

Manitoba-Minnesota
Transmission Project DRAFT
Scoping Document

DRAFT

DRAFT

November 21, 2014

Table of Contents

ABBREVIATIONS..... I

1.0 INTRODUCTION1.1

1.1 BACKGROUND 1.1

1.2 PROJECT OVERVIEW..... 1.2

1.3 THE PROPONENT..... 1.2

1.4 SCOPING DOCUMENT PURPOSE..... 1.3

2.0 REGULATORY AND POLICY FRAMEWORK2.1

2.1 FEDERAL 2.1

2.1.1 National Energy Board Act, R.S.C., 1985, c. N-7..... 2.1

2.1.2 Canadian Environmental Assessment Act, 2012, S.C. 2012, c. 19, s. 52..... 2.1

2.2 PROVINCIAL..... 2.2

2.2.1 The Environment Act, C.C.S.M. c. E125 2.2

3.0 SCOPE OF THE PROJECT.....3.1

3.1 GENERAL 3.1

3.2 PROJECT COMPONENT OVERVIEW 3.3

3.2.1 Southern Loop Transmission Corridor 3.3

3.2.2 500-kV Transmission Line from Southern Loop Transmission Corridor – US Border 3.3

3.2.3 Modifications at Dorsey Converter Station 3.7

3.2.4 Modifications at Riel Converter Station..... 3.7

3.2.5 Modifications at Glenboro Station..... 3.7

3.3 PROJECT DESCRIPTION..... 3.7

3.3.1 Planning 3.8

3.3.2 Site Preparation 3.8

3.3.3 Construction..... 3.9

3.3.4 Operation and Maintenance..... 3.10

3.3.5 Decommissioning 3.10

4.0 SCOPE OF THE ASSESSMENT4.1

5.0 ENVIRONMENTAL ASSESSMENT PUBLIC ENGAGEMENT PROCESS.....5.1

6.0 FIRST NATION AND METIS ENGAGEMENT.....6.2

6.1 TRADITIONAL LAND AND RESOURCE USE..... 6.1

7.0 ROUTE SELECTION.....7.1

8.0 ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING8.1

8.1 ELEMENTS OF THE BIOPHYSICAL ENVIRONMENT..... 8.1

8.1.1 Atmospheric Environment..... 8.1

8.1.2 Groundwater Resources..... 8.1

MANITOBA-MINNESOTA TRANSMISSION PROJECT DRAFT SCOPING DOCUMENT

| | | |
|-------------|--|-------------|
| 8.1.3 | Aquatic Environment | 8.1 |
| 8.1.4 | Geology and Terrain | 8.2 |
| 8.1.5 | Vegetation and Wetlands..... | 8.2 |
| 8.1.6 | Wildlife | 8.2 |
| 8.2 | ELEMENTS OF THE SOCIO-ECONOMIC ENVIRONMENT | 8.2 |
| 8.2.1 | Traditional Land and Resource Use | 8.2 |
| 8.2.2 | Heritage Resources | 8.3 |
| 8.2.3 | Agriculture | 8.3 |
| 8.2.4 | Land and Resource Use..... | 8.3 |
| 8.2.5 | Infrastructure and Services..... | 8.4 |
| 8.2.6 | Employment and Economy | 8.4 |
| 8.2.7 | Property and Residential Development..... | 8.4 |
| 8.2.8 | Aesthetics, Human Health and Public Safety..... | 8.5 |
| 9.0 | ENVIRONMENTAL ASSESSMENT METHODS | 9.1 |
| 9.1 | OVERVIEW OF APPROACH | 9.1 |
| 9.2 | SELECTION OF VALUED COMPONENTS | 9.1 |
| 9.3 | PROJECT INTERACTIONS WITH THE VALUED COMPONENTS | 9.1 |
| 9.4 | IDENTIFICATION OF ASSESSMENT BOUNDARIES | 9.2 |
| 9.5 | EXISTING CONDITIONS..... | 9.2 |
| 9.6 | DESCRIPTION AND ANALYSIS OF PROJECT ENVIRONMENTAL EFFECTS..... | 9.2 |
| 9.7 | MITIGATION OF PROJECT ENVIRONMENTAL EFFECTS..... | 9.2 |
| 9.8 | CHARACTERIZATION OF RESIDUAL PROJECT ENVIRONMENTAL EFFECTS..... | 9.2 |
| 9.9 | ASSESSMENT OF CUMULATIVE ENVIRONMENTAL EFFECTS | 9.2 |
| 9.10 | DETERMINATION OF THE SIGNIFICANCE OF RESIDUAL ENVIRONMENTAL EFFECTS..... | 9.2 |
| 9.11 | ACCIDENTS, MALFUNCTIONS AND UNPLANNED EVENTS..... | 9.2 |
| 9.12 | EFFECTS OF THE ENVIRONMENT ON THE PROJECT | 9.2 |
| 10.0 | SUSTAINABLE DEVELOPMENT | 10.1 |
| 11.0 | FOLLOW-UP AND MONITORING | 11.1 |
| 12.0 | REFERENCES..... | 12.1 |

LIST OF APPENDICES

| | | |
|-------------------|--|----------|
| APPENDIX A | ORDER IN COUNCIL NO. 00386/2013 | 1 |
|-------------------|--|----------|

MANITOBA-MINNESOTA TRANSMISSION PROJECT DRAFT SCOPING DOCUMENT

November 26, 2014

Abbreviations

| | |
|-----------------|--|
| AC | Alternating Current |
| ACSR | Aluminum Core Steel Reinforced |
| CEAA, 2012 | <i>Canadian Environmental Assessment Act, 2012</i> , S.C. 2012, c. 19, s. 52 |
| CH ₄ | Methane |
| CO ₂ | Carbon Dioxide |
| CSA | Canadian Standards Association |
| D604B | Dorsey to Blackberry Transmission Line |
| EnvPP | Environmental Protection Plan |
| EIS | Environmental Impact Statement / Environmental and Socio-economic Assessment |
| ESEA | <i>The Endangered Species and Ecosystems Act</i> , C.C.S.M. c. E111 |
| EPRI | Electric Power Research Institute |
| GIS | Geographic Information System |
| GNTL | Great Northern Transmission Line |
| GTC | Georgia Transmission Corporation |
| KV | Kilovolt |
| IPL | International Power Line |
| MCWS | Manitoba Conservation and Water Stewardship |
| MMF | Manitoba Metis Federation |
| NEB | National Energy Board |
| NFAT | Needs For and Alternatives To |
| PEP | Public Engagement Program |
| PUB | Public Utilities Board |
| ROW | <i>Right-of-way</i> |
| SARA | <i>Species at Risk Act</i> , S.C. 2002, c. 29 |
| SOCC | Species of Conservation Concern |
| VCs | Valued Components |

MANITOBA-MINNESOTA TRANSMISSION PROJECT DRAFT SCOPING DOCUMENT

Introduction
November 26, 2014

1.0 Introduction

Manitoba Hydro is proposing to construct and operate a 500 kilovolt (kV) alternating current (AC) international transmission (i.e., power) line in southeastern Manitoba that includes upgrades to three associated transmission stations. In Canada the project is called the Manitoba-Minnesota Transmission Project (the "Project").

