



CERTIFICATE EC-059

IN THE MATTER OF the *National Energy Board Act* (NEB Act) and the regulations made thereunder; and

IN THE MATTER OF the *Canadian Environmental Assessment Act, 2012* (CEAA 2012) and the regulations made thereunder; and,

IN THE MATTER OF an application dated 16 December 2016 by Manitoba Hydro, for a permit pursuant to section 58.11 of the NEB Act (Application) to construct and operate the Manitoba-Minnesota Transmission Project (Project), which includes a 500 kV international power line from the Dorsey Converter Station near Rosser, Manitoba to the border of the United States; and other approvals for related changes pursuant to subsection 45(1) of the NEB Act and conditions of Certificate EC-III-16 and Permit EP-196, filed with the National Energy Board (Board) under File OF-Fac-IPL-M180-2015-01 02.

BEFORE the Board on 20 October 2018.

WHEREAS the Application for the Project included construction and operation of a new international power line (IPL), the Dorsey IPL, which is a 500 kV alternating current IPL consisting of 213 kilometres of new transmission line with approximately 121 kilometres of new right-of-way from the Dorsey converter substation in Manitoba to a point on the international boundary south of Piney, Manitoba, connecting to the Great Northern Transmission Line in Minnesota;

AND WHEREAS the Application for the Project was preceded by an Order in Council issued by the Lieutenant Governor of the Province of Manitoba on 6 November 2013, pursuant to section 58.17 of the NEB Act, designating the Minister of Sustainable Development, formerly known as the Minister of Conservation and Water Stewardship, as the provincial regulatory agency for the proposed Dorsey IPL;

AND WHEREAS Order in Council 2017-1693, issued by the Governor in Council on 15 December 2017, designated the Project as an IPL that is to be constructed and operated under and in accordance with a Certificate issued under section 58.16 of the NEB Act;

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AND WHEREAS the Board held a public hearing in respect of the Project Application pursuant to Hearing Order EH-001-2017 in Winnipeg, Manitoba on 4-8 June 2018 and 18-22 June 2018;

AND WHEREAS the Board has had regard to all considerations that are directly related to the Application and relevant, pursuant to Part III.1 of the NEB Act, and conducted an environmental assessment of the Project pursuant to CEEA 2012;

AND WHEREAS the Board has examined the Application and all subsequent submissions made by Manitoba Hydro and the participants in the EH-001-2017 proceeding;

AND WHEREAS the Board has decided, taking into account Manitoba Hydro's mitigation measures and those set out in the conditions to this Certificate, that the Project is not likely to cause significant adverse environmental effects;

AND WHEREAS the Board has found that Manitoba-Minnesota Transmission Project is and will be required by the present and future public convenience and necessity;

AND WHEREAS the Board's decisions on the Application, and reasons, are set out in the EH-001-2017 National Energy Board Reasons for Decision;

AND WHEREAS the Governor in Council by Order in Council No. P.C. 2019-784 dated the 13 June 2019 added or amended certain conditions in this Certificate and has approved the issuance of this Certificate;

NOW THEREFORE pursuant to paragraph 58.16(1)(a) of the NEB Act, the Board hereby issues this Certificate in respect of the Project.

This Certificate is subject to the twenty-eight conditions listed below:

1. Condition Compliance

Manitoba Hydro must comply with all of the conditions contained in this Certificate, as well as Order AO-006-EC-III-16 and Order MO-074-2018 unless the Board otherwise directs.

2. Certificate Expiration

Unless the Board otherwise directs prior to 20 October 2021, the Certificate for the new Dorsey IPL as well as amendments for the existing Riel IPL Certificate and the amendments for the existing Glenboro Permit shall expire on **20 October 2021**, unless construction in respect of the Project has commenced by that date.

3. Implementation of Commitments

Manitoba Hydro must implement or cause to be implemented all of the policies, practices, mitigation measures, recommendations, and procedures for the protection of the environment and promotion of safety referred to in its application, or as otherwise agreed to in its related submissions as well as all commitments made to Indigenous groups through its Project application or otherwise on the record of the EH-001-2017.

4. General

Manitoba Hydro must cause the Project to be constructed, operated, and abandoned in accordance with the specifications, standards, and other information referred to in its application or as otherwise agreed to in its related submissions.

