture – Numerous residential developments have contributed to agricultural land loss in the RAA. The Project is expected to act cumulatively with other projects and activities and result in conflicts with agricultural activities. Further, some loss or degradation of agricultural land within the RAA may occur, but is expected to be less than 500 ha (approximately 0.2 per cent of a total of 445,249 ha). Cumulative effects are not anticipated to occur at levels that widely disrupt or restrict agricultural operations such that agricultural production cannot continue within the RAA at current levels for extended periods.
- Traditional Land and Resource Use – The area in which the Project is located has experienced disturbance as a result of human settlement, the creation of agricultural land and ongoing development. Plant harvesting, hunting and trapping, travelways and cultural sites were located in the RAA, but most of these sites were located outside of the Project LAA and would not be directly affected. Traditional land and resource use has experienced cumulative effects, and with the addition of the Project and other projects and planned activities, it will continue to experience those effects. However, the Project's contributions to cumulative effects are expected to be incremental and negligible.

Manitoba Hydro said it was committed to mitigating potential cumulative effects through monitoring of its projects for potential effects and implementing adaptive management for unanticipated effects.

Sagkeeng raised concerns related to the methodology used by Manitoba Hydro to conduct its cumulative effects assessment. It said Manitoba Hydro's cumulative effects assessments did not provide a sufficiently long temporal forecast, adequately consider the implications of climate change, use appropriate metrics such as linear disturbance, or provide supporting evidence/analysis of cumulative effects to support many of its conclusions. Sagkeeng suggested that Manitoba Hydro had underestimated total cumulative effects loading. It said additional information should have been provided regarding cumulative effects on moose in southern Manitoba, including a discussion of the role that additional land clearing and climate change may have on the increasing vulnerability of this culturally-important species.

CAC Manitoba said Manitoba Hydro's cumulative effect assessment should be enhanced and presented as a stand-alone chapter to allow readers to see the whole picture.

Sagkeeng said the Project area has been subject to extensive fragmentation, industrialization, and privatization resulting in reductions in wildlife habitat, populations and distribution of critical harvested species such as moose and alienation of the Sagkeeng and other Indigenous communities from practicing cultural and traditional activities. Sagkeeng disagreed that the impacts of the Project would be "minimal" or "insignificant" and was of the view that the land and their rights impose limits and that Manitoba Hydro has not provided sufficient evidence to indicate that those limits have not already been exceeded.

AON said the lands taken up in southern Manitoba, for agriculture, hydro, oil and gas, etc., have had a devastating set of combined and cumulative impacts on traditional harvesting areas and

resources for Indigenous communities that must be considered in assessing cumulative impacts. It is unclear how, considering this change of landscape that Manitoba Hydro considers that the effects of the Project will not be significant considering the potential for impact on future use.

Wa Ni Ska Tan said Manitoba Hydro's cumulative effect assessment was insufficient and required a more thorough evaluation of literature, expert consultation with scientists and inclusion of local and Indigenous knowledge, as well as needed to be conducted at a whole-system level which would allow communities to more meaningfully engage in the process. It said the spatial boundaries of the cumulative effects assessment excluded many upstream and downstream communities affected by the Project and ignored the impact of settlement and agriculture.

Views of the Board

The Board recognizes that, due to the high proportion of existing development in the Project area as described by Manitoba Hydro in its Application, many valued environmental components are already experiencing substantial cumulative effects. However, the Board also notes that society generally accepts and supports continued agricultural and community development, and as a result, is of the view that these valued components are likely to continue to experience ongoing cumulative effects.

The Board also recognizes that the Project's potential contributions to cumulative effects in the region have been substantially reduced through Manitoba Hydro's Project design and will be further reduced as a result of the mitigation measures (including adaptive management measures) Manitoba Hydro has committed to implementing, and the conditions the Board has imposed to further reduce any effects in Section 9.6.4.4 (Wetlands), Section 9.6.5.1 (Agriculture) of this EA, and in Chapter 8 (TLRU).

The Board is of the view that some potential adverse residual effects associated with the Project may interact with effects from other projects and activities over the long-term and in some cases, be permanent. However, the Board finds that most residual effects would be low to moderate in magnitude and restricted to the PDA or LAA, and would not likely result in significant adverse cumulative effects. Any Project contributions to cumulative effects will be generally overshadowed and subsumed within the greater land use changes that are a key determinant of cumulative effects in the Project area.

The Board acknowledges the concerns raised by Indigenous communities and recognizes how ongoing and potential cumulative effects can have lasting cultural implications. With this in mind, the Board reminds Manitoba Hydro that it expects the company to continue to consult with Indigenous communities and work towards ways to meaningfully address the concerns raised. The Board's views on Indigenous matters are provided in Chapter 8.

9.8 Follow-up Program

The CEAA 2012 requires a follow-up program. The Board recommends that **Condition 23** be implemented as a follow-up program. More detailed information is provided in Section 9.6.3.

9.9 CEAA 2012 Determination of Significance

The CEAA 2012 requires the Board, as a responsible authority, to make a determination of significance of Project effects. The Board conducted an environmental assessment of the Project according to methods and criteria outlined in Sections 9.1 and 9.6.2 above, and finds that the proposed Project is not likely to cause significant adverse socio-economic or environmental effects as defined within the CEAA 2012.

9.10 The Board's Environmental Assessment Conclusion

The NEB has conducted an environmental assessment of the Project and finds that overall, with the implementation of Manitoba Hydro's environmental protection procedures and mitigation and the NEB's conditions, the Project is not likely to cause significant adverse environmental effects.

Chapter 10

Infrastructure, Employment and Economy

The Board's Electricity Filing Manual sets out the Board's expectations of applicants regarding direct socio-economic impacts caused by the existence of a project. Applicants are expected to identify and consider the impacts a project may have on infrastructure, services, employment and economy. Applicants are also expected to provide mitigation of negative impacts and the consideration of positive benefits of the project.

Potential socio-economic effects that are caused by changes to the environment are included in Chapter 9, Environment and Socio-Economic Matters. Other economic effects are addressed in Chapter 5, Economic and Financial Matters. Direct socio-economic effects caused by the existence of the Project itself are discussed below. Employment and economic benefits, as they relate to Indigenous communities, are discussed in Chapter 8, Indigenous Matters.

10.1 Infrastructure and Services

Manitoba Hydro said the Project will cross or parallel various linear infrastructure in the region, including roads, railways, transmission lines and pipelines. More than 150 km of existing transmission lines are paralleled by the Project. Other linear infrastructure in the Project region includes the Red River Floodway and Greater Winnipeg Water District aqueduct.

Manitoba Hydro said that during its engagement processes the most common comments related to infrastructure and services pertained to the Project's proximity to existing infrastructure and services, Project crossings with existing infrastructure and services, or paralleling opportunities with existing infrastructure and services. Manitoba Hydro noted that the final preferred route avoids much of the existing transportation and utility infrastructure, thereby minimizing adverse effects. At the same time, the route favours paralleling with compatible infrastructure. Manitoba Hydro also committed to continue to engage with entities responsible for underground infrastructure, roads, railways and floodways to identify areas where tower placement could interfere with underground infrastructure, maintenance activities, or future plans for expansion.

Manitoba Hydro noted that the Project workforce will be spread across the various components, working on the existing corridor, the new right-of-way (ROW), the Riel Converter Station, the Dorsey Converter Station and Glenboro South Station. The peak combined number of workers is expected to be approximately 175, with average monthly number of workers in the new ROW expected to be approximately 100.

Manitoba Hydro said that while efforts will be made to hire workers locally or regionally, it is expected that most of the construction workforce will be recruited from outside the Project area. The workers will stay in temporary accommodations (i.e., hotels/motels) in local communities or in a mobile construction camp established for the Project. Manitoba Hydro noted that while there

is a wide range of temporary accommodation available in the urban centres of Winnipeg and Brandon, there are limited accommodations available in smaller communities such as Steinbach and Glenboro, and even fewer south of Steinbach to the Minnesota border. In order to reduce demands on temporary accommodations, Manitoba Hydro said workers will commute from larger centres or stay in the temporary camp for this portion of the new ROW. With the implementation of the Worker Code of Conduct, Manitoba Hydro said that impacts of the camp on local fire, police, emergency and protection services are expected to be minimal.

Manitoba Hydro also noted that because the workforce is small and will be spread out, adverse effects on health outcomes of communities in the Project area will be negligible. Further, incremental demands on health care will be minimal, and easily addressed through available capacity of regional hospitals. Manitoba Hydro noted that there is also sufficient potable water, wastewater and solid waste infrastructure in the area to meet the demands of the construction camp.

Manitoba Hydro said that Project construction activities will involve the movement of workers, materials, and equipment to and from the Project site, which may result in congestion on roads, as well as additional wear-and-tear on roads, potentially resulting in need for additional road maintenance. Manitoba Hydro noted that mitigation measures to reduce traffic effects will include: group transportation for workers travelling between the construction camp, temporary accommodations and the worksites, working with local authorities to address any damages to roads that may occur and compliance with weight restrictions for all materials being transported by truck. Manitoba Hydro said the increase in traffic will be at most 174 vehicles per day which, for most roads in the area, represents less than six per cent of the existing road traffic. As a result, Manitoba Hydro submitted that the addition of Project road traffic is not anticipated to exceed the capacity of any roads or reduce the level service on an ongoing basis.

View of the Board

The Board accepts the evidence filed by Manitoba Hydro and finds that the measures planned by Manitoba Hydro would adequately address the potential impacts of the Project on local infrastructure and services. Given the Project location and relatively small workforce, the Board finds that Project demands are unlikely to exceed the available capacity of community infrastructure and services, or impact the quality of local services.