In accordance with Manitoba Order In Council 472 / 2013 issued pursuant to Section 107 of *The Public Utilities Board Act*, C.C.S.M. c. P280, the Public Utilities Board conducted a Needs For and Alternatives To (NFAT) review of a preferred development plan proposed by Manitoba Hydro. This development plan included the construction of a 500-kV international power line (IPL). The PUB's report was provided to the Province in June 2014. Based on the PUB's recommendations, Manitoba Hydro is proceeding with the IPL (Manitoba-Minnesota Transmission Project).

Manitoba Hydro expects to file an Environmental Impact Statement (EIS) for the Project with the National Energy Board (NEB), as part of its application and with Manitoba Conservation and Water Stewardship (MCWS). Subject to regulatory approvals, the projected in-service date for the Project is mid-2020. The estimated cost of the Project is \$350 million. This scoping document will provide an outline of information to be included in the EIS.

1.1 BACKGROUND

Electricity use in Manitoba is projected to grow over the next two decades requiring new sources of electricity that will be needed to supply the province by 2023. To meet this need, Manitoba Hydro is continuing to invest in hydro generation. Manitoba Hydro has identified a development plan that ensures an adequate supply of electricity is available to meet all firm domestic load requirements. The recently approved Keeyask Generation Project will result in an initial surplus of power being available for export. The Project will support future export power sales and current electricity sale commitments.

The Project is required to:

- Export power to the United States based on current power sales agreements;
- Improve reliability and import capacity in emergency and drought situations;
- Increase access to markets in the United States.

The line will increase transmission capacity between Manitoba and U.S. markets, creating sales revenue and enhancing reliability of supply.

MANITOBA-MINNESOTA TRANSMISSION PROJECT DRAFT SCOPING DOCUMENT

Introduction
November 26, 2014

1.2 PROJECT OVERVIEW

The Project includes construction of a 500-kV AC IPL in southeastern Manitoba and associated terminal equipment within the Dorsey Converter Station, The Project also includes upgrades within the Dorsey and Riel Converter Stations, and modification of terminal facilities of the Glenboro IPL. The proposed 500 kV transmission line route will:

- originate at the Dorsey Converter Station (located near Rosser, Manitoba, northwest of Winnipeg);
- travel south around Winnipeg along what is known as the Southern Loop Transmission Corridor;
- continue south to a Manitoba-Minnesota border crossing south of Piney, Manitoba;
- connect to Minnesota Power's Great Northern Transmission Line (GNTL).

The GNTL is to be constructed by Minnesota Power in the United States and will terminate at a new station called Iron Range adjacent to the existing Blackberry Station located northwest of Duluth, Minnesota near Grand Rapids. The GNTL is not considered part of the Project.

For the transmission line to be compatible with the existing system, the Project includes modifications to both Riel Converter Station and Dorsey Converter Stations. Although distant from the proposed power line, modifications to the Glenboro IPL within the Glenboro Station will also be required, including extending the current switch yard and installing additional equipment.

1.3 THE PROPONENT

Manitoba Hydro is a Crown Corporation and Manitoba's major energy utility. The Corporation is governed by The Manitoba Hydro Electric Board.

Manitoba Hydro's mandate, as outlined in Section 2 of *The Manitoba Hydro Act*, C.C.S.M. c.H190 is to:

" ...provide for the continuance of a supply of power adequate for the needs of the province, and to engage in and to promote economy and efficiency in the development, generation, transmission, distribution, supply and end-use of power and, in addition are:

- *To provide and market products, services and expertise related to the development, generation, transmission, distribution, supply and end-use of power, within and outside the province; and*
- *To market and supply power to persons outside the province on terms and conditions acceptable to the board."*

MANITOBA-MINNESOTA TRANSMISSION PROJECT DRAFT SCOPING DOCUMENT

Introduction
November 26, 2014

1.4 SCOPING DOCUMENT PURPOSE

The purpose of this Scoping Document is to identify for MCWS .The NEB and the public the scope of information and analysis planned in preparation of the EIS for the Project. The purpose is also to provide an opportunity for public and regulator input into the proposed scope of the EIS. Approval is being sought from MCWS for this draft scoping document that will form the guidelines for conducting the environmental assessment of the Project.

DRAFT

MANITOBA-MINNESOTA TRANSMISSION PROJECT DRAFT SCOPING DOCUMENT

Regulatory and Policy Framework
November 26, 2014

2.0 Regulatory and Policy Framework

The following is an overview of the regulatory and policy framework for the Project.

2.1 FEDERAL

2.1.1 National Energy Board Act, R.S.C., 1985, c. N-7

The responsibility for regulating the construction and operation of IPLs rests with the NEB pursuant to the *National Energy Board Act*, R.S.C., 1985, c. N-7. Pursuant to Section 58.1 of the Act, authorization is required to construct or operate a section or part of an IPL. The National Energy Board Electricity Regulations SOR/97-130 outlines information to be provided by applicants for permits for the construction and operation of IPLs, including an environmental assessment report. Notwithstanding federal jurisdiction over IPLs, Sections 58.17 and 58.2 of the Act allow for the application of provincial law relating to environmental assessment provided an Order in Council is issued by the government of the province where the IPL is located.

On November 6, 2013, the Province of Manitoba issued Order in Council No. 00386/2013 (Appendix A) under the authority of Sections 58.17 and 58.2 of the *National Energy Board Act*, R.S.C., 1985, c. N-7. The Order in Council designates The Minister of Conservation and Water Stewardship as the provincial regulatory agency for the proposed IPL.

NEB Permit EP-196, issued on March 5, 2002 for the Glenboro international power line, requires Manitoba Hydro to obtain NEB approval for any changes to the Glenboro international power line.

2.1.2 Canadian Environmental Assessment Act, 2012, S.C. 2012, c. 19, s. 52

The construction, operation and decommissioning of a new electrical transmission line with a voltage of 345 kV or more and that requires a total of 75 km or more of new right of way is considered a Designated Project pursuant to the Regulation Designating Physical Activities SOR/2012-147 under the *Canadian Environmental Assessment Act, 2012*, S.C. 2012, c. 19, s. 52 (CEAA, 2012).

Pursuant to Section 15(b) of CEAA, 2012, the NEB is a Responsible Authority for designated projects regulated under the *National Energy Board Act*, R.S.C., 1985, c. N-7, and will be the authority responsible for the federal review under CEAA, 2012.

Other relevant federal legislation will be reviewed as part of the Project environmental and socio-economic assessment.

MANITOBA-MINNESOTA TRANSMISSION PROJECT DRAFT SCOPING DOCUMENT

Regulatory and Policy Framework
November 26, 2014

2.2 PROVINCIAL

2.2.1 The Environment Act, C.C.S.M. c. E125

The construction of electrical transmission lines greater than 230 kV and associated facilities is considered a Class 3 Development pursuant to the Classes of Development Regulation 164/88, of *The Environment Act*, CCSM c. E125 and is subject to licensing under Section 12 of this Act. The Licensing Procedures Regulation 163/88 of this Act outlines information requirements for proposals under the Act.

Other relevant legislation will be reviewed as part of the Project EIS.