5. Implementation of Standards

- a) Manitoba Hydro must design and construct the Project to comply with the current Canadian Electrical Code, Canadian Standards Association and other relevant standards applicable to the design and construction of power lines.
- b) Manitoba Hydro will ensure that any portion of the Riel IPL that may become part of the Project, will comply with the current standards in effect as of the date of construction.

6. Notification of Project Modifications

Manitoba Hydro must seek approval from the Board of any proposed modification to the Project's electrical system that may impact reliable operation for the bulk electrical system, power transfer capabilities, and the specification of the IPL structures, before any modification is made.

7. Quality Assurance and Compliance Program

Manitoba Hydro must file with the Board, **at least sixty (60) days prior to commencing construction**, confirmation by an officer of the company that they have developed and implemented a Quality Assurance and Compliance Program. The program must describe the methods by which Manitoba Hydro will ensure the Project, as described in the application, is designed, constructed, and operated in conformity with the conditions of the Certificate, and the designs, specifications, and undertakings set out in its application or as otherwise adduced in its evidence before the Board. The program must include, but not be limited to:

- a) a process or procedure to identify conditions of approval, company designs, specifications, and undertakings set out in the application or otherwise adduced in Manitoba Hydro's evidence;
- b) processes or procedures to monitor, measure, document, and report on compliance with conditions of approval, company designs, specifications, and undertakings set out in the application or otherwise adduced in Manitoba Hydro's evidence;
- c) the position title and contact information of the person(s) responsible for each aspect of the program;
- d) the qualifications, contact information, description of the job role and the position title of the person(s) authorized to stop work should work be in non-conformity with conditions of approval, company designs, specifications, and undertakings set out in the application or otherwise adduced in Manitoba Hydro's evidence;

- e) a process or procedure to identify and implement any corrective action as a result of any non-conformances that may be necessary before recommencing work;
- f) a process or procedure to evaluate the effectiveness of the corrective actions taken as a result of any non-conformances; and,
- g) the methods by which adherence to the program will be monitored, measured, documented, and reported to Manitoba Hydro's management.

8. Construction Safety Manuals

Manitoba Hydro must file with the Board, **at least ninety (90) days prior to commencing construction**:

- a) safety manuals related to the construction of the Project that address construction procedures, activities, and public safety; and,
- b) an outline of the safety training program to be implemented for Project operations.

9. Navigation and Navigation Safety Plan

Manitoba Hydro must file with the Board for approval, **at least ninety (90) days prior to commencing construction**, a Navigation and Navigation Safety Plan that includes:

- a) an updated listing of navigable waters to be crossed by all components of the Project described in the Application and subsequent filings;
- b) an updated discussion of effects of the Project to navigation and navigation safety;
- c) evidence and a summary of Manitoba Hydro's consultation with potentially affected waterway users and Indigenous communities regarding navigation use, including any concerns that were raised and how those concerns have been addressed; and,
- d) for each navigable waterway, a description of mitigation measures to be implemented to address the Project's potential effects on navigation and navigation safety.

Manitoba Hydro must incorporate the Navigation and Navigation Safety Plan into the updated Construction Environmental Protection Plan (CEPP) required by Condition 10.

10. Construction Environmental Protection Plan

Manitoba Hydro must file with the Board for approval, **at least ninety (90) days prior to commencing construction**, an updated Project-specific Construction Environmental Protection Plan (CEPP) which includes:

- a) all environmental protection, mitigation and monitoring measures and commitments, as set out in its Application, draft CEPP, or otherwise agreed to in its subsequent filings during both the Manitoba Clean Environment Commission hearing process and the Board's EH-001-2017 proceeding, and including any criteria that will be used to implement those measures;
- b) any updates from outstanding pre-construction surveys;
- c) the following plans:

- i) clearing management plan
 - ii) blasting plan
 - iii) erosion protection and sediment control plan
 - iv) golden-winged warbler habitat management plan
 - v) cultural and resource heritage protection plan
 - vi) navigation and navigation safety plan (see Condition 9)
 - vii) waste and recycling management plan
 - viii) emergency preparedness and response plan (see Condition 14)
 - ix) rehabilitation and invasive species management plan
 - x) biosecurity management plan
 - xi) access management plan
 - xii) environmental monitoring plan
 - xiii) integrated vegetation management plan;
- d) orthophoto maps of the Project footprint, which include the identification of environmental features, Manitoba Hydro's Environmentally Sensitive Sites, and mitigation measures to be applied; and,
- e) evidence and a summary of Manitoba Hydro's consultation with potentially affected persons, organizations, Indigenous communities, and federal and provincial authorities regarding the updated CEPP, including any concerns that were raised, steps that Manitoba Hydro has taken or will take to address those concerns, and/or explanations as to why no further action is required, if applicable.