10.2 Employment and Economy

Manitoba Hydro said that during its public engagement process, the public expressed interest in employment and business opportunities related to the Project. Manitoba Hydro said that, overall, Project clearing and construction activities will generate positive economic effects through increased local and regional employment, procurement, contribution to gross domestic product (GDP) and government revenue. It is expected that local labour will be used for clearing activities while an outside labour force will be used for construction of the transmission lines, stringing the lines and station modifications. Manitoba Hydro said this will create positive economic benefits to accommodations and restaurants in the Project area when a camp is not being used. Manitoba Hydro also noted that it will contact local municipal authorities prior to

Project start-up and will work with contractors through the contracting process to actively promote participation of Manitoba businesses in the Project.

Manitoba Hydro said the construction phase of the Project alone is expected to result in 124 person-years of direct employment in Manitoba. When other direct employment and indirect and induced employment is added, the result will be 504 person years in Manitoba, and 951 person-years of direct, indirect and induced employment in Canada. Manitoba Hydro said that an estimated \$35.3 million will be spent on labour in Manitoba, with an additional \$18.4 million spent on labour elsewhere in Canada.

Manitoba Hydro noted that during operations, economic effects related to employment and procurement will be less than during the construction phase. However, the Project will continue to contribute to provincial GDP via the facilitation of power exports to the United States.

Views of the Board

The Board accepts the evidence filed by Manitoba Hydro and finds that the Project will benefit local, regional and provincial economies. The Board finds that the socio-economic benefits related to the construction phase of the Project, through both direct and indirect employment, procurement and contracting opportunities, will benefit local communities as well as workers from elsewhere in Manitoba.

Appendix I – List of Issues

The Board identified, but did not limit itself to, the following issues for consideration in the hearing with respect to the construction and operation of the proposed Project:

1. The need for the Project.
2. The economic feasibility of the Project.
3. The potential commercial impacts of the Project.
4. The potential environmental and socio-economic effects of the Project, including those to be considered under the *Canadian Environmental Assessment Act, 2012*.
5. The suitability of the design, construction and operation of the Project.
6. Safety and security during construction and operation of the Project, including emergency response planning and third-party damage prevention.
7. Potential impact on the bulk power system, including neighbouring jurisdictions.
8. The appropriateness of the general route and land requirements for the Project.
9. Potential impacts of the Project on Indigenous interests.
10. Potential impacts of the Project on landowners.
11. The terms and conditions to be included in any approval the Board may issue.

Appendix II – Summary of Indigenous Concerns, and Applicant and NEB Responses

This appendix provides a summary of the general and specific concerns and issues raised by Indigenous communities through this proceeding, as well as summaries of the responses to these concerns provided by the applicant, responses by the Board (including conditions), and applicable requirements provided through regulation and/or legislation. The issues and concerns include those raised directly by Indigenous Peoples through their participation in the hearing, as well as summaries of Indigenous concerns and interests as recorded by the applicant in its evidence. Table 8-2 in the Decision refers to the written and oral submissions by Indigenous Intervenors who participated in the hearing. The Board notes that identifying and referring to issues and concerns as contained within the record (as provided in this appendix) may have resulted in some issues being categorized in a summary manner. Some direct and indirect references within the record of the hearing may therefore not be exhaustively listed in the issues below. Anyone wishing to fully understand the context of the information and evidence provided by Indigenous communities, as well as the applicable responses to these concerns by the applicant, should therefore familiarize themselves with the entire record of the hearing.

Concern	Indigenous Communities	Company response	NEB response (including conditions, and applicable regulatory and legislative requirements)	Reasons for Decision Section
Consultation with Indigenous Communities				
Lack of meaningful or inclusive engagement by Manitoba Hydro throughout the various phases of Project engagement.	AON AWZ BON NWA SCO	<p>Manitoba Hydro stated that it began engaging with Indigenous communities in August 2013 and is committed to share information with all Indigenous communities throughout the regulatory, construction and operation and maintenance phases of the Project.</p> <p>Manitoba Hydro stated that its First Nation and Métis Engagement Program (FNMEP) is adaptive and ongoing. Manitoba Hydro committed to hold pre-construction meetings with interested Indigenous communities to confirm what has been heard to date; share the proposed Construction Environmental Protection Plan (CEPP) with leadership, harvesters, and Elders; determine if concerns have been addressed; and hear about any outstanding concerns.</p> <p>Manitoba Hydro committed to establish the MMTP Monitoring Committee, with a collaboratively-developed Terms of Reference,</p>	<p>The Board is of the view that Manitoba Hydro’s design and implementation of its Project-specific Indigenous engagement activities are appropriate for the scope and scale of the Project.</p> <p>The Board finds that with Manitoba Hydro’s commitments and Conditions 11 (Indigenous Knowledge Studies Report) and 21 (Issues Tracking) Manitoba Hydro will continue to consult with Indigenous communities in order to learn more about their interests and concerns, and to address issues that they may raise throughout the lifecycle of the Project.</p>	8.7.1

		to support effective and meaningful Indigenous participation in monitoring the construction and operation of the Project.		
Short timetables and lack of adequate resources as barriers to meaningful participation	AON AWZ BON MMF NWA Peguis Sagkeeng	<p>Manitoba Hydro stated that it began engaging with Indigenous communities in August 2013. Manitoba Hydro offered funding for community engagement coordinator positions within the communities and for the completion of Indigenous Knowledge or land use and occupancy studies.</p> <p>Manitoba Hydro is seeking to enter into community-specific Project agreements with the Indigenous communities who have interests in the Project area. Funding under agreements could be used by the communities for a variety of purposes such as Project-related employment, training, or economic development initiatives, or other community programming that benefits a broad segment of their membership.</p>	<p>The Board is of the view that Manitoba Hydro’s design and implementation of its Project-specific Indigenous engagement activities are appropriate for the scope and scale of the Project.</p> <p>The Board, as an administrative tribunal, is bound by the common law requirements related to procedural fairness when making decisions that have the potential to impact rights. During the NEB proceeding, Indigenous Intervenors were able to obtain further information about the Project and present their views to the Board in numerous ways, including filing written evidence, asking information requests to Manitoba Hydro, presenting Oral Traditional Evidence, replying to information requests from the Board and Manitoba Hydro, participating in cross-examination and providing final argument.</p> <p>The Board administered its Participant Funding Program (PFP) for this Project, which provided financial assistance to support the participation of Indigenous communities.</p>	8.3 8.7.1
Adequacy of Crown consultation	AWZ MMF NWA Sagkeeng SCO Shoal Lake #40	<p>Manitoba Hydro noted that the legal obligation of Crown consultation with respect to the Project lies with Canada and the Province of Manitoba and has not been delegated to Manitoba Hydro.</p> <p>Manitoba Hydro did not do an assessment of the rights as such, but on the potential impacts of the Project on the activities, pursuits, practices and traditions which are often the subject matter of such rights. When an Indigenous community described these as constitutionally protected rights, Manitoba Hydro accepted that statement and considered these as exceptionally important to that Indigenous community. In every case, Manitoba Hydro said that efforts were made to avoid or mitigate potential effects.</p>	<p>The Board notes that the Supreme Court of Canada has acknowledged the Crown’s ability to rely on the Board’s regulatory assessment process to fulfill any Crown duty to consult, when the Board is the final-decision maker. The Federal Crown encouraged all Indigenous Peoples whose established or potential Indigenous or Treaty Rights could be affected by the Project to apply to participate in the Board’s public hearing process.</p> <p>The Board administered its PFP for this Project, which provided financial assistance to support participation of Indigenous Peoples.</p> <p>Considering all of the findings in this Decision, the Board is of the view that an approval of this Project is consistent with section 35 of the <i>Constitution Act, 1982</i> and the honour of the Crown.</p>	8.7.10

Effects on the interests, including asserted and established Treaty and Indigenous Rights, of Indigenous Communities				
Project impacts on asserted and established treaty and Indigenous rights	AON AWZ BON MMF NWA Peguis RRAFN Sagkeeng Shoal Lake #40 SCO Wa Ni Ska Tan	Manitoba Hydro noted that section 35 rights include Treaty Rights such as the right to continue traditional pursuits of hunting, trapping, and gathering on unoccupied Crown lands. Manitoba Hydro said it considered these traditional pursuits, activities, practices and traditions and the potential impact of the Project on them through engagement with Indigenous communities, through traditional land and resource use studies undertaken with funding provided by Manitoba Hydro and through the participation of Indigenous communities in the FNMEP, all of which informed transmission line routing and other measure to avoid or mitigate potential impacts.	<p>The Board has considered the information submitted regarding the nature of potentially affected Indigenous interests in the Project area, including information on Indigenous and Treaty Rights. The Board has also considered the anticipated effects of the Project on those interests and the concerns expressed by Indigenous communities. In light of the nature of the interests and the anticipated effects, the Board has evaluated the consultation undertaken with respect to this Project, including the mandated engagement performed by Manitoba Hydro and the consultation undertaken through the Board’s project assessment process.</p> <p>The Board has also considered the mitigation measures proposed to address the various concerns and potential effects, including the Board’s conditions. The Board is of the view that there has been adequate consultation and accommodation for the purpose of the Board’s decision on this Project. The Board is also of the view that any potential.</p> <p>Project impacts on the interests, including rights, of affected Indigenous Peoples are not likely to be significant and can be effectively addressed.</p>	8.7.10