DRAFT

MANITOBA-MINNESOTA TRANSMISSION PROJECT DRAFT SCOPING DOCUMENT

Scope of the Project
November 26, 2014

3.0 Scope of the Project

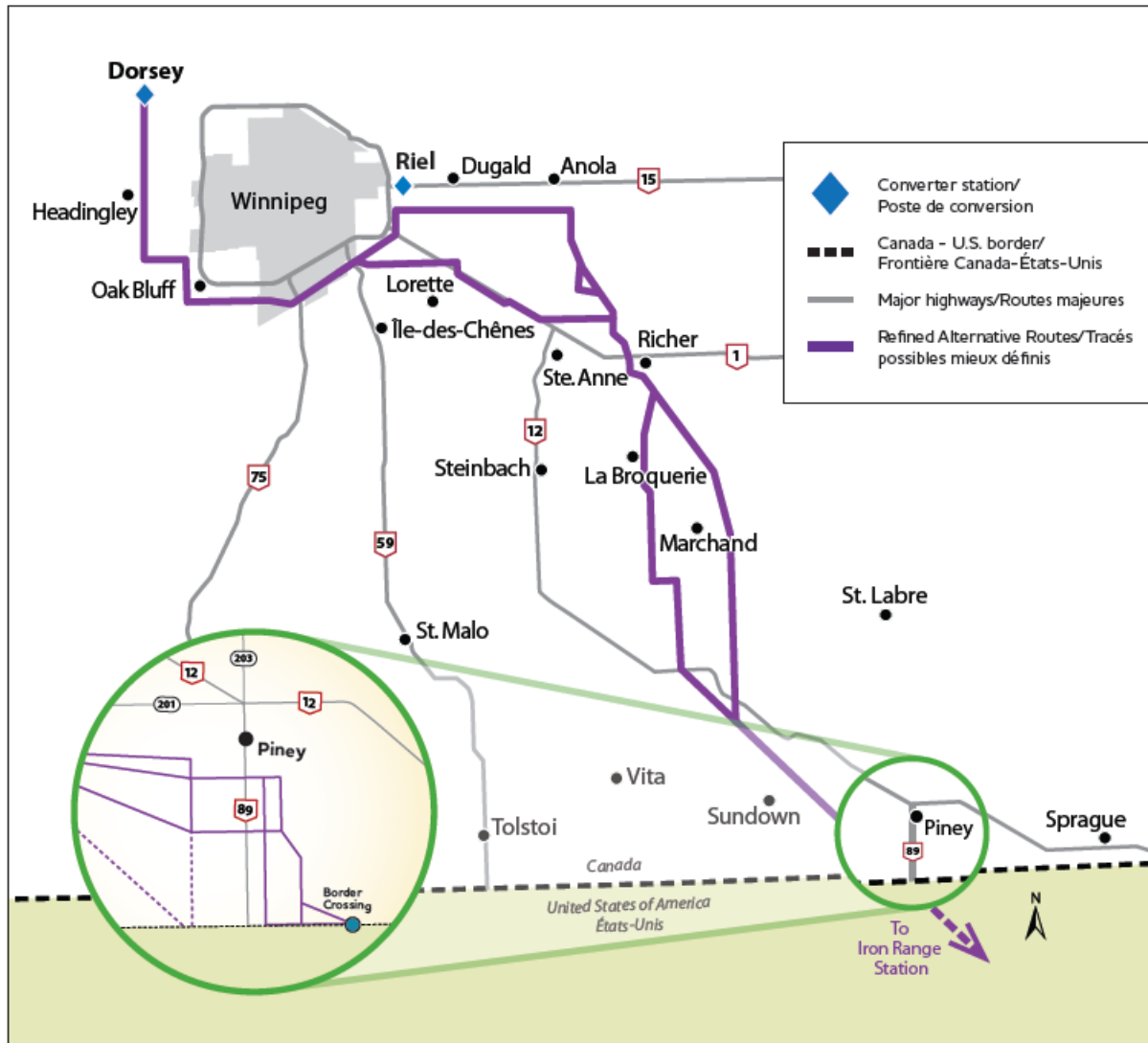
3.1 GENERAL

The scope of the Project consists of site preparation, construction, operation and maintenance of the following Project components (Map 3.1a and b):

- 500 kV AC transmission line between the Dorsey Converter Station and the Manitoba-Minnesota border. The technical name of the line is Dorsey to Iron Range (D604I) Transmission Line. Iron Range Station is the name of a new 500-230 kV station being built in Minnesota adjacent to the existing Blackberry 230 kV Station.
- For the transmission line to be compatible and operate efficiently and reliably within the existing system, the following modifications will need to be made to the Manitoba network:
 - Dorsey Converter Station expansion, upgrades and relocation of an existing 230-kV intraprovincial line at the proposed 500 kV line exit;
 - Riel Converter Station upgrades within the existing fenced compound;
 - Modifications to Glenboro Station, including extending the current switch yard and installing additional equipment. Several towers on existing intraprovincial lines will be relocated to accommodate the modifications.

MANITOBA-MINNESOTA TRANSMISSION PROJECT DRAFT SCOPING DOCUMENT

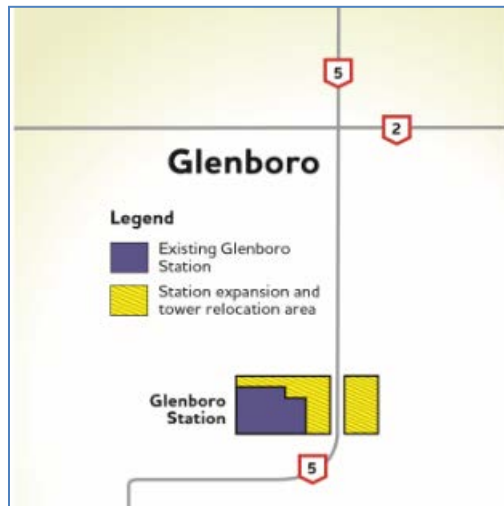
Scope of the Project
November 26, 2014



Map 3.1a: Refined alternative routes presented as part of the Public Engagement process (Round 2). Not representative of the final route. For description purpose only.

MANITOBA-MINNESOTA TRANSMISSION PROJECT DRAFT SCOPING DOCUMENT

Scope of the Project
November 26, 2014



Map 3.1b: Glenboro Station location and expansion

3.2 PROJECT COMPONENT OVERVIEW

The sections below provide an overview of the major components of the Project based on preliminary design information.

3.2.1 Southern Loop Transmission Corridor

The Southern Loop Transmission Corridor is a designated transmission line corridor that is currently only partially developed. This corridor will be used to route the transmission line from Dorsey Converter Station to an exit point in this corridor where it will turn south. The corridor is approximately 68 km long and connects Dorsey Converter Station to Riel Converter Station around the south end of the City of Winnipeg. The transmission line for the Project may not use this entire corridor length, depending on preferred route selection.

3.2.2 500-kV Transmission Line from Southern Loop Transmission Corridor – US Border

From the point at which the line exits the Southern Loop Transmission Corridor, the 500-kV transmission line (Dorsey to Iron Range - D604I) will proceed south-east to the U.S Border crossing.

3.2.2.1 Transmission Line Design Details

The transmission structures will support three sets of conductor bundles suspended by insulators to the transmission line steel lattice towers. The conductors will likely be aluminum core steel reinforced (ACSR) type material. Two skywires will also be strung along the tops of the towers to

MANITOBA-MINNESOTA TRANSMISSION PROJECT DRAFT SCOPING DOCUMENT

Scope of the Project
November 26, 2014

provide lightning protection. One of the skywires will be equipped as an Optical Ground Wire (OPGW). The OPGW is designed to provide system protection and communication for the D604I transmission line.

Interconnected glass disc insulators will be used between the conductor bundles and the steel lattice towers to prevent arcing or grounding. Conductor to ground distances at maximum loading will meet or exceed the Canadian Standards Association (CSA) standards for minimum ground clearance (C22.3 No. 1 "Overhead Systems").

