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# 1.0 INTRODUCTION

## 1.1 PROJECT OVERVIEW

The purpose of the proposed Bipole III Transmission Project (hereinafter referred to as the “Project” or “Bipole III” or “Bipole III Project”) is to provide enhanced reliability to Manitoba Hydro’s system and to reduce the severity of the consequences of major outages.

The route for the transmission line component of the Project is located primarily on the west side of the Province of Manitoba. Manitoba Hydro began intensive studies of a “western” route in 2007 following a request from the Government of Manitoba. A copy of the Government’s written request is included as an appendix to Chapter 2 of this Environmental Impact Statement (“EIS”) (Appendix 2A). In response to the Government’s request, no further studies were conducted of an “east” side route and this EIS, accordingly, is of no value in weighing the impacts of a transmission line routed on the west side of the Province of Manitoba as against the impacts of a transmission line routed on the east side of the Province.

Approximately 70% of Manitoba’s hydroelectric generating capacity is delivered to southern Manitoba, where most of the demand for energy is, via the Bipole I and Bipole II high voltage direct current (HVdc) transmission lines.<sup>1</sup> Bipoles I and II share the same transmission corridor, through the Interlake region, over much of their length from northern Manitoba to a common terminus at the Dorsey Converter Station, northwest of Winnipeg. The existing transmission system is vulnerable to the risk of catastrophic outage of either (or both) Bipoles I and II in the Interlake corridor and/or at the Dorsey Converter Station due to unpredictable events, particularly severe weather. This vulnerability, combined with the significant consequences of prolonged, major outages, justifies a major initiative to reduce dependence on the Dorsey Converter Station and the existing HVdc Interlake transmission corridor.

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<sup>1</sup> HVdc (“High Voltage direct current”) means a current, or flow, of electrons that moves in one direction only. The current from batteries, such as those used in cars or in flashlights, is dc (“direct current”) but the voltage, or force, at which the current moves is modest in a battery. HVdc flows at a much higher voltage, usually at more than 100 kilovolts (kV). Electricity that is generated by directing water to flow through turbines results in a flow of electrons that reverses its direction many times every second. Electric current that reverses its direction at regular intervals is called alternating current (“ac”). A primary advantage of dc over ac is that the power loss over long distances is considerably less. The advantage of ac over dc is the ease of transforming voltages to levels that can be distributed to homes and businesses to power lights, appliances and other equipment.

The Project includes:

- A new converter station, the Keewatinoow Converter Station, to be located near the site of the potential, future Conawapa Generating Station on the Nelson River northwest of Gillam, Manitoba (See Map 1-1);
- A ground electrode site connected by a low voltage feeder line to the Keewatinoow Converter Station;
- New 230 kV transmission lines linking the Keewatinoow Converter Station to the northern ac collector system at the existing 230 kV switchyards at the Henday Converter Station and Long Spruce Generating Station;
- Modifications to the Henday Converter Station and the Long Spruce Generating Station to accommodate the new collector lines;
- The development of a new +/-500 kV<sup>2</sup> HVdc transmission line, approximately 1,384 km in length centred on a 66 m wide right-of-way, that will originate at the Keewatinoow Converter Station, follow a westerly route to southern Manitoba and terminate at a new converter station, the Riel Converter Station, immediately east of Winnipeg;
- The completion of the Riel Converter Station, development of the site for which is already underway pursuant to a separate license; and
- A ground electrode site connected by a low voltage feeder line to the Riel Converter Station.<sup>3</sup>

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<sup>2</sup> Volts are the unit of measurement of the electrical force which causes electrons to flow in a current. A kilovolt (“kV”) is equal to 1,000 volts. A 500 kV force is very large and is typical of the force required to move an electric current, dc or ac, over long distances, such as the roughly 900 kilometres from Manitoba Hydro’s generating stations on the Nelson River down Bipoles I and II to the Dorsey Converter Station northwest of Winnipeg. The electricity consumed in homes and businesses is driven by a much more modest force, a mere 120 volts of force. The inclusion of “+/-“ before “500 kV” reflects the fact that the proposed dc transmission line will consist of a pair of conductors, each at a high potential with respect to ground, in opposite polarity. Where a bipole is transmitting electricity at +/- 500 kV, the total voltage at any given moment is one million volts.