<p>Project impacts on the use and availability of Crown land by Indigenous Peoples to practice traditional activities and exercise Indigenous and Treaty Rights</p>	<p>AON AWZ BON MMF NWA Peguis RRAFN Sagkeeng SCO</p>	<p>Manitoba Hydro said the understanding that Crown land is valuable to carry out activities considered important to Métis and First Nations was communicated as part of the FNMEP during each step of transmission line routing and the development of its Environmental Impact Statement.</p> <p>Manitoba Hydro said there will be no restriction to access of traditional use sites on Crown lands within the Project easement. Indigenous communities can still access Crown lands; however there will be short period during construction where there will be some restrictions in active construction zones based on safety concerns to Project staff and the public.</p> <p>Manitoba Hydro said an offset program involving the replacement of land affected by the Project with land of similar value elsewhere would require oversight and participation by the Province of Manitoba. As the Province of Manitoba is the owner of most Crown land in Manitoba, and would have oversight over many of the challenges associated with implementing an offset requirement, the Government of Manitoba would be best suited to determine whether an offset program is appropriate and, if so, in what form.</p>	<p>The Board finds the anticipated land requirements to reasonable and justified. The Board also finds Manitoba Hydro's criteria to determine the route to be acceptable and appropriate. The Board notes that, after construction is completed, access to the right-of-way (ROW) will be unchanged and plant harvesting, fishing, hunting and trapping, travel and use of cultural sites will be widely available in the area of the Project, and that these activities will still be possible.</p> <p>The Board acknowledges the concerns expressed from Indigenous communities regarding the impacts and availability of Crown land, including the cultural connection they have with this land and the value they place on the ability to access Crown land. The Board recognizes that reduced or interrupted access to Crown lands may result in temporary disruptions in the ability of Indigenous Peoples to practice their traditional activities. The Board therefore imposes Condition 22 (Crown Land Offset Measures Plan).</p>	<p>8.7.7 8.7.8</p>
<p>Project impacts on the current use of lands and resources for traditional purposes, including hunting, fishing, gathering and trapping.</p>	<p>AON AWZ MMF NWA RRAFN Sagkeeng SCO Shoal Lake #40</p>	<p>Manitoba Hydro said the final preferred route avoids areas identified as important for birds, wildlife, plants of traditional importance, sites of cultural importance and areas to be considered to have high heritage value.</p> <p>Manitoba Hydro said plant harvesting, fishing, hunting and trapping, travel, and use of cultural sites will be widely available in the area of the Project, and that these activities will still be possible, except during active construction, within the Project ROW. Manitoba Hydro will work with Indigenous communities to schedule some activities in the ROW around the seasonal timing of Indigenous traditional practices to the extent feasible in light of safety and operational needs. Once construction is complete,</p>	<p>The Board notes that, after construction is completed, access to the ROW will be unchanged and plant harvesting, fishing, hunting and trapping, travel and use of cultural sites will be widely available in the area of the Project, and that these activities will still be possible.</p> <p>The Board is of the view that the potential adverse effects of the Project on the current use of and resources for traditional purposes by Indigenous Peoples are temporary and not likely to be significant.</p> <p>The Board has imposed Condition 11 (Indigenous Knowledge Studies Report) requiring Manitoba Hydro to submit a report outlining a plan for completing Indigenous Knowledge studies,</p>	<p>8.7.7 8.7.8</p>

		<p>traditional practices can continue on the ROW.</p> <p>Manitoba Hydro offered funding to all potentially affected Indigenous communities to complete Indigenous knowledge and land use studies. Information from outstanding Indigenous Knowledge and land use studies will be incorporated into the updated CEPP. Site-specific mitigation can be applied to protect Environmentally Sensitive Sites (ESS) which are locations, features, areas and activities that are identified to be ecologically, socially or culturally important or sensitive to disturbance.</p> <p>Indigenous communities will be invited to attend regular field trips to the construction areas with the focus being the highly valued undisturbed land or land with little disturbance, as well as areas identified as sensitive sites.</p>	<p>including a description of how Manitoba Hydro has revised its CEPP as a result of the Indigenous Knowledge studies.</p> <p>The Board acknowledges the concerns expressed from Indigenous communities regarding the impacts and availability of Crown land, including the cultural connection they have with this land and the value they place on the ability to access Crown land. The Board recognizes that reduced or interrupted access to Crown lands may result in temporary disruptions in the ability of Indigenous Peoples to practice their traditional activities. The Board therefore imposes Condition 22 (Crown Land Offset Measures Plan).</p>	
Project impacts on heritage resources	Peguis Sagkeeng Wa Ni Ska Tan	<p>Manitoba Hydro said it will follow processes outlined in Manitoba's <i>Heritage Resources Act</i> (1986) and has drafted a Project Cultural and Heritage Resources Protection Plan (CHRPP), which is part of the CEPP.</p> <p>Manitoba Hydro will implement ongoing protection measures such as the implementation of a heritage resource impact monitoring (HRIM) field work program will continue the assessment of areas of high heritage potential over the course of clearing and construction activities.</p> <p>Indigenous knowledge holders will inform the heritage resource surveys through direct involvement in the pre-construction HRIM field investigation and share results with their respective communities and the MMTP Monitoring Committee will have input into the Project CHRPP.</p>	<p>The Board is of the view that the potential adverse effects of the Project on heritage resources are not likely to be significant.</p> <p>The Board has imposed Condition 16 requiring Manitoba Hydro to file confirmation that it has obtained all permits and clearances from Manitoba's Heritage Resources Branch. In addition, Condition 10 (CEPP) is for approval and includes the final version of Manitoba Hydro's CHRPP.</p>	8.7.9

<p>Opportunity for employment, contracting and economic benefits for Indigenous individuals, communities and businesses.</p>	<p>AWZ BON NWA Peguis RRAFN Sagkeeng SCO</p>	<p>Manitoba Hydro stated that construction tender documents will include incentives for contractors to exceed the minimum threshold of 20 per cent Indigenous content. Indigenous employment opportunities will be promoted through an Indigenous hours' requirement and hiring preference.</p> <p>Manitoba Hydro will monitor how contractors are meeting Indigenous content committed to in bids, including use of recovery plans and Manitoba Hydro withholding contractor payments.</p> <p>Manitoba Hydro noted that certain communities were interested in revenue sharing opportunities, but stated that it does not have the mandate to enter into discussions related to the issue. Rather, revenue sharing is an issue that would require input from and consideration by other interested third parties including the Province of Manitoba and the Public Utilities Board.</p>	<p>The Board is of the view that the Project would provide benefits to Indigenous, local, regional and provincial economies.</p> <p>The Board notes Manitoba Hydro's commitments regarding Indigenous content provisions of its construction contracts, which will result in purchases from Indigenous suppliers, contracts with Indigenous subcontractors, and direct employment and training of Indigenous people. The Board also acknowledges Manitoba Hydro's internal employment equity program, which includes opportunities in training, education and employment.</p>	<p>8.7.4</p>
<p>Socio-Cultural Well-Being</p>				
<p>Project impacts on social and cultural well-being, including the connection between land use and well-being</p>	<p>AON AWZ BON NWA Peguis Sagkeeng Wa Ni Ska Tan</p>	<p>In response to concerns from Indigenous communities who said members may avoid areas due to changes in landscape, access conditions, perceived effects as well as disruptions or reduced ability to use areas of importance, Manitoba Hydro acknowledged that Project effects such as sensory disturbance and vegetation clearing may alter the experience of traditional land use and the experiential aspects of cultural values. Manitoba Hydro said it reduced potential Project effects by considering culturally important areas identified by Indigenous community members during the routing process and through other mitigation measures.</p> <p>Manitoba Hydro said its Project design has reduced the adverse effects to land and resources important to cultural practices, while areas of interest to Indigenous communities will remain accessible to practice traditional harvesting activities once the Project is operational, and during certain portions of construction.</p>	<p>The Board notes that, after construction is completed, access to the ROW will be unchanged and plant harvesting, fishing, hunting and trapping, travel and use of cultural sites will be widely available in the area of the Project, and that these activities will still be possible.</p> <p>The Board acknowledges the concerns expressed from Indigenous communities regarding the impacts and availability of Crown land, including the cultural connection they have with this land and the value they place on the ability to access Crown land. The Board therefore imposes Condition 22 (Crown Land Offset Measures Plan).</p> <p>The Board is satisfied with Manitoba Hydro's approach to assessing concerns related to the social-cultural well-being of Indigenous Peoples and notes that it is working to share information and building understanding of the Project in an attempt to build trust with all potentially impacted</p>	<p>8.7.6</p>