The right-of-way (ROW) requirement will be approximately 80 m (260 ft) for self-supporting towers and 100 m (330 ft) for guyed towers, based on current design. In agricultural areas, this transmission line will be constructed primarily of self-supporting lattice steel structures (Figure 3.1) and in non-agricultural areas guyed lattice steel structures (Figure 3.2). Tower structures will be placed approximately 400 - 500 m apart, depending on site conditions. The typical 500-kV structure height is expected to range between 50 and 60 m, depending on terrain conditions and environmental sensitivities.

DRAFT

MANITOBA-MINNESOTA TRANSMISSION PROJECT DRAFT SCOPING DOCUMENT

Scope of the Project
November 26, 2014

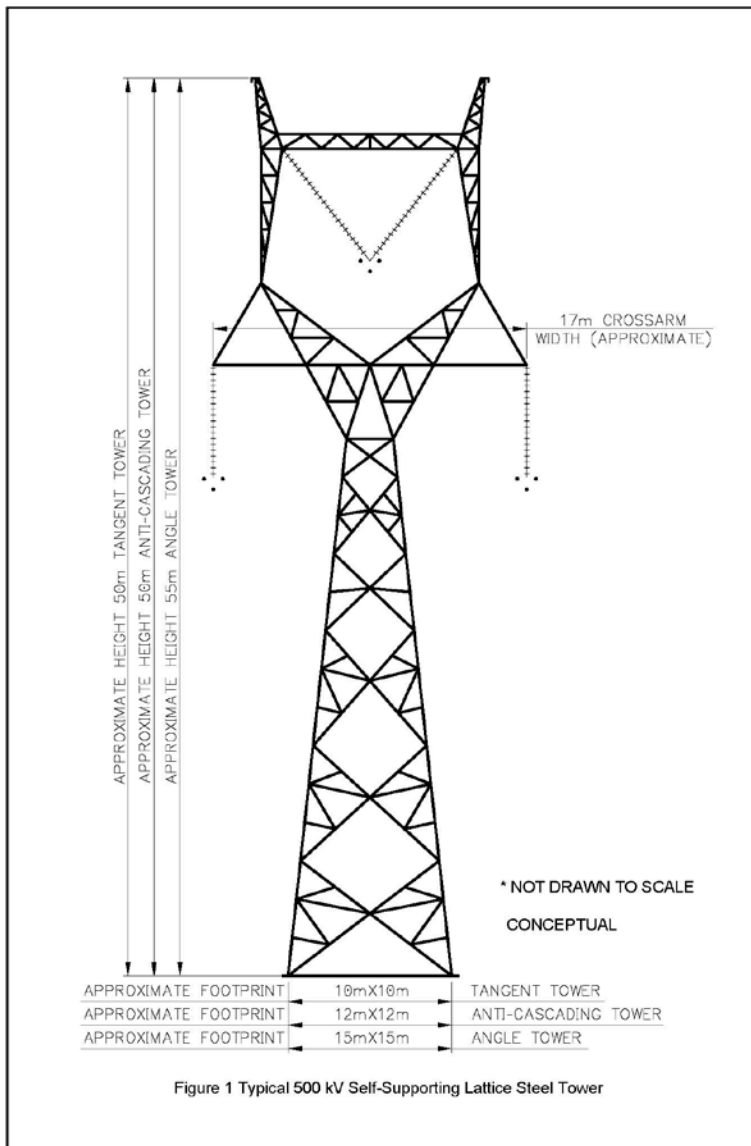


Figure 3.1 Anticipated self-supporting steel lattice tower design

MANITOBA-MINNESOTA TRANSMISSION PROJECT DRAFT SCOPING DOCUMENT

Scope of the Project
November 26, 2014

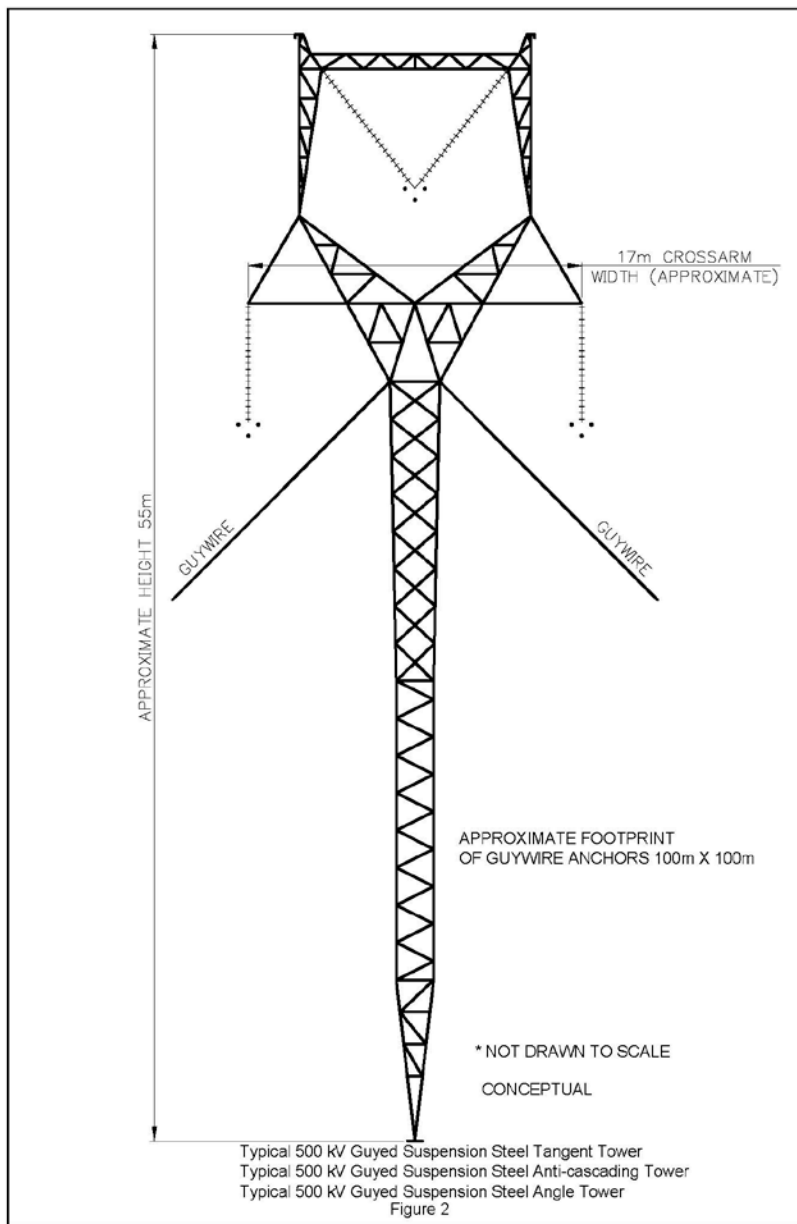


Figure 3.2 Anticipated guyed tower design

MANITOBA-MINNESOTA TRANSMISSION PROJECT DRAFT SCOPING DOCUMENT

Scope of the Project
November 26, 2014

3.2.3 Modifications at Dorsey Converter Station

To connect the new 500-kV transmission line (D604I) to the existing electrical network, modifications will be required at the Dorsey Converter Station, north-west of Winnipeg. The modifications include the addition of 500-kV breakers, switches, instrument transformers, capacitors and reactors to permit termination of the new line. The converter station will be expanded to the west on Manitoba Hydro owned property to accommodate the new line termination. An existing transmission line entering the converter station will need to be relocated to accommodate the Project line

3.2.4 Modifications at Riel Converter Station

The Riel Converter Station site is located east of Winnipeg in the Rural Municipality of Springfield. The site is presently under development for the previously approved and licensed Riel Reliability Improvement Initiative and the construction of the Riel Converter Station that is required for the Bipole III complex. There will be site modifications and additional electrical construction as a result of the Project for system integration and reliability requirements. The modifications will be contained within the current fenced area of the switchyard portion of the converter station and will include the addition of circuit breakers and switches, instrument transformer, surge arresters, reactors and capacitor banks. Neither the existing Riel IPL nor its terminal facilities will be modified.