<sup>3</sup> For dc electricity to flow a complete circuit is required. In a bipolar transmission design, the circuit is formed through one pole of conductor cables being charged ‘negatively’ and one ‘positively’. By contrast, in a monopole design, current flows through a single pole of transmission conductors from one converter station to the other and the circuit is ‘completed’ by current flowing in the earth between the two stations which are each connected to the earth through earth, or “ground”, electrodes. In normal operation of Bipole III, there will be insignificant voltage carried from the Riel Converter Station or the Keewatinoow Converter Stations through their respective feeder line connections and ground electrodes. The primary purpose of the feeder lines and ground electrodes is to ensure that during emergency events an alternative “circuit” will exist for the dc electricity to flow. The dryer the soil conditions at a ground electrode site, the more resistance there will be on the return

Subject to receipt of the necessary Environment Act License, construction is planned to commence in the fall of 2012 with a projected in-service date of October 2017. A detailed explanation of the need for the Project is in Chapter 2 and a detailed description of the Project and its various parts is in Chapter 3 (Project Description).

## **1.2 PLANNING AND BALANCE**

The identification of the Project as the best solution to improve the reliability of Manitoba Hydro's system was the result of work done over many years by a number of engineers employed in the Transmission Business Unit of Manitoba Hydro in consultation with specialists in the field. The decision to proceed with the Project was a decision made by Manitoba Hydro's Board in September 2007. Once a decision to proceed with the Project was made by the Board, Manitoba Hydro's engineers, again with the advice and assistance of consulting specialists, commenced the detailed design work for towers, converter stations, the complex equipment to be installed in the converter stations, and the ground electrode sites. Simultaneously, Manitoba Hydro proceeded to develop, and carry out, an extensive program of public consultation about the Project, and commenced the many specialised bio-physical and socio-economic studies which were required for this EIS. The work of public consultation, and the subsequent review of what was learned through public consultation, and the production and review of specialized studies on biophysical and socio-economic topics was coordinated by a team of external consultants and Manitoba Hydro employees led by Manitoba Hydro. Most of the specialist reports were prepared by consultants, each of whom was expert in his/her respective field. As part of the assessment of the Project, Manitoba Hydro contributed its own expertise and experience, having constructed, operated and maintained in the last 60 years over 18,500 kilometres (km) of ac transmission lines from 33 kV to 500 kV, over 1,800 km of dc transmission lines and three converter stations.

Team work was essential throughout the work of design and environmental assessment and every significant conclusion required for design and environmental assessment came only after debate and analysis by the particular Manitoba Hydro staff and consultants whose particular skills and knowledge were relevant to whatever topic was under consideration.

Accordingly, the preparation of this EIS required the assembly and assessment of a wide variety of studies and opinions, some of them provided by specialists retained by

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path for dc current. Therefore, one of the important factors in siting a ground electrode is the normal moisture content of the soil.

Manitoba Hydro, some of them provided by citizens of Manitoba at public forums, some of them provided through meetings and contractual arrangements with aboriginal communities, First Nations and the Manitoba Metis Federation. Not surprisingly, on many aspects of the Project, there was no ready consensus on many important issues. Manitoba Hydro has attempted in this EIS to set out fairly the opinions given to it but the EIS, in the end, is Manitoba Hydro's "statement" about the Project and it reflects Manitoba Hydro's judgment after weighing opinions and evidence on the issues, from choice of project to meet the need for improved reliability to assessment of the effects of the Project on a host of bio-physical and environmental factors. Wherever practical, the opinions and concerns Manitoba Hydro heard through consultations and meetings were accommodated through the balancing of routing choices and the siting of facilities. However, the essence of balancing and compromise is that no one point of view can necessarily prevail.