11. Indigenous Knowledge Studies Report

Manitoba Hydro must file with the Board for approval, **at least sixty (60) days prior to commencing construction**, a report outlining a plan for completing outstanding Indigenous Knowledge studies. The report must include:

- a) a summary of the status of the Indigenous Knowledge studies undertaken for the Project, including group-specific studies or planned supplemental surveys;
- b) a description of how Manitoba Hydro has considered and addressed information from any Indigenous Knowledge studies that it did not report on during the Board's EH-001-2017 proceeding;
- c) a description of any outstanding concerns raised by potentially-affected Indigenous communities regarding potential effects of the Project on the current use of lands and resources for traditional purposes, including a description of how these concerns have been or will be addressed by Manitoba Hydro;
- d) a summary of any outstanding Indigenous Knowledge studies or follow-up activities that will not be completed prior to commencing construction, including an estimated

completion date and an explanation as to why these will not be completed prior to construction, if applicable;

- e) a description of how Manitoba Hydro has already identified, or will identify, any potentially-affected traditional land use sites or resources if the outstanding studies will not be completed prior to construction; and,
- f) a description of how Manitoba Hydro has revised its CEPP as a result of the Indigenous Knowledge studies or follow-up activities. At the same time as this report is filed with the Board, Manitoba Hydro must send a copy to each of the Indigenous communities included in consultation activities.

12. Reliability, Safety, and Security of IPLs

Manitoba Hydro must:

- a) ensure that the new Dorsey IPL will operate within reliability limits of its nominal design voltage of 500 kV AC;
- b) comply with the provisions of the Board Order MO-036-2012 electric reliability;
- c) file with Board a list of reliability standards applicable to the Project, at least sixty (60) days prior to commencement of construction;
- d) report to the Board any event involving electrical contact between energized IPL components and terrain, vegetation, structures, vehicles, animals or people within forty-eight (48) hours of such event occurring; and,
- e) file with Board within sixty (60) days after occurrence of a reportable event under b) or d), a written report that must include:
 - i) the reasons why the deviation occurred;
 - ii) analysis of potential negative implications of the deviation; and,
 - iii) mitigation strategies for the implications identified and when the mitigation was or will be implemented.

13. Design and Interconnection Compliance

Manitoba Hydro must file with the Board for approval, **at least sixty (60) days prior to commencing construction**, a report confirming that the design of facilities, construction plan, and planned operations comply with the following:

- a) With the new Dorsey IPL and with the Project alterations in place, Manitoba Hydro may export up to 3058 MW of power to the U.S. and import up to 1473 MW of power from the U.S. over all of its international power lines without prior notification to any Canadian utility.
- b) Confirmation that SaskPower and the Ontario Independent Electric System Operator have reviewed the impact of both steady state and transient operation under the full set of permutations and combinations of availability of the Dorsey IPL, Riel IPL and Glenboro IPL after the Project is in service, and confirmation that none of the reviewed operating scenarios will impose unacceptable operating conditions upon the Saskatchewan or Ontario Provincial electric systems.

14. Construction Emergency Response Plan

Manitoba Hydro must file with the Board, **at least forty-five (45) days prior to commencing construction**, a Construction Emergency Response Plan for the Project that contains:

- a) a response plan for spills of fuels and fluids associated with construction;
- b) a response plan for medical incidents that includes provision for 24-hour emergency transport to hospital;
- c) a plan for fire response and evacuation;
- d) a security plan; and,
- e) an emergency contact list and emergency notification plan for government and response agencies and communities (including Indigenous and Métis) adjacent to the right-of-way and/or impacted by work sites.