3.2.5 Modifications at Glenboro Station

The modifications at Glenboro Station involve the installation of two phase-shifters to prevent loop flow and mitigate potential congestion on parallel lines. This requires the Glenboro Station to be expanded to the east of the existing 230-kV switchyard onto private land. This will also require new access into the site and relocation of several lines entering the station. There are no new transmission line terminations to this station as a result of the Project. The new phase shifters will modify the terminal facilities of the existing Glenboro IPL.

3.3 PROJECT DESCRIPTION

The project description in the EIS will include a single-line diagram identifying the facilities that constitute the Project. Maps of the preferred route and international border crossing point, and approximate sites of proposed ancillary facilities and related undertakings will be provided where possible, including conductors, station components, access roads (including temporary and permanent bridges, if any), construction camps, if any, temporary workspaces and any temporary or permanent facilities to be constructed by others which are required to accommodate the Project. Further details of the Project are described below.

MANITOBA-MINNESOTA TRANSMISSION PROJECT DRAFT SCOPING DOCUMENT

Scope of the Project
November 26, 2014

3.3.1 Planning

The EIS will describe proposed planning details and will include, but not be limited to:

- Project component locations including a general description of the route and facility locations;
- Project activities and stages of development;
- The expected in-service date;
- Construction and operation schedules.

3.3.2 Site Preparation

The EIS will describe expected actions and activities associated with site investigation and preparation for Project components (i.e., transmission lines and station modifications). The site preparation project phase will include the following, but not be limited to:

- Activities required to prepare project footprint sites, including transmission line rights-of-way, station upgrade and expansion sites and temporary work areas, such as marshalling yards.
- Activities included in site preparation include establishing access routes, surveying, lands to be cleared for the transmission line rights-of-way and infrastructure, and stripping and grading activities for expanded station sites, where required.
- Additional items requiring management during site preparation include site drainage for station expansions and disposal of cleared vegetation from ROW clearing.

MANITOBA-MINNESOTA TRANSMISSION PROJECT DRAFT SCOPING DOCUMENT

Scope of the Project
November 26, 2014

3.3.3 Construction

The anticipated construction approach, methods, materials, locations and schedule will be presented in the EIS, based on the most current information available. This will include the following, but not be limited to:

- Identification and description of the final preferred transmission line route and transmission line preliminary design details, including foundation and anchor types, conductor types, structure types, right-of-way widths and locations where it varies;
- Clearing methods and equipment to be used for clearing transmission line right-of-way and access roads, and debris disposal methods for cleared vegetation;
- Materials and equipment to be used in the construction of the transmission lines and station modifications;
- Installation, operation and removal of any temporary structures or facilities, including fuel storage facilities;
- Nature and estimated volume of hazardous materials including fuels proposed for use during construction of the Project. This will include: transportation, storage and dispensing methods associated with spill prevention plans, containment and clean-up plans, and equipment and personnel involved;
- Location and description of waterbody crossing methods;
- Estimation and disposition of the volume of wood (merchantable and non-merchantable) requiring clearing within the right-of-way, including clearing methods;
- Estimation of the amount of greenhouse gases (GHGs), and common air contaminants that could be released as a result of Project construction;
- Identification of waste disposal and recycling site locations and capacities for domestic and construction waste management;
- Estimation of the construction workforce numbers and composition and any accommodations required;
- Measures to protect the health and safety of workers and the general public in and around construction areas;
- Description of construction decommissioning methods for temporary construction facilities and/or end use of temporary access infrastructure and site reclamation plans;
- Proposed construction schedule including sequencing of each major Project component.

MANITOBA-MINNESOTA TRANSMISSION PROJECT DRAFT SCOPING DOCUMENT

Scope of the Project
November 26, 2014

3.3.4 Operation and Maintenance

Details related to operation and maintenance will include, but not limited to:

- Description of maintenance practices for transmission lines and permanent access roads (e.g., vegetation management, dust control, de-icing);
- Description of electromagnetic fields and noise associated with transmission line and station operation;
- Estimation of the operation and maintenance workforce size and general schedule of activities;
- Measures proposed to protect the health and safety of workers and the general public in and around construction areas;
- Types of equipment and materials proposed for use during operation and maintenance activities;
- Waste materials (type, management, disposal methods) produced by operation and maintenance activities;
- Estimation of the amount of GHGs, and common air contaminants that could be released as a result of Project operation and maintenance.

3.3.5 Decommissioning

The EIS will provide a description of plans for decommissioning temporary infrastructure or facilities related to the construction of the Project.

MANITOBA-MINNESOTA TRANSMISSION PROJECT DRAFT SCOPING DOCUMENT

Scope of the Assessment
November 26, 2014

4.0 Scope of the Assessment

The scope of the assessment will meet the provincial requirements of Manitoba Conservation and Water Stewardship and the federal requirements of the National Energy Board.

The EIS will be prepared in reference to the following legislation, regulations and guidelines:

- *Environment Act Proposal Report Guidelines* (Manitoba Conservation and Water Stewardship, 2014).
- The requirements for a Class 3 Development pursuant to Section 12 of *The Environment Act*, C.C.S.M. c. E125.
- The information requirements of Section 1(1) of the Licensing Procedures Regulation 163/88 of *The Environment Act*, C.C.S.M. c. E125.
- *NEB Filing Manual* (National Energy Board, 2014) and *NEB Electricity Filing Manual* (National Energy Board, 2013).
- The information requirements of Section 5 of the National Energy Board Electricity Regulations SOR/97-130 of the *National Energy Board Act*, R.S.C., 1985, c. N-7.
- The factors to be considered under Section 19 of the *Canadian Environmental Assessment Act, 2012*, S.C. 2012, c. 19, s. 52.

The scope of the assessment will address the following factors:

- Review of the environmental and socio-economic setting;
- The rationale used to identify environmental and socio-economic issues;
- The methodology used for effects analysis;
- Other alternative routes that were examined and the rationale for selecting the preferred route;
- Traditional and local knowledge;
- Potential effects of the Project including, but not limited to:
 - Potential effects on biophysical elements;
 - Potential effects on socio-economic elements; Potential effects on land and resource use;

MANITOBA-MINNESOTA TRANSMISSION PROJECT DRAFT SCOPING DOCUMENT

Scope of the Assessment
November 26, 2014

- Potential effects on heritage resources;
 - Potential effects of the Project on First Nation and Métis and traditional land uses;
 - Potential effects to human health and safety including potential effects from the release of pollutants, if any.
- Accidents and malfunctions that may occur, including their potential environmental effects.
 - Mitigation measures and risk mitigation practices that are technically and economically feasible that would mitigate any significant adverse environmental effects of the Project, including mitigation incorporated into Project planning and design.
 - Identification and quantification (where possible) of residual environmental effects remaining after mitigation including the significance of the residual effects.
 - The follow-up program for the Project including inspection and monitoring.
 - Any residual cumulative environmental effects that are likely to result from the Project in combination with other projects and physical activities that have been or will be carried out.
 - Any change to the Project that may be caused by the environment.