## **1.3 MANITOBA HYDRO**

### **1.3.1 Mission, Vision and Goals**

Manitoba Hydro is a Crown Corporation and is owned by the Province of Manitoba. Manitoba Hydro's mandate is to supply power adequate for the needs of the Province of Manitoba and to promote economy and efficiency in the development, generation, transmission, distribution, supply and end-use of power. Manitoba Hydro generates, transmits and distributes electrical energy throughout the Province and is a distributor of natural gas within certain Manitoba communities. Further, one of Manitoba Hydro's mandates is to export energy not required for domestic use.

The affairs of Manitoba Hydro are administered by the Manitoba Hydro-Electric Board appointed by the Lieutenant-Governor in Council. The Board reports to the Minister responsible for *The Manitoba Hydro Act* who, in turn, reports to the Manitoba Legislative Assembly.

Manitoba Hydro currently serves more than 537,000 electricity customers throughout Manitoba and provides natural gas service to over 265,000 customers in various communities. Manitoba Hydro is one of the largest integrated electricity and natural gas distribution utilities in Canada. Manitoba Hydro's head office is located in Winnipeg.

Manitoba Hydro employs more than 6,200 people, has assets in excess of \$12.5 billion and annual revenues of more than \$1.7 billion (Manitoba Hydro 2011a). For 60 years Manitoba Hydro's projects, focused primarily on the development of renewable hydro-electric power, have played a major role in the development of the provincial economy

and the Province as a whole. From the 1950s, Manitoba Hydro has been a principal engine chosen by a succession of Provincial governments to open Manitoba's north for the benefit of all of its citizens. Manitoba Hydro and its staff are key elements in the fabric of Manitoba.

Manitoba Hydro's Corporate Vision is:

"To be the best utility in North America with respect to safety, rates, reliability, customer satisfaction, and environmental leadership; and to always be considerate of the needs of customers, employees, and stakeholders" (Manitoba Hydro 2011b).

### **1.3.2 Environmental Policy and Management System**

Manitoba Hydro respects the need to protect and preserve natural environments and heritage resources affected by its projects and facilities and it does so through the following practices:

- Preventing or minimizing any adverse impacts, including pollution, on the environment, and enhancing positive impacts;
- Meeting or surpassing regulatory requirements and other commitments;
- Considering the interests and utilizing the knowledge of our customers, employees, communities and stakeholders who may be affected by our actions;
- Reviewing our environmental objectives and targets annually to ensure improvements in our environmental performance;
- Continually improving our Environmental Management System; and
- Documenting and reporting our activities and environmental performance.<sup>4</sup>

In addition to the foregoing, Manitoba Hydro's environmental management policy has been incorporated into the plan for the development of the Project. A Draft Environmental Protection Plan (EnvPP) for the Project has been prepared and is provided as a separate document in this EIS (Chapter 11, Attachment 11-1). The use of environmental protection plans is a practical and direct response to the implementation of Manitoba Hydro's commitment to responsible environmental stewardship. Manitoba Hydro has voluntarily developed and implemented an Environmental Management System (EMS) and registered the system to the ISO (International Organization for Standardization) 14001 EMS standard. An EMS provides a framework for the identification and management of those elements of a corporation's operations that may

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<sup>4</sup> Manitoba Hydro, 2008. Environmental Management Policy. October 30, 2008.

impact the environment. More specifically, the Manitoba Hydro EMS enables identification of environmental impacts, the setting of goals to manage them, implementation of plans to meet those objectives, and evaluation of performance to enable the Corporation to make continual improvements to its EMS and its environmental performance. As a member of the Canadian Electrical Association (CEA), Manitoba Hydro participates in the Sustainable Electricity Program. Under this program every member utility must implement an EMS consistent with ISO standards.