<p>Project impacts on the social-cultural well-being of Indigenous people as a result of the stress related to perceived risks from EMF and herbicide application</p>	<p>Sagkeeng Wa Ni Ska Tan</p>	<p>Manitoba Hydro said that, as part of its assessment of potential effects on community health and well-being, it undertook a review of literature related to public perception and psychological health related to power lines and industrial developments. Manitoba Hydro acknowledged that, despite the number of studies showing there are no links between exposure to EMFs and long-term health effects, the perception of these risks is still a cause for concern and that there are often increased levels of stress and anxiety that result from the presence of a transmission line.</p> <p>Manitoba Hydro said that it is difficult to monitor the impacts of psycho social effects. One of the ways that it is hoping to build trust is through the activities of the MMTP Monitoring Committee and through the ongoing engagement process. Manitoba Hydro said it will continue to address concerns related to EMF by providing factual, science-based information to concerned individuals and organizations. Manitoba Hydro has also committed to working with Indigenous communities to develop additional communication resources that discuss this issue.</p> <p>Manitoba Hydro said the development of an Integrated Vegetation Management Plan (IVMP) would provide a balanced approach for addressing concerns related to herbicide use through knowledge-sharing and mapping areas of concern (Environmentally Sensitive Sites).</p>	<p>Indigenous communities.</p> <p>The Board acknowledges the concerns raised regarding EMF exposure and herbicide use, and in particular the perceptions of risk to human health by Indigenous communities. The Board notes that Manitoba Hydro’s application included a comprehensive assessment of EMF and EMF-related exposure. The Board is also satisfied with Manitoba Hydro’s approach to developing an IVMP to address concerns related to herbicide use. The IVMP must also be included in the CEPP, as per Condition 10.</p> <p>The Board is satisfied with Manitoba Hydro’s approach to assessing concerns related to the social-cultural well-being of Indigenous communities and notes that it is working to share information and build understanding of the Project in an attempt to build trust with all potentially impacted Indigenous communities.</p> <p>The Board notes Manitoba Hydro’s commitment to continue to work with Indigenous communities through ongoing engagement as well as the MMTP Monitoring Committee to develop relevant educational materials to assist in alleviating concerns regarding EMF, as well as herbicide use, and their impacts.</p>	<p>8.7.6 9.6.5.2</p>
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Environmental Impact Statement Methodology				
<p>Adequacy of Manitoba Hydro's Environmental Impact Statement (EIS), including selection of valued components (VC) and inclusion of traditional knowledge and Indigenous concerns</p>	<p>AWZ BON MMF NWA Sagkeeng</p>	<p>Manitoba Hydro stated that information shared through the FNMEP and Indigenous Knowledge studies were provided to assessment practitioners for consideration during the VC selection process.</p> <p>Information from outstanding Indigenous Knowledge and land use studies will be incorporated into the updated CEPP. Site-specific mitigation can be applied to protect ESS which are locations, features, areas and activities that are identified to be ecologically, socially or culturally important or sensitive to disturbance.</p>	<p>The Board's Filing Manual provides guidance to proponents for undertaking an Environmental and Socio-economic assessment.</p> <p>The Board has assessed Manitoba Hydro's EIS methodology, including its selection of VCs and its incorporation of traditional knowledge and Indigenous concerns to assess Project impacts, and is satisfied that it used an approach that is in accordance with provincial and federal guidance documents, including the Board's Filing Manual.</p> <p>The Board has imposed Condition 11 requiring Manitoba Hydro to submit a report outlining a plan for completing Indigenous knowledge studies, including a description of how Manitoba Hydro has revised its CEPP as a result of the Indigenous knowledge studies.</p>	<p>8.7.5</p>
<p>Scope of Manitoba Hydro's EIS</p>	<p>AON AWZ NWA Shoal Lake #40 SCO Wa Ni Ska Tan</p>	<p>Manitoba Hydro pointed to the Board's Ruling No. 4 which indicated that upstream effects have been appropriately assessed by other agencies.</p> <p>Manitoba Hydro confirmed that water levels on Lake of the Woods will not be impacted by the Project.</p>	<p>The Application before the Board is for the construction and operation of the Project and the Board is of the view that upstream facilities are not part of the designated project, and as such, the scope of this decision is limited to the powerline and its immediate associated facilities.</p> <p>The Board notes that water levels on Lake of the Woods are regulated by the Canadian Lake of the Woods Control Board, which the Board understands operates under legislation that describes the operating limits for Lake of the Woods.</p>	<p>3.3.4 8.7.5</p>

Adequacy of Manitoba Hydro's cumulative effects assessment	AON Sagkeeng Wa Ni Ska Tan	<p>Manitoba Hydro said the existing landscape in which the Project is situated has been highly altered by past activities, mainly as a result of agriculture. Manitoba Hydro also provided a list of reasonably foreseeable development with the potential to contribute to further cumulative effects.</p> <p>Manitoba Hydro said it was forming a committee to mitigate potential cumulative effects through monitoring of its projects for potential effects and implementing adaptive management for unanticipated effects.</p>	<p>The Board recognizes that the Project's potential contributions to cumulative effects in the region have been substantially reduced through Manitoba Hydro's Project design and will be further reduced as a result of mitigation measures (including adaptive management measures) that Manitoba Hydro has committed to implementing, as well as the Board's conditions.</p> <p>The Board is of the view that some potential adverse residual effects associated with the Project may interact with effects from other projects and activities over the long-term and, in some cases, be permanent. However, the Board finds that most residual effects would be low to moderate in magnitude and restricted to the Project Development Area (PDA) or Local Assessment Area (LAA), and would not likely result in significant adverse cumulative effects. Any Project contributions to cumulative effects will be generally overshadowed and subsumed within the greater land use changes that are a key determinant of cumulative effects in the Project area.</p> <p>The Board acknowledges the concerns raised by Indigenous communities and recognizes how ongoing and potential cumulative effects can have lasting cultural implications. With this in mind, the Board reminds Manitoba Hydro that it expects the company to continue to consult with Indigenous communities and work towards ways to meaningfully address the concerns raised.</p>	9.7
Environmental Effects				
Effects on birds, wildlife and wildlife habitat, habitat loss and change in movement patterns	AWZ AON BON NWA Peguis RRAFN	<p>Manitoba Hydro said it would not clear trees or construct during the breeding period (April-August) when migratory birds are present, without conducting pre-activity nest sweeps. Manitoba Hydro said that, if nests were found to be active, appropriate buffers/setbacks would be implemented, depending on the level of disturbance expected.</p> <p>Since transmission lines in areas where bird activity is concentrated (e.g., lakes and open water wetlands) can have higher</p>	Manitoba Hydro has committed to monitoring avian mortality post-construction and the Board expects Manitoba Hydro will include the monitoring results, as well as any necessary adaptive management measures implemented to further reduce avian mortality, in the post-construction monitoring reports to be filed annually by Manitoba Hydro, in accordance with Condition 23 (Post Construction Monitoring Reports). The Board finds the potential residual adverse environmental effects of the Project to	9.6.3 9.6.4.2 9.6.4.3

	<p>Sagkeeng SCO</p>	<p>risk of bird–wire collision, Manitoba Hydro said that in these areas bird flight diverters would be installed on the shield wires to reduce collision risk. Manitoba Hydro said that applying bird diverters to shield wires has been shown to reduce bird mortality rates by 50 per cent to 80 per cent. Manitoba Hydro said it will monitor avian mortality as a result of bird–wire collision post-construction, bi-annually for two years to determine the effectiveness of the mitigation measures and, if appropriate, apply further mitigation strategies to reduce or prevent future mortality events.</p> <p>Manitoba Hydro is developing a plan for managing critical golden-winged warbler habitat during construction and operation of the Project.</p> <p>Manitoba Hydro said it will monitor for the presence of northern leopard frogs at wetland sites.</p> <p>Information from outstanding Indigenous Knowledge and land use studies will be incorporated into the updated CEPP.</p>	<p>migratory birds are not likely to be significant.</p> <p>The Board recognizes that Manitoba Hydro has used a precautionary approach in its assessment and assumed the presence of all species at risk when developing its mitigation measures. The Board is of the view that this is an acceptable approach, particularly since Manitoba Hydro plans to construct during winter when the risk of disturbance to wildlife species at risk is limited. Manitoba Hydro has committed to implement appropriate protection measures if plant or wildlife species at risk are found, or suspected to occur, on the ROW prior to or during construction, or if construction activities will occur during sensitive timing windows for wildlife species at risk. The Board expects Manitoba Hydro to follow through on that commitment.</p> <p>With regard to the Project’s effects to critical habitat for the golden-winged warbler, the Board notes ECCC’s support of Manitoba Hydro’s Golden-Winged Warbler Habitat Management Plan.</p> <p>The Board is of the view that Manitoba Hydro’s plans to use integrated vegetation management techniques during construction and operations to provide habitat suitable for golden-winged warblers is appropriate and will minimize the Project’s adverse environmental effects to this species. The Board expects Manitoba Hydro to monitor and report the effectiveness of these measures post-construction as per the requirements of Condition 23.</p> <p>If any species at risk are newly identified during construction, the Board expects Manitoba Hydro to report on any protective measures implemented during construction, and monitor the success of those measures post-construction, as per the requirements of Condition 23.</p> <p>In addition, the Board expects Manitoba Hydro to periodically check for updates to SARA Schedule 1 listings prior to and during</p>	
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			construction, including any issuance or updating of management plans and recovery strategies by ECCC, for species at risk that may occur in the Project area, and implement mitigation strategies accordingly. The Board finds the potential residual adverse environmental effects of the Project to species at risk are not likely to be significant.	
Effects on fish and fish habitat	AON AWZ BON NWA Peguis RRAFN Sagkeeng SCO	<p>Manitoba Hydro said the Project’s potential effects to fish and fish habitat, including species at risk, are expected to be limited since no in-water work is planned at watercourse crossings. In addition, Project activities in the vicinity of watercourses would be limited to selective removal of riparian vegetation, except where existing access is not available. In those locations, clearing would be required for trail access, and temporary ice and snowfall crossings would be constructed on the frozen watercourses.</p> <p>Manitoba Hydro said it would implement provincial guidelines for watercourse crossings and the protection principles outlined in DFO’s Fisheries Protection Policy Statement and <i>Measures to Avoid Causing Harm to Fish and Fish Habitat</i>, as well as a variety of additional mitigation measures. As part of its environmental monitoring plan, Manitoba Hydro will monitor riparian buffers, ground cover and erosion at watercourse crossings during construction and one year post-construction.</p>	<p>The Board notes that the interaction with fish and fish habitat, including any species at risk, is limited and it is of the view that Manitoba Hydro’s proposed mitigation measures will effectively mitigate any potential adverse effects.</p> <p>As part of Condition 10, the Board requires Manitoba Hydro to submit, for approval, a CEPP for the Project. The Board expects Manitoba Hydro to ensure that the CEPP clearly documents the measures to which it has committed implementing in order to protect fish and their habitat from the effects of the Project. The condition requires the CEPP to include an Erosion Protection and Sediment Control Management Plan, Rehabilitation and Invasive Species Management Plan, Emergency Preparedness and Response Plan, and Environmental Monitoring Plan. The Board is of the view that the measures in these plans will further protect watercourses and the fish that inhabit them.</p> <p>With the mitigation measures proposed and the Board’s conditions, the Board finds that any residual effects of the Project to fish and fish habitat are not likely to be significant.</p>	9.6.3 9.6.4.1
Effects on vegetation	AON AWZ NWA Peguis RRAFN	Manitoba Hydro stated that vegetation management is required on an ongoing basis to ensure that regrowth in the cleared ROW does not interfere with transmission line operations. Integrated vegetation management may involve a variety of methods including handcutting, mechanical shear blading, brush mowing, and herbicide treatment. Manitoba Hydro said the focus of vegetation management is on the tall growing tree species that	<p>The Board is satisfied with Manitoba Hydro’s approach to developing an IVMP to address concerns related to vegetation management. The Board is of the view that Manitoba Hydro’s approach to integrated vegetation management, including the application of herbicides, is appropriate.</p> <p>The Board encourages Manitoba Hydro to keep communicating with Indigenous communities and other interested parties</p>	9.6.3 9.6.5.2