MANITOBA-MINNESOTA TRANSMISSION PROJECT DRAFT SCOPING DOCUMENT

Environmental Assessment Public Engagement Process
November 26, 2014

5.0 Environmental Assessment Public Engagement Process

A project-specific Public Engagement Process (PEP) will be implemented. The PEP will seek input from First Nations, Metis, local municipalities, stakeholder groups, government departments, local landowners and the general public during the route selection and environmental assessment process.

The Public engagement process was designed using guidance from the *NEB Electricity Filing Manual*, CEAA Public Participation guide, an understanding of the International Association of Public Participations spectrum of Public Participation, recent feedback and commentary from provincial regulators as well as past project experience.

Goals for public engagement for the Project are:

- Share project information.
- Obtain feedback for use in the route selection and environmental assessment processes.
- Gather and understand local interests and concerns.
- Integrate interests and concerns into the routing and assessment process.
- Review potential mitigation measures and consider suggested changes.

These goals will be met by:

- Involving the public throughout route selection and environmental assessment stages.
- Providing clear, timely, and relevant information and responses.
- Delivering a public engagement process that is adaptive and inclusive.
- Informing the public as to how their feedback influenced the project.
- Documenting and reporting on feedback received.

A variety of engagement methods will be used to inform the public and interested groups of project activities and provide opportunities to participate in the route selection and environmental and socio-economic assessment. These methods include but are not limited to open houses, meetings, workshops, a dedicated toll free project information telephone line, dedicated email address and opportunities through Manitoba Hydro's website.

Public engagement is coordinated with the routing methodology to provide information and gather feedback at key stages of route selection. A three-round PEP is planned for input into

MANITOBA-MINNESOTA TRANSMISSION PROJECT DRAFT SCOPING DOCUMENT

First Nation and Metis Engagement
November 26, 2014

route selection and environmental assessment and has been partially executed to date. The anticipated focus of each round of engagement is as follows:

- **Round 1 – Alternative Routes and Border Crossings (Fall 2013):** presented alternative routes and three potential border crossings at the Manitoba/Minnesota border. Feedback received assisted in the evaluation of the routes presented and selecting a preferred border crossing for the project.
- **Round 2 – Refined Alternative Routes and Border Crossing (Spring 2014):** a preferred border crossing and refined alternative routes were shared with the public for feedback.
- **Round 3 – Preferred Route (Early 2015):** a preferred route for the transmission line will be presented in this round based on environmental assessment and input received during previous rounds. Further feedback will be gathered to consider any final adjustments to the route or additional mitigation prior to filing the Project's EIS for regulatory approval.

The EIS will provide a description of the PEP developed for the Project, including plans for future post-licensing engagement and follow-up throughout the construction and operation of the Project. The results of the PEP will also be described in the EIS. Comments received from the public or any interested party and any formal response provided as part of the program will be documented, to the extent possible, and described in the EIS. The EIS will also describe how the information obtained from the PEP was used in identification of issues and the routing and assessment processes.

6.0 First Nation and Metis Engagement

First Nation and Metis engagement conducted by Manitoba Hydro with respect to this Project will aim to achieve the same goals as the overall Public Engagement Process for the Project. This engagement process is separate from any Crown-Aboriginal consultation process to be initiated by the Government with First Nations, Metis and other Aboriginal communities to inform any Crown decisions about the project. It should be noted that the Government of Manitoba, not Manitoba Hydro, is responsible for conducting the Crown Aboriginal consultation.

Manitoba Hydro will seek to engage the Manitoba Metis Federation (MMF) as well as First Nations who are located in the vicinity of the project, or those who have indicated an interest in the Project, though not initially engaged. The level and methods of engagement will depend on the response from each First Nation and the MMF. These engagement methods will be adaptive where possible to meet the specific context of each group with a view to achieve meaningful participation.

MANITOBA-MINNESOTA TRANSMISSION PROJECT DRAFT SCOPING DOCUMENT

First Nation and Metis Engagement
November 26, 2014

6.1 TRADITIONAL LAND AND RESOURCE USE

The Traditional Land and Resource Use methodology was based on guidance from the *NEB Electricity Filing Manual*, feedback and commentary from provincial regulators as well as past project experience.

The EIS will characterize the traditional setting and baseline of current First Nations and Metis land and resource use from primary and secondary sources, where available. Primary sources are self-directed Traditional Knowledge studies initiated by the Project. First Nations, who indicated an interest in the Project to Manitoba Hydro and the MMF, have been invited to submit proposals to undertake self-directed TK studies. Traditional Knowledge that is shared prior to the filing of the EIS will be incorporated into, and reflected in, the assessment. Information that is shared after the filing of the EIS will be incorporated into the Environmental Protection Program, where appropriate. Secondary sources include existing traditional land and resource use studies not initiated by the Project (subject to approvals by relevant communities to utilize the studies for this purpose), environmental and socio-economic assessments from other projects in the assessment area, publically available government documents and academic studies.

The EIS will include:

- A description of engagement of the Metis and individual First Nations, as well as a record of and the rationale for, those who have been included in the engagement process.
- Confirmation that First Nations and Metis who participated in collecting traditional use information have had the opportunity to review the information and proposed mitigation.
- A description of how traditional knowledge was employed throughout the assessment.

MANITOBA-MINNESOTA TRANSMISSION PROJECT DRAFT SCOPING DOCUMENT

Route Selection
November 26, 2014

7.0 Route Selection

The selection of a preferred route will use a methodology based on the Electric Power Research Institute (EPRI) – Georgia Transmission Corporation (GTC) Overhead Electric Transmission Line Siting Methodology (EPRI and GTC 2006). The objective of the methodology is to produce objective, quantifiable and consistent site selection decisions using a Geographic Information System (GIS)-based siting model.

A description of the routing process will be included and will address (but not necessarily be limited to) the following:

- A description of the overall process and methodology including a description of the three perspectives used in route comparisons (built, natural and engineering).
- A description of how feedback from stakeholders informed route selection criteria.
- A description of routing decisions made at each stage of routing and the criteria and weightings of criteria used in decision making.
- Maps detailing the alternative route options considered in each stage of the route determination process.

DRAFT

8.0 Environmental and Socio-economic Setting

The EIS will describe the environmental and socio-economic setting. The setting will be described in quantitative (where possible) and qualitative terms. The description will reflect local and Traditional Knowledge available for the assessment area. Interrelationships between elements will be described.

8.1 ELEMENTS OF THE BIOPHYSICAL ENVIRONMENT

8.1.1 Atmospheric Environment

The atmospheric environment will be described and may include:

- a) Prevailing climate and meteorological conditions, based on nearby climate monitoring stations.
- b) Extreme weather potential, including areas prone to flooding, wildfire, tornadoes, and ice storms.
- c) Greenhouse gas (CO₂, CH₄) emissions relative to applicable targets.
- d) Ambient air quality and major existing emission sources.

8.1.2 Groundwater Resources

Groundwater resources will be described which may include:

- a) Regional groundwater conditions.
- b) Existing quantity and type of groundwater uses.
- c) Potential groundwater pollution hazard areas.
- d) Potential areas of artesian conditions and springs.