### **1.3.2.1 Generation Facilities**

Manitoba Hydro currently operates 14 hydroelectric generating stations located on the Winnipeg, Saskatchewan, Nelson, and Laurie Rivers (see Map 1-2), which generate approximately 95% of the utility's electricity (Table 1.3-1). Electricity is also generated at two natural gas-fired combustion turbines located at Brandon, Manitoba and at a natural gas-fired generating station at Selkirk, Manitoba. One coal fired unit in Brandon is used in emergencies only. Four remote northern communities (Brochet, Lac Brochet, Shammattawa and Tadoule Lake) are served by on-site diesel generation. Power is also purchased from an independent 99-megawatt (MW) wind farm in St Leon, Manitoba and a 138-MW wind farm at St. Joseph, Manitoba. In addition, Manitoba Hydro anticipates that the new Wuskwatim Generating Station owned by the Wuskwatim Power Limited Partnership on the Burntwood River will be commissioned early in 2012.

**Table 1.3-1: Manitoba Hydro's Generating Stations**

<b>Station</b>	<b>In Service Date<sup>1</sup></b>	<b>Capacity (MW)<sup>2</sup></b>
<b>Winnipeg River</b>		
Pointe du Bois <sup>3</sup>	1911	77
Slave Falls <sup>3</sup>	1931 - 1948	67
Seven Sisters	1931 & 1952	165
McArthur	1955	55
Great Falls	1928	136
Pine Falls	1952	89
<b>Saskatchewan River</b>		
Grand Rapids	1968	479
<b>Nelson River</b>		
Jenpeg	1979	133
Kelsey	1961 & 1972	250
Kettle <sup>7</sup>	1974	1220
Long Spruce <sup>7</sup>	1979	1010
Limestone <sup>7</sup>	1992	1340
<b>Churchill River</b>		
Laurie River #1	1952 & 1970	n/a
Laurie River #2	1958	10
<b>Thermal</b>		
Selkirk <sup>4</sup>	1961 & 2002	125
Brandon <sup>5</sup>	1970 & 2002	333
<b>TOTAL</b>		<b>5499<sup>6</sup></b>

Notes:

1. Date station was fully in-service, dates of upgrades also indicated.
2. Current capacity.
3. Acquired from Winnipeg Hydro in 2002.
4. Fuel source converted from coal to natural gas in 2002.
5. Brandon Units 1- 4 were taken out of service in 1994. Coal fired unit 5 is used for emergencies only. Units 6 & 7 are natural gas fired combustion turbines.
6. Includes 10MW total on-site diesel generation for four remote northern communities (Brochet, Lac Brochet, Shammattawa, Tadoule Lake).
7. These generating stations are connected to the HVdc system.

### 1.3.2.2 Transmission Facilities

Most of Manitoba Hydro's hydraulic generating capacity is supplied by northern generating stations. A small portion of this generation is fed directly to the northern ac transmission system to serve northern areas. The remainder is connected to the northern ac collector transmission system. This collector system connects the generating stations on the Nelson River to the dc converter stations at Radisson (138 kV) and Henday (230

kV). Two HVdc lines (Bipoles I and II) connect the Radisson and Henday Converter Stations in northern Manitoba to the Dorsey Converter Station, located near Winnipeg. From there, the electricity is distributed throughout much of southern Manitoba through the southern ac transmission system.

The remaining hydraulic generation is supplied by generating stations on the Winnipeg River, at Grand Rapids on the Saskatchewan River and Jenpeg at the northern end of Lake Winnipeg. Generation outlet transmission facilities for the Winnipeg River plants consist of 115 kV ac transmission lines (see Map 1-2).

Manitoba Hydro's hydraulic generation system usually produces more power than required for domestic consumption when river flow levels are generally normal or above normal. High voltage ac transmission facilities interconnected to Saskatchewan, Ontario and the United States make it possible to export power to those jurisdictions. Interconnected transmission facilities also allow Manitoba Hydro to import power during periods of drought and periods during which demand in Manitoba exceeds the supply Manitoba Hydro can generate, thereby strengthening the reliability of the provincial electric system. Delivery of electricity to US markets is facilitated by membership in Mid-West Reliability Organization (MRO).