	SCO Sagkeeng Wa Ni Ska Tan	<p>have the potential to grow or fall into, or within the arcing distance of, transmission lines or facilities.</p> <p>Manitoba Hydro noted that it would develop an IVMP, as part of its Environmental Protection Program, to manage vegetation on the ROW during Project operation and maintenance. It said that integrated vegetation management involves selecting and combining vegetation treatments to target specific plant species that pose a risk to system safety and reliability, while limiting effects on the environment and the public.</p>	<p>regarding concerns about its approach to vegetation management, through ongoing engagement activities, as well as the MMTP Monitoring Committee.</p> <p>The IVMP must also be included in the CEPP, as per Condition 10.</p>	
Effects on wetlands	AON AWZ BON NWA Peguis SCO	<p>Manitoba Hydro said the Project routing considered effects to wetlands, and transmission towers would not be placed directly in wetlands unless the distance between towers is too great to span. It said that, while the exact locations of towers would not be known until the route is finalized, it estimated that 56 of the approximate 558 transmission towers would need to be placed within wetlands.</p> <p>Manitoba Hydro explained that it considered and incorporated the government of Manitoba's draft no-net-loss guidelines for wetland into its Project design and CEPP mitigation measures. As well, it said it intended to address permanent wetland loss associated with the Dorsey Converter Station through offset mitigation, by protecting an equivalent or greater amount of similar wetland class on its own property or through a third-party conservation easement.</p> <p>With regard to tower locations, Manitoba Hydro said that it is currently in discussion with the Province of Manitoba about offsets for permanent wetland loss on its Bipole III Transmission Project, and that it anticipated having similar discussions with regard to the Project.</p> <p>Manitoba Hydro committed to conducting ground surveys to monitor wetland protection measures during construction, and</p>	<p>The Board is of the view that Manitoba Hydro's pre-construction survey effort, environmental protection measures, and monitoring commitments are sufficient to avoid and minimize most effects the Project may cause to wetlands in the PDA. While Project design is still occurring and exact transmission tower placement locations in wetlands are not yet known, Manitoba Hydro has demonstrated that it will consider feedback from Indigenous Knowledge studies and the MMTP Monitoring Committee when finalizing siting of towers to see if requests can be accommodated.</p> <p>The Board is mindful that permanent wetland loss is expected to occur at the Dorsey station and locations where transmission tower foundations are placed within wetlands. Also, permanent loss may occur accidentally at other wetland locations where mitigation efforts are not as effective or successful as predicted. As a result, the Board imposes Condition 26 for Manitoba Hydro to submit a Wetland Offset Measures Plan to offset or compensate for any permanent loss of wetlands as a result of the Project. In addition, the Board requires Manitoba to report, as part of its requirement for post-construction monitoring reporting (see Condition 23), the total area of permanent loss of wetlands resulting from construction of the Project and an explanation of how that loss will be offset or compensated for, as per the Wetland Offset Measures Plan.</p> <p>With the implementation of Condition 26 for offsetting any areas</p>	9.6.3 9.6.4.4

		identify wetland changes during construction, and annually for two years post-construction.	of permanent loss, the Board finds that any remaining potential adverse residual environmental effects to wetlands would not be significant.	
Effects on Navigation and Navigation Safety	AON BON Wa Ni Ska Tan	<p>Given there are no temporary or permanent in-water works or structures planned for the Project, Manitoba Hydro noted that there is limited potential for the Project to cause effects to navigation and navigation safety.</p> <p>Helicopters rather than boats will be used for conductor stringing across navigable waters.</p> <p>During these activities, flag persons in boats would be situated both upstream and downstream of the ROW as a navigation safety precaution.</p> <p>Ice bridges may be used at navigable crossings, and impacts to navigation and navigation safety would be eliminated as a result of the mitigation measures that would be implemented.</p>	<p>The Board notes that, while any temporary crossing structures would only be in place during the winter months when navigation is not expected to occur, there is some potential for Project interactions to occur when the watercourse are flowing in the spring and potentially navigable. As well, depending on the time of year the work is conducted at these locations, overhead conductor stringing activities could affect navigation and navigation safety for short periods of time.</p> <p>The Board imposes Condition 9 requiring Manitoba Hydro to file a Navigation and Navigation Safety Plan 90 days prior to commencing construction. Manitoba Hydro must consult with potentially affected waterway users and Indigenous communities regarding navigation use, including reporting on any concerns that were raised and how those concerns have been addressed. The Navigation and Navigation Safety Plan must also be included in the CEPP, as per Condition 10.</p> <p>With the implementation of Condition 9, the Board finds that any potential adverse residual environmental effects to navigation and navigation safety would not be significant.</p>	9.6.3 9.6.4.5

Human Health				
Potential effects on human health as a result of EMF from transmission line	AON BON AWZ NWA Sagkeeng SCO Wa Ni Ska Tan	<p>Manitoba Hydro said its transmission routing methodology took into consideration the proximity of the Project to potential human health receptors such as houses, schools, daycares, sites of worship, campgrounds, and recreational and picnic areas.</p> <p>Manitoba Hydro provided an overview of the current scientific understanding of EMF and health risk. Manitoba Hydro said that numerous reviews of research literature on exposure to EMFs from transmission lines, and possible adverse health effects, have been conducted by international and national scientific and governmental agencies, including Health Canada and the World Health Organization. It said that none of these agencies has concluded that exposure to EMFs from transmission lines is a demonstrated cause of any long-term adverse health effect.</p> <p>Manitoba Hydro noted that EMF diminishes rapidly with distance from the transmission line, and physical buffers such as trees and buildings will reduce the intensity of the electric fields. According to Manitoba Hydro's calculations, the highest estimated EMF levels at the edge of the ROW will be well below the recommended reference levels for public exposure.</p> <p>Manitoba Hydro said it will continue to address concerns related to EMF by providing factual, science-based information to concerned individuals and organizations. Manitoba Hydro has also committed to working with Indigenous communities to develop additional communication resources that discuss this issue.</p>	<p>The Board acknowledges the concerns raised regarding EMF exposure, and in particular the perceptions of risk to human health by Indigenous communities. The Board notes that Manitoba Hydro's application included a comprehensive assessment of EMF and EMF-related exposure, and finds this assessment to be acceptable. The Board notes that Project design will meet the international and national guidelines regarding exposure levels from transmission lines.</p> <p>Based on the balance of evidence, the Board finds that exposure to EMF is not likely to cause significant adverse effects to human health, including the health of Indigenous Peoples.</p> <p>Given the nature of the concerns raised, including perception of risk, the Board encourages Manitoba Hydro to keep communicating with Indigenous communities and other interested parties regarding these concerns through ongoing engagement activities, as well as the MMTP Monitoring Committee.</p>	8.7.6 9.6.5.2
Potential effects on human health as a result of herbicide use	AON AWZ BON NWA	<p>Manitoba Hydro said the herbicides it uses are selective and only affect broadleaf plants, leaving other nearby trees and plants to grow and thrive. Manitoba Hydro indicated that it does not apply herbicides annually to a ROW, rather they are generally applied at a five to eight year interval.</p> <p>Manitoba Hydro explained that it uses herbicides judiciously. It</p>	<p>The Board is satisfied with Manitoba Hydro's approach to developing an IVMP to address concerns related to herbicide use. The Board is of the view that Manitoba Hydro's approach to integrated vegetation management, including the application of herbicides, is appropriate. Herbicide use is a necessary tool in a larger integrated vegetation management toolbox. The Board notes</p>	8.7.6 9.6.5.2