8.1.3 Aquatic Environment

The aquatic environment will be described which may include:

- a) Local and regional surface water bodies (lakes, rivers).
- b) Fish and aquatic species, known or suspected to be located in the assessment area.
- c) Fish habitat classification at major stream crossings

MANITOBA-MINNESOTA TRANSMISSION PROJECT DRAFT SCOPING DOCUMENT

Environmental and Socio-economic Setting
November 26, 2014

- d) Aquatic species of conservation concern (SOCC) and their habitat if affected by the project.

8.1.4 Geology and Terrain

The geology and terrain will be described which may include:

- a) Physiography including elevations, relief, unique terrain features, etc.
- b) Bedrock geology
- c) Surficial geology and landforms

8.1.5 Vegetation and Wetlands

Vegetation and wetlands will be described which may include:

- a) Composition, distribution and abundance of vegetation species and communities (Land cover classification and ecological classification)
- b) Wetland classification, community type, conservation status, abundance, and distribution.
- c) Species of Conservation Concern and their habitat, with a focus on S1 to S3 Provincial Rank, ESEA and SARA species or communities.

8.1.6 Wildlife

Wildlife will be described which may include:

- a) Wildlife species of ecological, economic or human importance known or suspected to be located in the assessment area and their habitat.
- b) Important or sensitive habitat types or areas.
- c) Areas that support biological diversity, such as parks, bird sanctuaries, wildlife management areas, and ecological reserves.
- d) Existing level and patterns of habitat alteration (e.g., fragmentation).
- e) SOCC and their habitat, with a focus on S1 to S3 Provincial Rank, ESEA and SARA species.

8.2 ELEMENTS OF THE SOCIO-ECONOMIC ENVIRONMENT

8.2.1 Traditional Land and Resource Use

Traditional land and resource use will be described which may include:

MANITOBA-MINNESOTA TRANSMISSION PROJECT DRAFT SCOPING DOCUMENT

Environmental and Socio-economic Setting
November 26, 2014

- a) A description of how lands and resources in the assessment area are currently used by First Nations and Metis for traditional purposes.
- b) Identification of First Nations and Metis currently carrying out traditional land and resource use activities.
- c) Sacred or ceremonial sites identified by First Nations or Metis and as permitted for description in the EIS.

8.2.2 Heritage Resources

Heritage resources will be described which may include:

- a) Cultural heritage sites.
- b) Historic and archaeological resources.
- c) Paleontological resources.
- d) Summary of any previous heritage resource assessments completed in the assessment area, if available.

8.2.3 Agriculture

The agricultural environment will be described which may include:

- a) General soil characteristics.
- b) Soil types in the Project vicinity that are highly susceptible to wind and water erosion; soil compaction; and loss of structure and tilth.
- c) Soil classification, including soil agricultural capability rating, based on the Canada Land Inventory Soil Capability Classification for Agriculture.
- d) Any known or suspected soil contamination in the Project vicinity that could be disturbed as a result of the Project.
- e) Agricultural activities, including annual and perennial cropping, livestock production, pasture and specialty agricultural operations.

8.2.4 Land and Resource Use

Land and resource use will be described which may include:

- a) Present and potential timber resource harvest and utilization (commercial and domestic).

MANITOBA-MINNESOTA TRANSMISSION PROJECT DRAFT SCOPING DOCUMENT

Environmental and Socio-economic Setting
November 26, 2014

- b) Existing and proposed commercial resource use, including lodges and outfitters, mining, quarrying and forestry.
- c) Unique sites or special features, including any candidate sites for ecological or cultural heritage preservation and conservation.
- d) Protected areas, including existing and proposed parks, ecological reserves, wildlife management areas, conservation agreement lands and habitat enhancement projects (e.g., prairie restoration areas).
- e) Tourism and recreational areas, including campgrounds, trails (e.g., hiking, ATV, snowmobile) and day use areas.
- f) Navigable waterways.
- g) Hunting, trapping and fishing areas.

8.2.5 Infrastructure and Services

Infrastructure and services will be described which may include:

- a) Community services, including accommodations (e.g., campgrounds), health care services, police, fire-fighting, ambulance, water and waste disposal.
- b) Infrastructure, including railways, roads, highways and their traffic usage levels; major pipelines; existing transmission lines; aviation facilities; communication infrastructure.

8.2.6 Employment and Economy

Employment and economy will be described which may include:

- a) Regional and local economy.
- b) Existing population distribution and demographics including labour force, employment, income, education, etc.
- c) Local business capacity.

8.2.7 Property and Residential Development

Property and residential development will be described which may include:

- a) Land tenure and property ownership patterns (i.e., types of land survey, Crown [including Crown lessees] versus private land holdings).

MANITOBA-MINNESOTA TRANSMISSION PROJECT DRAFT SCOPING DOCUMENT

Environmental and Socio-economic Setting
November 26, 2014

- b) Existing rural residential and subdivision development and areas for potential future development.
- c) Development plan zoning, subdivisions and development controls.

8.2.8 Aesthetics, Human Health and Public Safety

Aesthetic, human health and public safety components will be described which may include:

- a) Current visual landscape (aesthetics) including existing transmission lines and communication infrastructure.
- b) Community health.
- c) Existing public safety and human health risks.

DRAFT

9.0 Environmental Assessment Methods

9.1 OVERVIEW OF APPROACH

An EIS will be completed to meet the combined requirements of *CEAA, 2012*, the *National Energy Board Act, R.S.C., 1985, c. N-7* and *The Environment Act, C.C.S.M. c. E125*.

This EIS will focus on Valued Components (VCs). VCs comprise biophysical and socio-economic elements of particular value or interest to regulators and other parties. The assessment of project-related and cumulative environmental effects will use tables and matrices to document details of the assessment. Residual Project-related environmental effects will be characterized using specific criteria (e.g., direction, magnitude, geographic extent, duration, frequency, and reversibility). The significance of the Project-related environmental effects will then be determined based on pre-defined criteria or thresholds for each VC (see Section 9.10). If there is an identified potential for the adverse residual environmental effects of the Project to interact cumulatively with the adverse residual environmental effects of other projects or physical activities, these cumulative adverse environmental effects will be assessed.

The assessment approach to be used in the EIS is summarized in the sections below.

9.2 SELECTION OF VALUED COMPONENTS

VCs will be selected in consideration of components that:

- Represent a broad environmental, ecological or human environment component that might be affected by the Project; or
- Are a part of the heritage of Aboriginal peoples¹ or a part of their current use of lands for traditional purposes; or
- Are of scientific, historical, archaeological importance; or,
- Have been identified as important issues or concerns by regulators, stakeholders and public or in other effects assessments in the region.

Selected VCs will be refined based on public and regulatory review feedback on this Scoping Document. Justification for VC selections will be provided in the EIS.

9.3 PROJECT INTERACTIONS WITH THE VALUED COMPONENTS

A matrix will be used to identify potential interactions between the environment (i.e., VCs) and Project activities.

¹ Indian (First Nations), Inuit and Métis peoples of Canada per subsection 35(2) of the *Constitution Act, 1982*.

MANITOBA-MINNESOTA TRANSMISSION PROJECT DRAFT SCOPING DOCUMENT

Environmental Assessment Methods
November 26, 2014

Table A-1 in the *NEB Filing Manual* (Circumstances and Interactions Requiring Detailed Biophysical and Socio-Economic Information) will be used as a guide in determining if there is likely an interaction between the Project and biophysical or socio-economic elements of the environment (NEB 2014).

