



MANITOBA – MINNESOTA TRANSMISSION PROJECT
Environmental Impact Statement

INTRODUCTION

CHAPTER 1
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ABBREVIATIONS AND ACRONYMS

ATK	Aboriginal Traditional Knowledge
CEAA	<i>Canadian Environmental Assessment Act</i>
EIS	environmental impact statement
MMF	Manitoba Metis Federation
MMTP	Manitoba–Minnesota Transmission Project
NEB	National Energy Board
VCs	valued components

1 Introduction

1.1 Document Purpose

This environmental impact statement (EIS) for the Manitoba–Minnesota Transmission Project (MMTP, or the Project) was prepared in response to the Project Final Scoping Document, issued on June 24, 2015, by Manitoba Conservation and Water Stewardship’s Environmental Approvals Branch. The Final Scoping Document represents the guidelines for the EIS, based on public and regulatory review. The EIS is intended to meet the requirements of *The Environment Act* (C.C.S.M. c. E125), as well as relevant filing requirements under the *National Energy Board Act* (R.S.C. 1985, c. N-7) (NEB Act) and the *Canadian Environmental Assessment Act, 2012* (S.C.2012, c. 19, s. 52) (CEAA 2012). In light of this, the Scoping Document integrated the requirements of the Environment Act Proposal Report Guidelines, National Energy Board Electricity Regulations, S.O.R./97-130 and guidance for environmental and socio-economic elements in the NEB Electricity Filing Manual (Chapter 6), as well as CEAA 2012 and its applicable regulations and guidelines.

This EIS is based on more than five years of planning, routing and design work, involving extensive field studies and several rounds of engagement opportunities with First Nations and Metis, local landowners, local municipalities, stakeholder groups and government departments, through the Project’s First Nations and Metis and Public engagement processes. As a result, this EIS describes a Project that balances the concerns and sensitivities of the environment and potentially affected people to address the goals of ensuring an adequate, cost-effective, and reliable supply of electricity to meet the growing needs of Manitoba.

1.2 Project Setting

The environmental setting of the Project is a region in southern Manitoba that has been substantially affected by human development for more than 100 years. The changes to the landscape have been dominated by conversion of native prairie to agricultural lands, and accompanied by urban and rural settlements, public infrastructure, and various other land uses. The natural features of the landscape have gradually disappeared, and as such, many natural values have also been diminished or lost. These ecological changes are the consequence of numerous land and resource use decisions by many administrative jurisdictions and governments over a long period of time, often to advance economic opportunities to support a growing population.

As noted in the Government of Manitoba’s *Tomorrow Now–Manitoba’s Green Plan*:

“there is a need to manage Manitoba’s land and water sustainably to balance long-term economic prosperity, social equity and environmental well-being. This involves maintaining and protecting

existing critical areas and habitats necessary to sustain characteristics of the environment that are important to Manitobans.”

The concept of balancing environmental and socioeconomic values is a core component of the design and planning of this Project.

In an effort to align with resource management goals, the transmission line routing process integrated an understanding of the need to maintain critical areas and habitats supportive of priority resources. In addition, the routing process was influenced by socio-economic considerations such as zoning and development plans and the potential effect on future development within municipalities. Thus, by routing the transmission line in existing corridors for nearly half of its length, it is expected that cumulative effects resulting from the Project, in combination with past projects, may not be fully additive.

The purpose of this chapter is to:

- introduce the Project and Manitoba Hydro
- describe the setting of the Project
- outline the approach to the EIS
- provide an overview of the structure and contents of the EIS

1.3 Project Proponent

Established in 1961, Manitoba Hydro is a Crown corporation and the province’s major energy utility. The corporation serves electricity to 555,760 customers throughout the province, and natural gas to 272,228 customers in communities in southern parts of the province. As one of the largest integrated electricity and natural gas distribution utilities in Canada, Manitoba Hydro currently employs more than 6,500 people, has assets-in-service at original cost exceeding \$15 billion and annual revenues of more than \$2 billion. The corporation is administered by the Manitoba Hydro-Electric Board, appointed by the Lieutenant Governor in Council. Pursuant to section 16(1) of *The Manitoba Hydro Act* (C.C.S.M. c. H190), the primary activities of the Corporation surrounding the generating, transmitting, distributing, or supplying power are subject to approval by the Manitoba Lieutenant-Governor in Council.