### **1.3.3 History of HVdc Development**

HVdc technology has been present since the 1920s, but it was not until 1954 that the first commercial HVdc link carried power from the mainland of Sweden to the island of Gotland (ABB Sweden 2010).

In the 1960s, the Government of Canada and the Government of Manitoba entered into an agreement to investigate and subsequently to proceed with hydroelectric development on the Nelson River. The federal government agreed to provide a long-term loan to cover the costs of erecting transmission lines and installing intermediary and terminal control structures. Under the Agreement, Atomic Energy of Canada Limited (AECL) was designated as the federal government agency and Manitoba Hydro as the province's representative. Phase 1 of the development included construction of HVdc transmission system (Bipole I) from the Radisson Converter Station, at the site of the Kettle Generating Station near Gillam, to Dorsey Converter Station near Winnipeg.

The HVdc transmission system is an integral component of Manitoba Hydro's northern hydroelectric system. Manitoba Hydro undertook extensive studies into possible transmission systems. Alternating current and dc transmission systems were evaluated, and two routes were assessed – one on the east side and one on the west side of Lake Winnipeg. After careful consideration, dc transmission was selected over ac transmission

because the construction cost of the dc system was less than that of an ac transmission system of the same transfer capability, and the power losses over long distances would be less. The construction cost for a dc transmission line amounts to about two-thirds the cost of an ac transmission line of comparable capacity. For longer transmission distances, the savings in line cost compensates for the higher cost of dc converter equipment compared to ac terminating stations, with the result that dc transmission is more economical.

Two HVdc transmission lines and associated converter stations were built – one line (Bipole I) starting at the Radisson Converter Station, three km south of Kettle Generating Station and the other (Bipole II) starting at Henday Converter Station, 42 km northeast of Kettle Generating Station.

Bipole I, the first HVdc line in Manitoba, was constructed by Atomic Energy of Canada Ltd. using mercury arc converter equipment and completed in 1971. The mercury arc converters were replaced with solid state thyristor converters in 2004. Bipole I has a capacity rating of 1,854 MW.

Bipole II (Stage 1) was completed in 1978. Between 1984 and 1985, Bipole II reached its full power potential with the completion of a second stage of development. This second stage increased the Bipole II voltage from  $\pm 250$  kV to  $\pm 500$  kV, increasing its power rating from 1000 MW to 2000 MW.

The construction of Dorsey Converter Station was started in 1968 and the facility became operational in 1971 with the completion of Bipole I. Located near the community of Rosser, some 26 km northwest of the city of Winnipeg, Dorsey Converter Station acts as the southern terminus for the two bipole HVdc transmission lines.

The power produced at the generating stations on the Nelson River is converted from ac to dc at the Radisson and Henday Converter Stations for transmission over Bipoles I and II nearly 900 km south to Dorsey Converter Station. When the dc power reaches Dorsey Converter Station, it is then converted back to ac power and injected into the southern transmission system which delivers the power to the sub-transmission and distribution systems, and ultimately to customers.

Manitoba Hydro's HVdc transmission system currently has capacity to transmit 3,854 MW of power and is responsible for the delivery of over 70% of the province's total hydraulic generating capacity to southern Manitoba.

## **1.4 REGULATORY REVIEW AND OVERVIEW OF THIS ENVIRONMENTAL IMPACT STATEMENT**

### **1.4.1 Introduction**

The relevant federal and provincial legislation applicable to the assessment and licensing of the Bipole III Project is described below.

The legislation in question forms a subset of that area of the law known generally as “environmental law”. One of the purposes of this legislation is to impose certain information gathering requirements related to a project and the environment in which it is to be built on project proponents. With relevant information in hand, gathered in as objective a fashion as possible, it is expected that better decisions can be made regarding the licensing of a project. Licences and authorizations for projects govern, in turn, its construction, management, operation and monitoring. When licences and authorizations are issued following a careful review of the relevant information about a project and the environment in which it is to be built, the reasonable expectation is that the environment will be protected and preserved.