15. Commitments Tracking Table

Manitoba Hydro must:

- a) file with the Board and post on its website, **at least thirty (30) days prior to commencing construction**, a commitments tracking table listing all commitments it made in its application, including all commitments made to Indigenous communities, and otherwise agreed to during questioning or in its related submissions in the Board's EH-001-2017 proceeding, as well as commitments from the Clean Environment Commission hearing process that are of federal interest, and that includes references to:
 - i) the document in which each commitment appears (for example, the application, responses to information requests, hearing transcripts, permit requirements, condition filings, or other document);
 - ii) the accountable lead for implementing each commitment; and,
 - iii) the estimated timeline associated with the fulfillment of each commitment;
- b) file with the Board, at the following times, an updated commitments tracking table:
 - i) **within ninety (90) days after the Certificate is issued**; and,
 - ii) **at least thirty (30) days prior to commencing construction**;
- c) update the status of the commitments and file those updates with the Board, **on a monthly basis starting ninety (90) days after the Certificate date until commencing operations, and quarterly during operations until all commitments are satisfied (except those that involve filings for the Project's operational life)**;
- d) post on its website, the same information required by b) and c), within the same indicated timeframes; and,
- e) maintain at each of its construction offices:
 - i) the relevant environmental portion of the commitments tracking table listing all of Manitoba Hydro's regulatory commitments, including those described

in its application and subsequent filings, and conditions from permits, authorizations, and approvals it has received;

- ii) copies of any permits, authorizations, and approvals for the Project issued by federal, provincial, or other permitting authorities that include environmental conditions or site-specific mitigation or monitoring; and,
- iii) copies of any subsequent variances to any permits, authorizations, and approvals in e) ii).

16. Heritage Resources

Manitoba Hydro must file with the Board, **at least thirty (30) days prior to commencing construction**:

- a) confirmation, signed by an officer of the company, that it has obtained all of the required archaeological and heritage resource permits and clearances from the Manitoba Historic Resources Branch;
- b) a description of how Manitoba Hydro will meet conditions and respond to comments and recommendations contained in the permits and clearances referred to in a); and,
- c) a description of how Manitoba Hydro has incorporated additional mitigation measures, as applicable, into its CEPP as a result of conditions or recommendations referred to in b).

17. Landowner Advisory Committee Plan

Manitoba Hydro must file with the Board, **at least thirty (30) days prior to commencing construction**, a plan for developing a Landowner Advisory Committee (LAC) for the Project. The plan must include:

- a) a summary of how potentially-affected landowners and/or their representative organizations were consulted, including a description of the design of the consultation and activities undertaken;
- b) a summary of the results of consultation, in terms of input from the landowners, including whether or not there is any interest from landowners in forming a LAC; and,
- c) if there is interest in forming a LAC, a description of the scope of activities that will be undertaken, in consultation with the LAC, during construction and operation of the Project, including but not limited to:
 - i) the standard mitigation measures to be implemented by Manitoba Hydro during construction to protect landowner interests and reduce effects to agricultural activities;
 - ii) measures to be implemented when site-specific issues arise during construction; and,
 - iii) third party monitors, including the activities and geographic locations where third-party monitoring have been proposed.

18. Operations Safety Manuals

Manitoba Hydro must file with the Board, **at least ninety (90) days prior to commencing operations:**

- a) safety manuals related to operations activities for the Project that address routine operation procedures, activities, and public safety issues that might be encountered during the IPL operations; and,
- b) an outline of the safety training program to be implemented for Project operations.

19. Operations and Maintenance Manual

Manitoba Hydro must file with the Board, **at least sixty (60) days prior to the commencing operations**, an Operations and Maintenance Manual for the Project. The manual must require Manitoba Hydro to conduct documented audits of its records and inspections of the Manitoba Hydro electrical system and right-of-way to confirm company conformity to the manual's requirements. The manual must also include a schedule or procedure for its yearly review and update, as appropriate, to remain current with regulatory requirements and accepted industry practice. The manual, and the programs and procedures on Manitoba Hydro's records as required by the manual, must be made available to the Board for periodic review, upon request. The manual must also include:

- a) the type of maintenance followed by Manitoba Hydro;
- b) maintenance schedules according to the selected maintenance practice;
- c) operational procedures for steady state and transient conditions;
- d) a public awareness program for the life of the Project that:
 - i) promotes public awareness of ongoing hazards associated with the Project; and,
 - ii) provides contact numbers for the public to report issues and concerns;
- e) training requirements for personnel implementing the manual; and,
- f) the maintenance and operations records that will be produced during operations, including during the performance of maintenance tasks and routine inspections.