Manitoba Hydro’s mission statement is:

“To provide for the continuance of a supply of energy to meet the needs of the province and to promote economy and efficiency in the development, generation, transmission, distribution, supply and end-use of energy.”

For more than 60 years, Manitoba Hydro’s projects have primarily focused on the development of renewable hydroelectric power, and have played a major role in the development of the provincial economy and the Province as a whole.

Manitoba Hydro's corporate vision is:

"To be recognized as a leading utility in North America with respect to safety, reliability, rates, customer satisfaction and environmental leadership."

Additional information can be found on the corporate website at <https://www.hydro.mb.ca/>.

1.3.1 Project Team

A list of key personnel from Manitoba Hydro and the consulting firms who worked on the environmental assessment of the Project can be found in the Executive Volume.

1.4 Approach

Manitoba Hydro reviewed comments received on EIS submissions for previous projects (*i.e.*, Wuskwatim Generating Station Project, Bipole III Transmission Project, Keeyask Generation Project). The format of this EIS, and the environmental assessment it documents, builds in improvements based on these comments, where possible, and every relevant chapter in the EIS includes a section summarizing learnings from previous assessments.

Some areas where these learnings have been leveraged include:

- the transmission line routing process
- the cumulative effects assessment process
- the process for selecting valued components (VCs)
- the process for applying and documenting Aboriginal Traditional Knowledge (ATK)
- the Public Engagement Process
- the development of a draft Environmental Protection Plan and an Access Management Plan

In addition, similar topics are grouped in the EIS to reduce redundancy.

Rather than amalgamating the cumulative effects into one section, these are discussed within each VC assessment and include historic (predisturbance) baseline information and thresholds, where possible.

The spatial boundaries are VC-centered rather than Project-centered. The VC selection process used a systematic, evidence-based process that was integrated into the stakeholder engagement process, and the overall number of VCs was reduced by grouping some broader topics.

Manitoba Hydro offered First Nations and the Manitoba Metis Federation (MMF) opportunities to conduct their own ATK studies. The outputs of this process are documented in the EIS, and how the ATK and stakeholder engagement information was used is explicitly highlighted in each chapter, where applicable. ATK reports are attached to the EIS in Volume 4, Appendix A.

As indicated, an effort has been made to avoid duplication/repetition and potential inconsistencies in the EIS. Rather than a core volume or response to EIS guidelines with a series of stand-alone discipline-specific volumes, the EIS consists of four volumes that walk the reader through each topic without repeating an assessment in a stand-alone volume. A Conclusions Chapter brings together information on all VCs and their assessment status. Attachments to this EIS are primarily technical data reports and not stand-alone environmental assessments. In addition, the draft Monitoring and Environmental Protection Plans are included as part of the EIS submission and final versions will integrate the input from public and regulatory review. A concordance table is included to outline how and where the EIS has considered the requirements of the Scoping Document, and relevant guidance documents mentioned previously.

Due to the overall size of the EIS, a decision was made to repeat a standard introductory section in most chapters, which provides information on aspects such as regulatory context and assessment scope and methodology. The intent is to assist those reviewers who may not read every chapter in the EIS.

1.5 Structure and Contents of the Environmental Impact Statement

After the Executive Volume, the EIS is organized into four volumes, consisting of:

- **Volume 1: Project Description, Public Engagement and Assessment Methods**
 - **Chapter 1: Introduction** – describes the purpose of the EIS, introduces Manitoba Hydro, and outlines where topics are addressed in the document
 - **Chapter 2: Project Description** – provides a detailed description of the Project and its components and activities, and an overview of the environmental regulatory requirements
 - **Chapter 3: Public Engagement Process** – describes the purpose, goals, objectives and methods of the public engagement process undertaken for the Project and how feedback has been incorporated into the environmental assessment and transmission line routing process
 - **Chapter 4: First Nation and Metis Engagement Process** – describes the principles and goals of the process, the scope and adaptable nature of the process, key concerns identified by First Nations, Metis and Aboriginal organizations, and outcomes resulting from the engagement process
 - **Chapter 5: Transmission Line Routing** – describes the approach, methods and decisions made in the routing process, including the selection of the border crossing, preferred route and final preferred route selection
 - **Chapter 6: Environmental and Socio-Economic Setting** – provides an overview of the environmental and socio-economic setting for the Project, with further elaboration provided in the various assessment chapters