9.4 IDENTIFICATION OF ASSESSMENT BOUNDARIES

To focus the assessment, spatial and temporal boundaries will be defined for each VC. There may also be administrative boundaries that affect the quantity or quality of the information available for the assessment.

9.5 EXISTING CONDITIONS

The existing conditions for each VC will be described including:

- The status and characteristics of the VC within its defined spatial and temporal boundaries for the assessment.
- Information from past research conducted in the region.
- Traditional land and resource use as informed by traditional knowledge (to the extent available).
- Knowledge gained from the collection of baseline data from data holders and through literature review, interviews, quantitative and qualitative analyses (where available), and field programs carried out as part of the EIS.

9.6 DESCRIPTION AND ANALYSIS OF PROJECT ENVIRONMENTAL EFFECTS

The assessment of each potential project environmental effect begins with a description of the mechanisms whereby specific project activities and actions could result in an environmental effect. Available data will be analyzed to quantify (where possible) and qualify the potential effects of project interactions with each VC.

9.7 MITIGATION OF PROJECT ENVIRONMENTAL EFFECTS

Mitigation measures that will avoid, reduce or eliminate an environmental effect will be described.

9.8 CHARACTERIZATION OF RESIDUAL PROJECT ENVIRONMENTAL EFFECTS

Residual environmental effects (i.e., the environmental effects that remain after mitigation has been applied) will be described for each VC. The characteristics of residual environmental effects to be described include:

- Direction
- Magnitude

MANITOBA-MINNESOTA TRANSMISSION PROJECT DRAFT SCOPING DOCUMENT

Environmental Assessment Methods
November 26, 2014

- Geographic Extent
- Frequency
- Duration
- Reversibility
- Ecological/Socioeconomic Context

Where possible, the magnitude, geographic extent and duration will be quantified. Where these characteristics cannot be expressed quantitatively, at minimum, they will be described using qualitative terms that are defined specifically for the VC or environmental effect.

9.9 ASSESSMENT OF CUMULATIVE ENVIRONMENTAL EFFECTS

Residual adverse environmental effects will be assessed for their potential to act cumulatively with the adverse effects of other projects and physical activities that have been or will be carried out. The residual project environmental effects that are likely to interact cumulatively with effects of other projects and physical activities will be identified.

The cumulative environmental effects will be assessed following the same format as used for project effects: namely, description and analysis of cumulative effects, mitigation of cumulative effects, and characterization of residual cumulative effects. The assessment will be carried through for each environmental effect that interacts with those of other projects and physical activities past, present, or foreseeable future.

9.10 DETERMINATION OF THE SIGNIFICANCE OF RESIDUAL ENVIRONMENTAL EFFECTS

Threshold criteria or standards for determining the significance of environmental effects will be identified for each VC quantitatively (where possible) or qualitatively, beyond which a residual environmental project effect or cumulative effect would be considered significant. These are generally selected in consideration of provincial and federal regulatory requirements, standards, objectives, guidelines that are applicable to the VC, or other relevant planning objectives. Thresholds or standards will be developed in consideration of guidance, past practice, and the specific conditions of the receiving environment.

For cumulative environmental effects, the determination of significance will be made for the overall cumulative environmental effect and the contribution of the Project to the cumulative environmental effect.

In cases where significant environmental effects are identified, the likelihood of their occurrence will be evaluated.

9.11 ACCIDENTS, MALFUNCTIONS AND UNPLANNED EVENTS

The potential for accidents, malfunctions and unplanned events will be assessed. Potential environmental effects on the VC will be assessed in a similar fashion to project environmental effects and mitigation measures prescribed. One or more scenarios for potential accidents,

MANITOBA-MINNESOTA TRANSMISSION PROJECT DRAFT SCOPING DOCUMENT

Environmental Assessment Methods
November 26, 2014

malfunctions or unplanned events will be developed and the potential effects for the scenario(s) will be assessed.

9.12 EFFECTS OF THE ENVIRONMENT ON THE PROJECT

Environmental effects that may occur as a result of the environment acting on the Project will be assessed. Potential environmental changes and hazards may include wind, severe precipitation, ice storms, flooding, forest fire, earthquakes and/or tornado. The influence that these environmental changes and hazards may have on the Project will be predicted and described.

DRAFT

Sustainable Development
November 26, 2014

10.0 Sustainable Development

The EIS will describe how principles of sustainable development have been incorporated into Project planning, design, construction and operation, with reference to the Principles and Guidelines of Sustainable Development (Schedules A and B) of *The Sustainable Development Act*, C.C.S.M. c. S270; Manitoba Hydro's Sustainable Development Policy; and Principles, and CEAA, 2012.

DRAFT

11.0 Follow-up and Monitoring

The need for follow-up and monitoring programs to verify the accuracy of environmental effects predictions and assess the effectiveness of mitigation measures will be evaluated. Follow-up and monitoring programs and associated reporting required at construction and operation stages of development will be recommended in the EIS.

The requirements of proposed follow-up and monitoring programs will be described for each VC or potential environmental effect, as appropriate, and may include monitoring, inspection, or surveillance. The EIS will include a statement of Manitoba Hydro's approach to environmental inspection of the Project during construction and operation. In addition, recommendations regarding independent third-party environmental auditing to assess whether commitments were met and to assess the accuracy of assumptions and predictions will be included in the EIS, as well as a description of public reporting plans.

Details of recommended follow-up and monitoring approach, including Contractor emergency response plan requirements, will be included in a project-specific draft EnvPP. These details will include identification of roles and responsibilities, description of inspection procedures and an approach to developing the project environmental and socio-economic monitoring plans. Plans for reporting and disseminating information regarding follow-up and monitoring activities will be included in the draft EnvPP.

The draft EnvPP will be submitted to Manitoba Conservation and Water Stewardship at the time of the EIS filing and subsequently with the NEB.

MANITOBA-MINNESOTA TRANSMISSION PROJECT DRAFT SCOPING DOCUMENT

References
November 26, 2014

12.0 References

Canadian Environmental Assessment Agency. 2008. Public Participation Guide: A guide for meaningful public participation in Environmental Assessments under the Canadian Environmental Assessment Act. EN106-80/2008E-PDF.

Electric Power Research Institute (EPRI) and Georgia Transmission Corporation (GTC). 2006. EPRI-GTC Overhead Electric Transmission Line Siting Methodology. EPRI, Palo Alto, CA, and Georgia Transmission Corporation, Tucker, GA: 2006: 1013080.

Manitoba Conservation and Water Stewardship. 2014. Environment Act Proposal Report Guidelines – Information Bulletin, February 2014. Available online at http://www.gov.mb.ca/conservation/eal/pubs/info_eap.pdf. Accessed March 1, 2014.

National Energy Board. 2013. Electricity Filing Manual, July 2013. Available online at <http://www.neb-one.gc.ca/clf-nsi/rpblctn/ctsndrgltn/rrggnmgpnb/lctrcty/lctrctyflngmnl-eng.pdf>. Accessed March 1, 2014.

National Energy Board. 2014. Filing Manual, including January 2014 revisions. <http://www.neb-one.gc.ca/clf-nsi/rpblctn/ctsndrgltn/flngmnl/flngmnl-eng.pdf>. Accessed April 15, 2014.

DRAFT

MANITOBA-MINNESOTA TRANSMISSION PROJECT DRAFT SCOPING DOCUMENT

Appendix A Order in Council No. 00386/2013
November 26, 2014

Appendix A Order in Council No. 00386/2013

DRAFT