20. Construction Progress Reports

Manitoba Hydro must file with the Board **monthly**, during construction, construction progress reports for the Project that include:

- a) a summary of the Project's construction;
- b) a summary of the safety, security, or environmental concerns encountered;
- c) details of each incident of environmental non-compliance; and,
- d) details of the adaptive management applied to achieve resolution of each non-compliance.

21. Issues Tracking

Manitoba Hydro must create and maintain records that chronologically track complaints by Indigenous communities, including complaints raised through the MMTP Monitoring Committee, landowners, and municipal and regional governments relating to the Project, beginning with the commencement of construction and continuing for five years after the commencement of operations. The records must be retained for five years after the commencement of operations. The complaint tracking records must include:

- a) the date the complaint was received;
- b) the form in which the complaint was received (for example, telephone, mail, email, or other communication methods that may evolve over time);
- c) a detailed description of the complaint;
- d) the date and summary of all subsequent telephone calls, visits, correspondence, site monitoring/inspections, follow-up reports and other related documentation;
- e) updated contact information for all persons involved in the complaint; and,
- f) any actions taken or to be taken or an explanation why no further action is required.

Manitoba Hydro must maintain these records for audit purposes and make them available to the Board upon request. Manitoba Hydro must make available to the complainant, upon request, the records related to the specific complaint(s) that the affected party has made to Manitoba Hydro.

22. Crown land Offset Measures Plan

Manitoba Hydro must file with the Board, for approval, **30 days prior to commencing operations**, a Crown Land Offset Measures Plan (the Plan) that outlines how permanent loss of crown lands available for traditional use by Indigenous Peoples resulting from the Project will be offset or compensated for. The Plan must include:

- a) a description of site-specific details and maps showing the locations where Crown land is no longer available for traditional use as a result of Project activities at Dorsey Converter Station and the transmission tower locations, as well as any other locations;
- b) a list of the offset or compensation measures that will be implemented to address the permanent loss of crown lands identified in a) above;
- c) an explanation of the expected effectiveness of each offset measure described in b) for each Indigenous community;
- d) the decision-making criteria for selecting specific offset measures that would be used and under what circumstances;
- e) a schedule indicating when measures will be implemented and the estimated completion date(s);
- f) summary of consultation by Manitoba Hydro with any impacted Indigenous communities and with relevant provincial and federal authorities regarding the Plan; and,

- g) this summary must include a description of any issues or concerns raised regarding the plan by Indigenous communities and how Manitoba Hydro has addressed or responded to them.

23. Post Construction Monitoring Reports

Manitoba Hydro must file with the Board, **on or before 31 January following the first year of Project operations and for a period of at least ten (10) years** after commencing operations, annual post-construction monitoring reports. These reports must include:

- a) a description of monitoring methods used;
- b) identification, including on a map or diagram, of any reclamation or other environmental issues which arose during construction or in the course of the previous year;
- c) a description of the valued components or issues that were assessed or monitored, as outlined in Manitoba Hydro's Environmental Monitoring Plan (see Condition 10);
- d) the monitoring results, including a comparison to measurable goals;
- e) an assessment of the effectiveness of the mitigation measures implemented and the accuracy the environmental assessment predictions;
- f) a description of any corrective actions taken, their observed success and current status; and,
- g) a schedule outlining when further corrective actions will be implemented or monitoring conducted to address any unresolved issues.

Notwithstanding the requirement for filing on or before 31 January above, if the Provincial Minister responsible for issuing a Provincial Licence to Manitoba Hydro does grant such a Licence, and such a Licence requires annual submission of post-construction monitoring reports, Manitoba Hydro may submit post-construction monitoring reports to the Board in accordance with any timing requirements set out in that Provincial Licence, provided that the submission of the reports to the Board commences within the first year of operations and occurs annually for ten (10) years.

24. Compliance Reporting

Manitoba Hydro must file with the Board, **within thirty (30) days after commencing operations**, confirmation, signed by an officer of the company, that the Project was completed and constructed in compliance with all applicable conditions in the Certificate. If compliance with any of the Board's conditions cannot be confirmed, the officer of the company must provide details as to why compliance cannot be confirmed. The filing required by this condition must include a statement confirming that the signatory to the filing is an officer of the company.