- **Chapter 7: Assessment Methods** – describes the methods employed in undertaking the environmental assessment, including scoping the assessment, analysis of effects, and determining the significance of any Project or cumulative residual effects
- **Volume 2: Biophysical Effects Assessment**
 - **Chapter 8: Assessment of Potential Environmental Effects on Fish and Fish Habitat** – describes the methods employed in undertaking the fish and fish habitat assessment and describes the potential effects of the Project and cumulative effects assessment
 - **Chapter 9: Assessment of Potential Environmental Effects on Wildlife and Wildlife Habitat** – describes the methods employed in undertaking the wildlife and wildlife habitat assessment and describes the potential effects of the Project and cumulative effects assessment
 - **Chapter 10: Assessment of Potential Environmental Effects on Vegetation and Wetlands** – describes the methods employed in undertaking the vegetation and wetlands assessment and describes the potential effects of the Project and cumulative effects assessment
- **Volume 3: Socio-economic Effects Assessment**
 - **Chapter 11: Assessment of Potential Environmental Effects on Traditional Land and Resource Use** – describes the methods employed in undertaking the Traditional land and resource use assessment and describes the potential effects of the Project and cumulative effects assessment.
 - **Chapter 12: Assessment of Potential Environmental Effects on Heritage Resources** – describes the methods employed in undertaking the heritage resources assessment and describes the potential effects of the Project and cumulative effects assessment
 - **Chapter 13: Assessment of Potential Environmental Effects on Infrastructure and Services** – describes the methods employed in undertaking the infrastructure and services assessment and describes the potential effects of the Project and cumulative effects assessment
 - **Chapter 14: Assessment of Potential Environmental Effects on Employment and Economy** – describes the methods employed in undertaking the employment and economy assessment and describes the potential effects of the Project and cumulative effects assessment
 - **Chapter 15: Assessment of Potential Environmental Effects on Agriculture** – describes the methods employed in undertaking the agriculture assessment and describes the potential effects of the Project and cumulative effects assessment
 - **Chapter 16: Assessment of Potential Environmental Effects on Land and Resource Use** – describes the methods employed in undertaking the land and resource use assessment and describes the potential effects of the Project and cumulative effects assessment

- **Chapter 17: Assessment of Potential Environmental Effects on Visual Quality** – describes the methods employed and results in undertaking the visual quality assessment and describes the potential effects of the Project and cumulative effects assessment
- **Chapter 18: Assessment of Potential Environmental Effects on Human Health Risk** – describes the methods employed and results in undertaking the human health risk assessment and describes the potential effects of the Project and cumulative effects assessment
- **Chapter 19: Assessment of Potential Environmental Effects on Community Health and Well-being** – describes the methods employed in undertaking the community health and well-being assessment and describes the potential effects of the Project and cumulative effects assessment
- **Volume 4: Effects, Monitoring and Conclusions**
 - **Chapter 20: Effects of the Environment on the Project** – describes potential effects of the environment, including weather events, on the Project
 - **Chapter 21: Accidents, Malfunctions and Unplanned Events** – presents potential accident and malfunction scenarios and assesses their potential effects on the environment
 - **Chapter 22: Environmental Protection, Follow-up and Monitoring** – describes Manitoba Hydro’s Environmental Protection Program for the Project. This includes a draft Monitoring Plan, draft Construction Environmental Protection Plan, and a draft Construction Access Management Plan
 - **Chapter 23: Sustainable Development** – provides information demonstrating how the Project is consistent with the Provincial, Federal and Manitoba Hydro sustainable development principles and guidelines
 - **Chapter 24: Conclusions** – summarizes residual Project and cumulative effects and mitigation measures and provides a concluding summary of the effects assessment
 - **Appendix A: Aboriginal Traditional Knowledge Studies**
- **Biophysical Technical Data Reports**
 - Physical Environment
 - Terrain and Soils
 - Groundwater
 - Air
 - Noise
 - Historic and Future Climate Study
 - Greenhouse Gas Lifecycle Assessment

- Vegetation and Wetlands
- Wildlife and Wildlife Habitat
- Fish and Fish Habitat
- **Socio-Economic Technical Data Reports**
 - Public Engagement Process
 - Socio-Economic and Land Use
 - Heritage Resources
 - Traffic Impact Study
 - Economic Impact Assessment
 - Assessment of Land Usage for Hydro Towers
 - Research on Extremely Low Frequency Electric and Magnetic Fields From Alternating Current Transmission Lines – Summary Evaluation of the Evidence
 - Electric Field, Magnetic Field, Audible Noise and Radio Noise Calculations