A further subset of “environmental law” is made up of the laws and regulations that regulate conduct that is potentially harmful to the environment. The intent of these laws and regulations is to ensure that where construction activities can cause harm, they must be carried out in accordance with the laws and regulations applicable to them so as to avoid the harm that might otherwise occur. The legislation that applies to the construction of the Project is set out in Appendix 1A to this Chapter.

### **1.4.2 Canada: Regulatory Review and Decision Making**

The *Canadian Environmental Assessment Act* (CEAA) requires that there be an assessment of the environmental impacts of a project if federal authorities have to make a decision regarding some aspect of the project. For the purposes of environmental assessment, federal authorities who have to make a decision relevant to a project are known generally as “responsible authorities”. Depending on the type and complexity of a project, there can be a number of “responsible authorities”.

The federal government has refined its processes for reviewing and considering projects with the intent that there be coordination between all “responsible authorities”; that there be access within the federal government to relevant areas of expertise that could be helpful in assessing a project; and, if an environmental assessment is required pursuant

to federal legislation, that there be only one assessment. A federal environmental assessment, if found to be required, is one of four types, ranging from a screening report to a referral to a review panel.

In the case of Bipole III, Manitoba Hydro is of the opinion that an environmental assessment will not be required pursuant to federal legislation.

The development of the Project requires the construction of high voltage transmission lines crossing a number of rivers and streams. The construction of the Keewatinooow Converter Station requires a construction camp and arrangements to treat sewage from the camp, and, subsequently, from the converter station, and to discharge it safely.

Manitoba Hydro is confident that there will be no interference to navigation on any of the rivers and streams which will be crossed by transmission lines and is in the process of reviewing that conclusion with the Canadian Transport Agency. The proposal for the treatment of waste from the construction and operation of the Keewatinooow Converter Station is the subject of a separate license application under the *Environment Act (Manitoba)*. Manitoba Hydro is confident that the provisions for treatment of this waste will result in neither the loss of any fish or fish habitat nor the release of any substance into a fish bearing river or stream that is deleterious to fish. Manitoba Hydro is in the process of reviewing those conclusions with the Department of Fisheries and Oceans.

### **1.4.3 Canada-Manitoba Environmental Assessment**

If some form of federal environmental assessment of the Project is required, the provisions of an Agreement signed by Canada and Manitoba on March 5, 2007 will apply. The Canada-Manitoba Agreement on Environmental Assessment Cooperation (2007) is intended to ensure that, where both federal and provincial environmental reviews of projects are required, the respective processes are conducted in as cooperative and harmonious a fashion as possible. The Agreement provides that one party will become the Lead Party and as such will establish and chair a Project Administration Team, or PAT, with membership from the federal “responsible authority(ies)” and from the Province. The PAT is then responsible for managing the cooperative environmental assessment. In the event that the federal government requires an environmental review of the Project, Manitoba will be the Lead Party in accordance with the Agreement which stipulates that Manitoba is to be the lead party for project proposals on lands within its provincial boundaries where no federal lands are involved.

The Agreement obligates the Province and the federal government to share information at an early date regarding proposed projects that may be of interest to either party.

#### **1.4.4 Manitoba: Regulatory Review and Decision Making**

The *Environment Act* (Manitoba) sets out the environmental assessment and licensing process for developments such as the Bipole III Project. The provincial process encourages early consultation by project proponents and provides for public participation at various stages of the Province's review of a project. The *Classes of Development Regulation* (Manitoba Regulation 164/88) classifies projects as Class 1, 2 or 3, generally in accordance with the size and complexity of the project. The Project is a Class 3 Development under "Transportation and Transmission" because it consists of "electrical transmission lines greater than 230 kV, and associated facilities" and "transformer stations greater than 230 kV". In order to build the Project, Manitoba Hydro requires an Environment Act Licence. To obtain that licence, the Project must be assessed in accordance with the process outlined in the *Environment Act*.

Manitoba Hydro submitted an Environment Act Proposal Form (EAPF) together with a draft Environmental Assessment Scoping Document (the "Scoping Document") to Manitoba Conservation on December 14, 2009. The purpose of the Scoping Document was to suggest an appropriate framework and scope for conducting the environmental assessment of the Project required by the *Environment Act* and for preparing the EIS for regulatory review.