<p>Peguis RRAFN Sagkeeng SCO Wa Ni Ska Tan</p>	<p>said it would not apply herbicides within 30 m of watercourses and wetlands, and for other ESSs that are sensitive to herbicide application, including areas designating traditional use plant species identified through Indigenous Knowledge, it indicated that it would apply a 30 m herbicide-free buffer, unless directed otherwise by a Weed Supervisor or a landowner.</p> <p>Manitoba Hydro indicated that herbicide registration, and premarket approval and regulations governing herbicide application, follow the federal <i>Pest Control Products Act</i> (Health Canada 2006), which is reviewed by Health Canada to confirm that human health is adequately protected.</p> <p>Manitoba Hydro said it is aware that some Indigenous community members may not use the ROW after construction due to concerns about herbicide contamination and its impacts on human health and the plants and animals that they harvest. Manitoba Hydro said if areas of concern are identified, it would prevent spraying in those sites. Manitoba Hydro said the application of herbicides for the Project would not result in concentrations in traditionally harvested foods such that the consumption of these foods would result in exposures that would exceed allowable daily intakes.</p> <p>Manitoba Hydro has committed to the development of an IVMP that would provide a balanced approach for addressing concerns related to herbicide use through knowledge-sharing and mapping areas of concern. The IVMP would be completed prior to commencement of vegetation management activities for operation and maintenance of the Project. Manitoba Hydro said the scope of the plan would include a description of vegetation control methods, criteria for application of control methods, and communication protocols to the public and Indigenous communities.</p>	<p>that Manitoba Hydro has committed to not using herbicides indiscriminately, and that “herbicide-free” buffers will be established and maintained adjacent to watercourses, wetlands, and as best as possible around sites identified as being of concern to Indigenous communities. The IVMP must also be included in the CEPP, as per Condition 10.</p> <p>Based on the balance of evidence, the Board finds that exposure to herbicides is not likely to cause significant adverse effects to human health, including the health of Indigenous Peoples.</p> <p>Given the nature of the concerns raised, the Board encourages Manitoba Hydro to keep communicating with Indigenous communities and other interested parties regarding these concerns through ongoing engagement activities, as well as the MMTP Monitoring Committee.</p>	
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Follow Up and Monitoring				
Implementation of MMTP Monitoring Committee	AON AWZ BON NWA Peguis Sagkeeng SCO Wa Ni Ska Tan	<p>Manitoba Hydro committed to establish the MMTP Monitoring Committee, with a collaboratively-developed Terms of Reference, to support effective and meaningful Indigenous participation in monitoring the construction and operation of the Project. All 25 potentially affected Indigenous communities have been invited to participate in the MMTP Monitoring Committee.</p> <p>Manitoba Hydro said it is funding all committee activities and supports two members from each community or organization to participate in the Committee. The Committee will have the opportunity to provide comments on the various monitoring plans being proposed by Manitoba Hydro.</p> <p>Manitoba Hydro said that First Nations and Métis involvement in the monitoring program is essential for the Project and that it would continue its work to develop mechanisms for their involvement. It said the MMTP Monitoring Committee will remain in place through Project construction and participation in the operations phase will be commensurate with the nature of activities occurring during that time.</p>	<p>The Board understands the value and unique perspective that Indigenous communities can provide in determining the effectiveness of mitigation measures, based on their traditional knowledge, as well as their ongoing use of the lands and resources in the area. The Board is encouraged by the establishment of the MMTP Monitoring Committee, which is already underway with Terms of Reference and scope of activities being developed by its members. The Board notes that all 25 potentially affected Indigenous communities have been invited to participate in the Committee.</p> <p>The Board understands that the purpose of the committee is to support effective and meaningful participation in the monitoring of the Project, to create a platform for understanding issues of concern to Indigenous participants and Manitoba Hydro in order to collaboratively provide informed advice on how to address issues of concern, and to share information relating to the environmental issues in a cooperative and transparent manner.</p> <p>The Board is of the view that the MMTP Monitoring Committee will be an effective way to both address Indigenous communities' concerns regarding Project impacts, as well as to include Indigenous knowledge in monitoring activities for the Project.</p>	8.7.3
Adequacy of Manitoba Hydro's proposed monitoring of the Project for environmental effects – particularly for wildlife/wildlife habitat, fish/fish habitat,	AON AWZ BON NWA Peguis Sagkeeng	<p>Manitoba Hydro committed to undertake two main types of monitoring for the Project: environmental monitoring to verify accuracy of the predictions made and effectiveness of the mitigation measures implemented; and compliance monitoring to verify whether a practice or procedure meets regulatory requirements.</p> <p>Indicators selected by Manitoba Hydro for monitoring include: stream crossings (riparian buffers, ground cover, erosion); wetlands; plant species of conservation concern; non-native and</p>	<p>The Board is of the view that a robust post-construction monitoring program is a fundamental tool and key to ensuring that potential adverse effects have been effectively mitigated and where issues are identified, adaptive management implemented to address them. The Board requires that Manitoba Hydro include an updated Environmental Monitoring Plan in the CEPP, as per the requirements of Condition 10.</p> <p>The Board has also imposed Condition 23 requiring Manitoba Hydro to file post-construction monitoring reports with the Board</p>	8.7.3 9.6.3 9.8

vegetation and wetlands	SCO WNST	<p>invasive plant species; traditional use plant species; amphibians; common garter snake hibernacula; bird–wire collisions, sharp-tailed grouse lek sites; bird species of conservation concern; ungulates and predators (winter aerial and remote IR camera trap surveys); and black bear (camera trap surveys).</p> <p>The length of post-construction monitoring proposed by Manitoba Hydro ranges from 1 to 2 years for most indicators, and 1, 3 and 5 years after clearing for bird species of conservation concern. However, it said the duration of the monitoring program will remain flexible based on the program’s findings and results of other Manitoba Hydro transmission projects under construction.</p> <p>Manitoba Hydro said that First Nations and Métis involvement in the monitoring program is essential for the Project and that it would continue its work to develop mechanisms for their involvement. The MMTP Monitoring Committee will remain in place through Project construction and participation in the operations phase will be commensurate with the nature of activities occurring during that time.</p>	<p>annually for at least 10 years. The Board expect that, if there are any outstanding issues at the end of monitoring year 10, Manitoba Hydro will apply adaptive management strategies, appropriately extend the monitoring period for those environmental indicators, and continue reporting monitoring results to the Board.</p> <p>The Board is also of the view that the MMTP Monitoring Committee will be an effective way to both address Indigenous communities’ concerns regarding Project impacts, as well as to include Indigenous knowledge in monitoring activities for the Project.</p>	
Emergency Response				
Communication regarding emergency response plans	AON BON	The MMTP Indigenous Monitoring Committee is a venue in which ongoing concerns, including emergency response plans, can be discussed.	<p>The Board is of the view that emergency response plans are an important product of the emergency management program which is in turn a component of the management system. The Board is also of the view that information contained in emergency response plans can contribute to the protection of the environment and the safety of the public adjacent to international and inter-provincial power lines.</p> <p>The Board directs Manitoba Hydro to submit an Emergency Response Plan, as detailed in Condition 14.</p>	4.2.1 8.7.3

Appendix III – Conditions

Guidance about conditions

A primary purpose of conditions is to mitigate potential risks and effects posed by a project throughout all phases of its lifecycle so that it is designed, constructed, and operated in a manner that protects property and the environment, and promotes the safety and security of the public.

Conditions outline requirements that a company must meet in relation to a project, and will include a standard requirement that the project applicant implements all of the commitments and undertakings included in its project applications and subsequent filings in a given hearing. Additional conditions are used to address issues specific to each project. Conditions imposed by the Board are enforced pursuant to the *National Energy Board Act*.

Generally, conditions are ordered according to when each condition's filing (or initial filing) is due.

In this appendix, the terms and expressions below have the following meanings:

Annual (in relation to a condition filing or posting)	Unless otherwise specified in a condition, an annual filing must be made on the 31 st of January after commencing the Project operation and by that date on an annual basis thereafter for the life of the project to which the filing pertains.
CEPP	Construction Environmental Protection Plan
commencing construction	Vegetation clearing, ground-breaking, and other forms of right-of-way preparation that may have an impact on the environment (activities associated with normal surveying do not constitute commencing construction).
commencing operations	When the Manitoba-Minnesota Transmission Project is opened for the import and export of electricity. Unless otherwise specified in a condition, an action to be completed "prior to commencing operations" means that action must be completed prior to commencing operation of any component of the project. An action to be completed "after commencing operations" means that action must be completed after all components of the project are operating.
consultation	Unless otherwise specified in a condition, Manitoba Hydro's consultation must be carried out in a manner that: a) provides, to those to be consulted: i) notice of the matter in sufficient form and detail to allow them to prepare their views or information on the matter; ii) a reasonable period for them to prepare those views or

information; and,

- iii) an opportunity to present those views or information to Manitoba Hydro;
- b) considers, fully and impartially, the views or information presented;
- c) provides, to those in a) who request it, a draft summary of the consultation undertaken with that party, and a reasonable period for them to provide feedback to Manitoba Hydro; and,
- d) provides, to those in a) who request it, a copy of the National Energy Board filing receipt for, or notice of, the condition filing to which the consultation pertains.

for approval

When a condition requires a filing for approval, Manitoba Hydro must not commence the indicated activity until the National Energy Board issues its written approval of that filing.

including

Use of this term, or any variant of it, is not intended to limit the elements to just those listed. Rather, it implies minimum requirements with the potential for augmentation, as appropriate.

IPL

International Power Line

monitoring

Observing the environmental and socio-economic effects of a project for the purposes of assessing and measuring the effectiveness of mitigation measures undertaken, identifying unanticipated environmental and socio-economic issues, and, based on the results of these activities, determining any remedial actions required.

From an engineering perspective, for the Manitoba-Minnesota Transmission Project, monitoring involves regularly observing the international power line, conductors, and transformers with the goal of identifying any issues or potential concerns that may compromise the protection of the power line, property, persons, and the environment.

monthly (in relation to a condition filing or posting)

Unless otherwise specified in a condition, a monthly filing must be made on the 5th working day of the calendar month following the month to which the filing pertains.

officer of the company

Where a condition requires a filing to be signed by an officer of the company, the filing must include a statement confirming that the signatory to the filing is an officer of the company duly authorized for that purpose.

quarterly (in relation to a condition filing or posting)

Unless otherwise specified in a condition, a quarterly filing must be made on the 10th working day of the quarter following the quarter to which the filing pertains.

General/Overarching Conditions

1. Condition Compliance

Manitoba Hydro must comply with all of the conditions contained in this Certificate, as well as Order AO-006-EC-III-16 and Order MO-074-2018 unless the Board otherwise directs.

2. Certificate Expiration

Unless the Board otherwise directs prior to 20 October 2021, the Certificate for the new Dorsey IPL as well as amendments for the existing Riel IPL Certificate and the amendments for the existing Glenboro Permit shall expire on **20 October 2021**, unless construction in respect of the Project has commenced by that date.

3. Implementation of Commitments

Manitoba Hydro must implement or cause to be implemented all of the policies, practices, mitigation measures, recommendations, and procedures for the protection of the environment and promotion of safety referred to in its application, or as otherwise agreed to in its related submissions.

4. General

Manitoba Hydro must cause the Project to be constructed, operated, and abandoned in accordance with the specifications, standards, and other information referred to in its application or as otherwise agreed to in its related submissions.

5. Implementation of Standards

- a) Manitoba Hydro must design and construct the Project to comply with the current Canadian Electrical Code, Canadian Standards Association and other relevant standards applicable to the design and construction of power lines.
- b) Manitoba Hydro will ensure that any portion of the Riel IPL that may become part of the Project, will comply with the current standards in effect as of the date of construction.

6. Notification of Project Modifications

Manitoba Hydro must seek approval from the Board of any proposed modification to the Project's electrical system that may impact reliable operation for the bulk electrical system, power transfer capabilities, and the specification of the IPL structures, before any modification is made.