25. As-built Drawings

Manitoba Hydro must file with the Board, **within sixty (60) days after commencing operations**, as-built drawings of structures and major equipment identifying the location and

configuration of the new Dorsey IPL, altered Riel IPL, and altered Glenboro IPL facilities, and including:

- a) the termination structure at Dorsey substation;
- b) transmission structures from Dorsey substation to the international border;
- c) existing Riel IPL structures that will be incorporated into the new Dorsey IPL;
- d) any transition structures linking the new Dorsey IPL segments with the old Riel IPL segment;
- e) Bipole III crossing structures and conductor elevations;
- f) configurations and elevations at all locations where the new Dorsey IPL crosses existing high-voltage transmission lines;
- g) typical right-of-way cross-sections for both self-supporting and guyed structures; and,
- h) right-of-way cross-sections of the structures for the segment through which the new Dorsey IPL runs parallel with the Riel IPL and/or any other high-voltage transmission lines and any other major assets comprising the new Dorsey IPL facilities.

26. Wetland Offset Measures Plan

Manitoba Hydro must file with the Board for approval, **within ninety (90) days of commencing operation of the Project**, a Wetland Offset Measures Plan which outlines how permanent loss to wetlands resulting from the Project will be offset or compensated for. This plan must include:

- a) a description of site-specific details and maps showing the locations of permanent wetland loss as a result of Project activities at Dorsey Converter Station and the transmission tower locations, as well as any other locations where wetlands were affected by the Project;
- b) an explanation of how wetland function will be measured during the post-construction monitoring program, and any resulting accidental permanent loss to wetlands quantified and reported to the Board as part of Condition 23;
- c) a list of the offset or compensation measures that will be implemented to address permanent loss of wetlands as identified in a) and b) above;
- d) an explanation of the expected effectiveness of each offset measure described in c) and the relative value of each offset measure towards achieving the offset;
- e) the decision-making criteria for selecting specific offset measures and offset ratios that would be used under what circumstances;
- f) a schedule indicating when measures will be implemented and estimated completion date(s);
- g) evidence and summary of consultation with provincial and federal authorities, any non-governmental expert bodies, and any impacted Indigenous communities regarding the plan; and,

- h) this summary must include a description of any issues or concerns raised regarding the plan by Indigenous communities, and how Manitoba Hydro has addressed or responded to them.

27. Conductors

Manitoba Hydro shall design and construct the Project in accordance with its application or as otherwise agreed to in its related submissions such that:

- a) the transmission towers shall support one set of triple conductor bundles for each of the three phases suspended from insulators;
- b) each of the nine sub conductors shall be aluminum conductor steel reinforced (ACSR) type with the following specifications:
 - i) Type: 1192.55 MCM 45/7 aluminum to steel stranding ACSR, code name "Bunting"
 - ii) Diameter 33 mm
 - iii) Bundle spacing: 460 mm
 - iv) Steel Shield Wire: Size 10 (11 mm) Steel - 7 Strand Grade 1300.

28. Annual Filing Requirements

Manitoba Hydro must file with the Board, **prior to 31 January after commencing Project operation, and by that date on an annual basis thereafter for the life of the Project:**

- a) confirmation that Manitoba Hydro is still the owner and operator of the Project;
- b) Manitoba Hydro's current contact information, including:
 - i) corporate headquarters' street and mailing addresses;
 - ii) phone number;
 - iii) fax number;
 - iv) email address;
 - v) the name and job title of an officer of the company for the Board to serve documents on, as required; and,
 - vi) the name and job title of a secondary contact at Manitoba Hydro;
- c) a filing that complies with the provisions of the Board's General Order MO-036-2012 for Electricity Reliability Standards;
- d) an updated commitments tracking table as per Condition 15; and,
- e) confirmation that no changes were made to Manitoba Hydro's compliance program, safety manual, or operations and maintenance manual or, if changes have been made, provide a rationale and description of the change(s), if not already provided to the Board.

Issued at Calgary, Alberta on the 18 day of June 2019.

NATIONAL ENERGY BOARD

Original signed by L. George

for

Sheri Young

Secretary of the Board