Manitoba Conservation placed an advertisement in local newspapers in the general vicinity of the Project inviting interested parties to provide their comments and concerns about the Project and supporting documentation, namely the EAPF and the draft Scoping Document. Interested parties had a 60-day period following December 14, 2009 in which to do that and some comments were received. These comments can be found on the website maintained by the Manitoba Department of Conservation. In addition, employees of the Environmental Assessment and Licensing Branch and members of a Technical Advisory Committee (the "TAC"), set up by the Province reviewed the foregoing documents and provided comments. In response to the comments received, the Scoping Document was revised and resubmitted for final review in June 2010. Manitoba Conservation approved the revised Scoping Document on June 11, 2010. The Scoping Document is included in Appendix 1B to this Chapter. Thereafter, Manitoba Hydro continued the public consultations and studies which form the basis of the EIS, the filing of which is the next significant step in the process established by the *Environment Act*.

The Scoping Document stipulates that the EIS is to include, at a minimum: a discussion of the regulatory and policy framework; determination of the scope of the project and assessment; the alternatives considered; a description of the environmental assessment consultation process; consideration of Aboriginal and local knowledge; a discussion of

the environmental assessment process; discussion of the approach for cumulative effects assessment and sustainability assessment; the process for follow-up and monitoring; and the format for preparation of the EIS. Accordingly, this EIS includes consideration of the environmental effects of undertakings associated with site preparation, construction, operation and maintenance, and final decommissioning of the associated project components.

Not all Developments covered in the *Environment Act (Manitoba)* necessarily require an EIS, but the Project did, owing to its size and complexity. Upon the filing of the EIS, the Act mandates that the EIS be accessible to the public and that there be a two month period for interested parties to review the material and provide comment. The Minister of Conservation has the discretion to direct that there be a public hearing to review the EIS on such terms as the Minister determines. If there is to be a public hearing of the Project, it will be held before the Clean Environment Commission of Manitoba (the “CEC”). The CEC is required to report to the Minister following such a public hearing and provide recommendations regarding the Project.

### **1.4.5 Manitoba and Section 35 of Canada’s Constitution**

Section 35 of the Constitution Act, 1982 stipulates that “[t]he existing aboriginal and treaty rights of the aboriginal peoples of Canada are hereby recognized and affirmed.” The Metis peoples of Canada are explicitly included in “aboriginal peoples of Canada”.

While Section 35 is not an “environmental” statute it does require consultation with Aboriginal peoples whose rights may be impacted in some fashion by a project. The process of consulting with aboriginal peoples in accordance with Section 35 is not a “regulatory process”. The obligation to initiate and carry out consultations with respect to Section 35 is that of the Province and/or of Canada, depending upon the nature of the project under consideration, its location and its ownership. Consultations conducted pursuant to Section 35 must not be confused with those public consultations and discussions that many project proponents have with Aboriginal peoples who live in the vicinity of a proposed project. That said, many of the topics which a project proponent will discuss with Aboriginal peoples will be similar to those topics that representatives of Manitoba and/or Canada will discuss with the same communities and, hence, there is sometimes confusion and overlap between the two consultation processes.

With respect to the Project, Manitoba Hydro’s approach to stakeholder engagement was designed to be adaptive in nature, involving the ongoing involvement of Aboriginal peoples, communities, and organizations, including First Nations, the Manitoba Metis Federation, Northern Affairs Community Councils, and regional organizations such as Treaty and Tribal Council organizations. This engagement involved a variety of

mechanisms, as described more fully in Chapter 5 (Environmental Assessment Consultation Program), and included an Aboriginal Traditional Knowledge (ATK) study process whereby a number of Aboriginal communities participated in ATK workshops or undertook self-directed ATK studies with a view to sharing ATK with the specialists working on particular reports and, subsequently, the team preparing this EIS.