Prior to commencing construction

7. Quality Assurance and Compliance Program

Manitoba Hydro must file with the Board, **at least sixty (60) days prior to commencing construction**, confirmation by an officer of the company that they have developed and implemented a Quality Assurance and Compliance Program. The program must describe the methods by which Manitoba Hydro will ensure the Project, as described in the application, is

designed, constructed, and operated in conformity with the conditions of the Certificate, and the designs, specifications, and undertakings set out in its application or as otherwise adduced in its evidence before the Board. The program must include, but not be limited to:

- a) a process or procedure to identify conditions of approval, company designs, specifications, and undertakings set out in the application or otherwise adduced in Manitoba Hydro's evidence;
- b) processes or procedures to monitor, measure, document, and report on compliance with conditions of approval, company designs, specifications, and undertakings set out in the application or otherwise adduced in Manitoba Hydro's evidence;
- c) the position title and contact information of the person(s) responsible for each aspect of the program;
- d) the qualifications, contact information, description of the job role and the position title of the person(s) authorized to stop work should work be in non-conformity with conditions of approval, company designs, specifications, and undertakings set out in the application or otherwise adduced in Manitoba Hydro's evidence;
- e) a process or procedure to identify and implement any corrective action as a result of any non-conformances that may be necessary before recommencing work;
- f) a process or procedure to evaluate the effectiveness of the corrective actions taken as a result of any non-conformances; and,
- g) the methods by which adherence to the program will be monitored, measured, documented, and reported to Manitoba Hydro's management.

8. Construction Safety Manuals

Manitoba Hydro must file with the Board, **at least ninety (90) days prior to commencing construction**:

- a) safety manuals related to the construction of the Project that address construction procedures, activities, and public safety; and,
- b) an outline of the safety training program to be implemented for Project operations.

9. Navigation and Navigation Safety Plan

Manitoba Hydro must file with the Board for approval, **at least ninety (90) days prior to commencing construction**, a Navigation and Navigation Safety Plan that includes:

- a) an updated listing of navigable waters to be crossed by all components of the Project described in the Application and subsequent filings;
- b) an updated discussion of effects of the Project to navigation and navigation safety;
- c) evidence and a summary of Manitoba Hydro's consultation with potentially affected waterway users and Indigenous communities regarding navigation use, including any concerns that were raised and how those concerns have been addressed; and,
- d) for each navigable waterway, a description of mitigation measures to be implemented to address the Project's potential effects on navigation and navigation safety.

Manitoba Hydro must incorporate the Navigation and Navigation Safety Plan into the updated Construction Environmental Protection Plan (CEPP) required by Condition 10.

10. Construction Environmental Protection Plan

Manitoba Hydro must file with the Board for approval, **at least ninety (90) days prior to commencing construction**, an updated Project-specific Construction Environmental Protection Plan (CEPP) which includes:

- a) all environmental protection, mitigation and monitoring measures and commitments, as set out in its Application, draft CEPP, or otherwise agreed to in its subsequent filings during both the Manitoba Clean Environment Commission hearing process and the Board's EH-001-2017 proceeding, and including any criteria that will be used to implement those measures;
- b) any updates from outstanding pre-construction surveys;
- c) the following plans:
 - i) clearing management plan
 - ii) blasting plan
 - iii) erosion protection and sediment control plan
 - iv) golden-winged warbler habitat management plan
 - v) cultural and resource heritage protection plan
 - vi) navigation and navigation safety plan (see Condition 9)
 - vii) waste and recycling management plan
 - viii) emergency preparedness and response plan (see Condition 14)
 - ix) rehabilitation and invasive species management plan
 - x) biosecurity management plan
 - xi) access management plan
 - xii) environmental monitoring plan
 - xiii) integrated vegetation management plan
- d) orthophoto maps of the Project footprint, which include the identification of environmental features, Manitoba Hydro's Environmentally Sensitive Sites, and mitigation measures to be applied; and,
- e) evidence and a summary of Manitoba Hydro's consultation with potentially affected persons, organizations, Indigenous communities, and federal and provincial authorities regarding the updated CEPP, including any concerns that were raised, steps that Manitoba Hydro has taken or will take to address those concerns, and/or explanations as to why no further action is required, if applicable.

11. Indigenous Knowledge Studies Report

Manitoba Hydro must file with the Board for approval, **at least sixty (60) days prior to commencing construction**, a report outlining a plan for completing outstanding Indigenous Knowledge studies. The report must include:

- a) a summary of the status of the Indigenous Knowledge studies undertaken for the Project, including group-specific studies or planned supplemental surveys;
- b) a description of how Manitoba Hydro has considered and addressed information from any Indigenous Knowledge studies that it did not report on during the Board's EH-001-2017 proceeding;
- c) a description of any outstanding concerns raised by potentially-affected Indigenous communities regarding potential effects of the Project on the current use of lands and resources for traditional purposes, including a description of how these concerns have been or will be addressed by Manitoba Hydro;
- d) a summary of any outstanding Indigenous Knowledge studies or follow-up activities that will not be completed prior to commencing construction, including an estimated completion date and an explanation as to why these will not be completed prior to construction, if applicable;
- e) a description of how Manitoba Hydro has already identified, or will identify, any potentially-affected traditional land use sites or resources if the outstanding studies will not be completed prior to construction; and,
- f) a description of how Manitoba Hydro has revised its CEPP as a result of the Indigenous Knowledge studies or follow-up activities. At the same time as this report is filed with the Board, Manitoba Hydro must send a copy to each of the Indigenous communities included in consultation activities.

12. Reliability, Safety, and Security of IPLs

Manitoba Hydro must:

- a) ensure that the new Dorsey IPL will operate within reliability limits of its nominal design voltage of 500 kV AC;
- b) comply with the provisions of the Board Order MO-036-2012 electric reliability;
- c) file with Board a list of reliability standards applicable to the Project, at least sixty (60) days prior to commencement of construction;
- d) report to the Board any event involving electrical contact between energized IPL components and terrain, vegetation, structures, vehicles, animals or people within forty-eight (48) hours of such event occurring; and,
- e) file with Board within sixty (60) days after occurrence of a reportable event under b) or d), a written report that must include:
 - i) the reasons why the deviation occurred;
 - ii) analysis of potential negative implications of the deviation; and,

- iii) mitigation strategies for the implications identified and when the mitigation was or will be implemented.

13. Design and Interconnection Compliance

Manitoba Hydro must file with the Board for approval, **at least sixty (60) days prior to commencing construction**, a report confirming that the design of facilities, construction plan, and planned operations comply with the following:

- a) With the new Dorsey IPL and with the Project alterations in place, Manitoba Hydro may export up to 3058 MW of power to the U.S. and import up to 1473 MW of power from the U.S. over all of its international power lines without prior notification to any Canadian utility.
- b) Confirmation that SaskPower and the Ontario Independent Electric System Operator have reviewed the impact of both steady state and transient operation under the full set of permutations and combinations of availability of the Dorsey IPL, Riel IPL and Glenboro IPL after the Project is in service, and confirmation that none of the reviewed operating scenarios will impose unacceptable operating conditions upon the Saskatchewan or Ontario Provincial electric systems.

14. Construction Emergency Response Plan

Manitoba Hydro must file with the Board, **at least forty-five (45) days prior to commencing construction**, a Construction Emergency Response Plan for the Project that contains:

- a) a response plan for spills of fuels and fluids associated with construction;
- b) a response plan for medical incidents that includes provision for 24-hour emergency transport to hospital;
- c) a plan for fire response and evacuation;
- d) a security plan; and,
- e) an emergency contact list and emergency notification plan for government and response agencies and communities (including Indigenous and Métis) adjacent to the right-of-way and/or impacted by work sites.

15. Commitments Tracking Table

Manitoba Hydro must:

- a) file with the Board and post on its website, **at least thirty (30) days prior to commencing construction**, a commitments tracking table listing all commitments it made in its application and otherwise agreed to during questioning or in its related submissions in the Board's EH-001-2017 proceeding, as well as commitments from the Clean Environment Commission hearing process that are of federal interest, and that includes references to:
 - i) the document in which each commitment appears (for example, the application, responses to information requests, hearing transcripts, permit requirements, condition filings, or other document);

- ii) the accountable lead for implementing each commitment; and,
 - iii) the estimated timeline associated with the fulfillment of each commitment;
- b) file with the Board, at the following times, an updated commitments tracking table:
 - i) **within ninety (90) days after the Certificate is issued;** and,
 - ii) **at least thirty (30) days prior to commencing construction;**
- c) update the status of the commitments and file those updates with the Board, **on a monthly basis starting ninety (90) days after the Certificate date until commencing operations, and quarterly during operations until all commitments are satisfied (except those that involve filings for the Project's operational life);**
- d) Post on its website, the same information required by b) and c), within the same indicated timeframes; and,
- e) maintain at each of its construction offices:
 - i) the relevant environmental portion of the commitments tracking table listing all of Manitoba Hydro's regulatory commitments, including those described in its application and subsequent filings, and conditions from permits, authorizations, and approvals it has received;
 - ii) copies of any permits, authorizations, and approvals for the Project issued by federal, provincial, or other permitting authorities that include environmental conditions or site-specific mitigation or monitoring; and,
 - iii) copies of any subsequent variances to any permits, authorizations, and approvals in e) ii).

16. Heritage Resources

Manitoba Hydro must file with the Board, **at least thirty (30) days prior to commencing construction:**

- a) confirmation, signed by an officer of the company, that it has obtained all of the required archaeological and heritage resource permits and clearances from the Manitoba Historic Resources Branch;
- b) a description of how Manitoba Hydro will meet conditions and respond to comments and recommendations contained in the permits and clearances referred to in a); and,
- c) a description of how Manitoba Hydro has incorporated additional mitigation measures, as applicable, into its CEPP as a result of conditions or recommendations referred to in b).