The Province of Manitoba engages directly with those Aboriginal communities whose rights under Section 35 may be impacted by a proposed project. With respect to the Project, Manitoba has initiated a process to do that and has provided funding to enable Aboriginal communities to participate in the process. Manitoba Hydro does not participate directly in this process, but does provide the necessary background and technical information related to the Project to enable the parties to discuss the Project in an accurate and comprehensive fashion. This process is not yet complete, as it necessarily awaits the filing of this EIS.

## **1.5 OUTLINE OF THE ENVIRONMENTAL IMPACT STATEMENT**

The EIS includes an examination and consideration of the potential effects that may result from the Project to:

- Physical Environment – Atmosphere (air, climate and climate change), land (terrain, geology, soils), and water (surface, groundwater, water quality).
- Biological Environment – Aquatic biota and habitat, terrestrial ecosystems and vegetation, terrestrial species and habitat (mammals, birds, amphibians, reptiles, invertebrates).
- Land and Resource Use – Commercial resource use (forestry, mining, agriculture, fishing), protected areas, Aboriginal land and resource use, recreation and tourism (including aesthetics), property ownership, infrastructure services and facilities.
- Socio-economic and Cultural Conditions – Population and demographics, economic base, personal, family and community life (including human health and well-being, employment and income), and heritage and cultural resources.

Valued environmental components (VECs) are identified for each of the above environmental component categories based on consultations within Manitoba Hydro, discussions with discipline experts and others, as well as a literature review and Manitoba Hydro's experience with other projects. The selected VECs, which are elements of the environment having scientific, social, cultural, economic, historical, archaeological, or aesthetic importance, are used to describe the environmental effects of the Project

including the residual environmental effects. Additional information on the approach adopted for this project can be found in Chapter 4 (Effects Assessment Approach) and Chapter 7 (Evaluation of Route Alternatives).

ATK and local knowledge is considered for each of the above component categories and incorporated into the assessment to the extent possible.

The balance of the EIS is organized as follows:

- Chapter 2 explains the need for the Project, alternatives to the Project that were considered and why they were found less attractive, and alternative means of improving reliability through the development of a new high voltage transmission line;
- Chapter 3 provides a detailed description of the Project;
- Chapter 4 describes the overall Environmental Assessment (EA) approach including the Site Selection and Environmental Assessment (SSEA) process;
- Chapter 5 provides the purpose and objectives of the Environmental Assessment Consultation Program (EACP), along with a description of public involvement and the self-directed studies of First Nations and the Manitoba Metis Federation;
- Chapter 6 describes the existing environment, both biophysical and socio-economic;
- Chapter 7 provides an evaluation and comparison of the Alternative Routes, the criteria for selecting the Converter Station sites and a description of the Final Preferred Route;
- Chapter 8 identifies the anticipated effects of the Project and plans to mitigate potential and identified residual effects;
- Chapter 9 provides the cumulative effects assessment;
- Chapter 10 provides the sustainability assessment; and
- Chapter 11 provides information on monitoring and follow-up.

This EIS includes a number of appendices, which provide general supplementary material for the main body of text.

Comprehensive technical reports provide details on the research and analysis on biophysical, socio-economic and cultural topics by specialist consultants. Appendix 1C provides an outline of all of the supporting technical reports and other documents prepared by a wide variety of specialists and interested parties that form the basis of this EIS. The technical report documents are provided in electronic format on a CD included in the printed versions of the EIS document and will also be available on line

through Manitoba Hydro's website. While the technical reports, including the self-directed studies of First Nations and the Manitoba Metis Federation were read and drawn upon in the preparation of the EIS, Manitoba Hydro does not necessarily endorse all of the findings and conclusions in them and reminds readers that the participation by consultants, First Nations, the Manitoba Metis Federation, aboriginal communities and members of the public through the submission of reports, participation in meetings and the sharing of information does not mean that any of the persons concerned necessarily agree with all, or any particular, conclusions set out in the EIS nor that they support the licensing of the Project.

## 1.6 REFERENCES

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