17. Landowner Advisory Committee Plan

Manitoba Hydro must file with the Board, **at least thirty (30) days prior to commencing construction**, a plan for developing a Landowner Advisory Committee (LAC) for the Project. The plan must include:

- a) a summary of how potentially-affected landowners and/or their representative organizations were consulted, including a description of the design of the consultation and activities undertaken;
- b) a summary of the results of consultation, in terms of input from the landowners, including whether or not there is any interest from landowners in forming a LAC; and,
- c) if there is interest in forming a LAC, a description of the scope of activities that will be undertaken, in consultation with the LAC, during construction and operation of the Project, including but not limited to:
 - i) the standard mitigation measures to be implemented by Manitoba Hydro during construction to protect landowner interests and reduce effects to agricultural activities;
 - ii) measures to be implemented when site-specific issues arise during construction; and,
 - iii) third party monitors, including the activities and geographic locations where third-party monitoring have been proposed.

During construction and prior to commencing operations

18. Operations Safety Manuals

Manitoba Hydro must file with the Board, **at least ninety (90) days prior to commencing operations**:

- a) safety manuals related to operations activities for the Project that address routine operation procedures, activities, and public safety issues that might be encountered during the IPL operations; and,
- b) an outline of the safety training program to be implemented for Project operations.

19. Operations and Maintenance Manual

Manitoba Hydro must file with the Board, **at least sixty (60) days prior to the commencing operations**, an Operations and Maintenance Manual for the Project. The manual must require Manitoba Hydro to conduct documented audits of its records and inspections of the Manitoba Hydro electrical system and right-of-way to confirm company conformity to the manual's requirements. The manual must also include a schedule or procedure for its yearly review and update, as appropriate, to remain current with regulatory requirements and accepted industry practice. The manual, and the programs and procedures on Manitoba Hydro's records as required by the manual, must be made available to the Board for periodic review, upon request. The manual must also include:

- a) the type of maintenance followed by Manitoba Hydro;
- b) maintenance schedules according to the selected maintenance practice;
- c) operational procedures for steady state and transient conditions;
- d) a public awareness program for the life of the Project that:
 - i) promotes public awareness of ongoing hazards associated with the Project; and,
 - ii) provides contact numbers for the public to report issues and concerns;
- e) training requirements for personnel implementing the manual; and,
- f) the maintenance and operations records that will be produced during operations, including during the performance of maintenance tasks and routine inspections.

20. Construction Progress Reports

Manitoba Hydro must file with the Board **monthly**, during construction, construction progress reports for the Project that include:

- a) a summary of the Project's construction;
- b) a summary of the safety, security, or environmental concerns encountered;
- c) details of each incident of environmental non-compliance; and,
- d) details of the adaptive management applied to achieve resolution of each non-compliance.

21. Issues Tracking

Manitoba Hydro must create and maintain records that chronologically track complaints by Indigenous communities, landowners, and municipal and regional governments relating to the Project, beginning with the commencement of construction and continuing for five years after the commencement of operations. The records must be retained for five years after the commencement of operations. The complaint tracking records must include:

- a) the date the complaint was received;
- b) the form in which the complaint was received (for example, telephone, mail, email, or other communication methods that may evolve over time);
- c) a detailed description of the complaint;
- d) the date and summary of all subsequent telephone calls, visits, correspondence, site monitoring/inspections, follow-up reports and other related documentation;
- e) updated contact information for all persons involved in the complaint; and,
- f) any further actions to be taken or an explanation why no further action is required.

Manitoba Hydro must maintain these records for audit purposes and make them available to the Board upon request. Manitoba Hydro must make available to the complainant, upon request, the records related to the specific complaint(s) that the affected party has made to Manitoba Hydro.

22. Crown land Offset Measures Plan

Manitoba Hydro must file with the Board, **30 days prior to commencing operations**, a Crown Land Offset Measures Plan (the Plan) that outlines how permanent loss of crown lands available for traditional use by Indigenous Peoples resulting from the Project will be offset or compensated for. The Plan must include:

- a) a description of site-specific details and maps showing the locations where Crown land is no longer available for traditional use as a result of Project activities at Dorsey Converter Station and the transmission tower locations, as well as any other locations;
- b) a list of the offset or compensation measures that will be implemented to address the permanent loss of crown lands identified in a) above;
- c) an explanation of the expected effectiveness of each offset measure described in b);
- d) the decision-making criteria for selecting specific offset measures that would be used and under what circumstances;
- e) a schedule indicating when measures will be implemented and the estimated completion date(s); and,
- f) summary of consultation by Manitoba Hydro with any impacted Indigenous communities and with relevant provincial and federal authorities regarding the Plan.

23. Post Construction Monitoring Reports

Manitoba Hydro must file with the Board, **on or before 31 January following the first year of Project operations and for a period of at least ten (10) years** after commencing operations, annual post-construction monitoring reports. These reports must include:

- a) a description of monitoring methods used;
- b) identification, including on a map or diagram, of any reclamation or other environmental issues which arose during construction or in the course of the previous year;
- c) a description of the valued components or issues that were assessed or monitored, as outlined in Manitoba Hydro's Environmental Monitoring Plan (see Condition 10);
- d) the monitoring results, including a comparison to measurable goals;
- e) an assessment of the effectiveness of the mitigation measures implemented and the accuracy the environmental assessment predictions;
- f) a description of any corrective actions taken, their observed success and current status; and,
- g) a schedule outlining when further corrective actions will be implemented or monitoring conducted to address any unresolved issues.

Notwithstanding the requirement for filing on or before 31 January above, if the Provincial Minister responsible for issuing a Provincial Licence to Manitoba Hydro does grant such a Licence, and such a Licence requires annual submission of post-construction monitoring reports, Manitoba Hydro may submit post-construction monitoring reports to the Board in accordance with any timing requirements set out in that Provincial Licence, provided that the submission of

the reports to the Board commences within the first year of operations and occurs annually for ten (10) years.

After commencing operations

24. Compliance Reporting

Manitoba Hydro must file with the Board, **within thirty (30) days after commencing operations**, confirmation, signed by an officer of the company, that the Project was completed and constructed in compliance with all applicable conditions in the Certificate. If compliance with any of the Board's conditions cannot be confirmed, the officer of the company must provide details as to why compliance cannot be confirmed. The filing required by this condition must include a statement confirming that the signatory to the filing is an officer of the company.

25. As-built Drawings

Manitoba Hydro must file with the Board, **within sixty (60) days after commencing operations**, as-built drawings of structures and major equipment identifying the location and configuration of the new Dorsey IPL, altered Riel IPL, and altered Glenboro IPL facilities, and including:

- a) the termination structure at Dorsey substation;
- b) transmission structures from Dorsey substation to the international border;
- c) existing Riel IPL structures that will be incorporated into the new Dorsey IPL;
- d) any transition structures linking the new Dorsey IPL segments with the old Riel IPL segment;
- e) Bipole III crossing structures and conductor elevations;
- f) configurations and elevations at all locations where the new Dorsey IPL crosses existing high-voltage transmission lines;
- g) typical right-of-way cross-sections for both self-supporting and guyed structures; and,
- h) right-of-way cross-sections of the structures for the segment through which the new Dorsey IPL runs parallel with the Riel IPL and/or any other high-voltage transmission lines and any other major assets comprising the new Dorsey IPL facilities.

26. Wetland Offset Measures Plan

Manitoba Hydro must file with the Board, **within ninety (90) days of commencing operation of the Project**, a Wetland Offset Measures Plan outlines how permanent loss to wetlands resulting from the Project will be offset or compensated for. This plan must include:

- a) A description of site-specific details and maps showing the locations of permanent wetland loss as a result of Project activities at Dorsey Converter Station and the transmission tower locations, as well as any other locations where wetlands were affected by the Project;

- b) An explanation of how wetland function will be measured during the post-construction monitoring program, and any resulting accidental permanent loss to wetlands quantified and reported to the Board as part of Condition 23;
- c) A list of the offset or compensation measures that will be implemented to address permanent loss of wetlands as identified in a) and b) above;
- d) An explanation of the expected effectiveness of each offset measure described in c) and the relative value of each offset measure towards achieving the offset;
- e) The decision-making criteria for selecting specific offset measures and offset ratios would be used under what circumstances;
- f) A schedule indicating when measures will be implemented and estimated completion date(s); and,
- g) Evidence and summary of consultation with provincial and federal authorities and any non-governmental expert bodies regarding the plan.

27. Conductors

Manitoba Hydro shall design and construct the Project in accordance with its application or as otherwise agreed to in its related submissions such that:

- a) The transmission towers shall support one set of triple conductor bundles for each of the three phases suspended from insulators.
- b) Each of the nine sub conductors shall be aluminum conductor steel reinforced (ACSR) type with the following specifications:
 - i) Type: 1192.55 MCM 45/7 aluminum to steel stranding ACSR, code name "Bunting";
 - ii) Diameter 33 mm;
 - iii) Bundle spacing: 460 mm; and,
 - iv) Steel Shield Wire: Size 10 (11 mm) Steel - 7 Strand Grade 1300.

28. Annual Filing Requirements

Manitoba Hydro must file with the Board, **prior to 31 January after commencing Project operation, and by that date on an annual basis thereafter for the life of the Project:**

- a) confirmation that Manitoba Hydro is still the owner and operator of the Project;
- b) Manitoba Hydro's current contact information, including:
 - i) corporate headquarters' street and mailing addresses;
 - ii) phone number;
 - iii) fax number;
 - iv) email address;
 - v) the name and job title of an officer of the company for the Board to serve documents on, as required; and,

- vi) the name and job title of a secondary contact at Manitoba Hydro;
- c) a filing that complies with the provisions of the Board's General Order MO-036-2012 for Electricity Reliability Standards;
- d) an updated commitments tracking table as per Condition 15; and,
- e) confirmation that no changes were made to Manitoba Hydro's compliance program, safety manual, or operations and maintenance manual or, if changes have been made, provide a rationale and description of the change(s), if not already provided to the Board.