

Brandon dispatchable capacity project

Initial project description

Prepared by Manitoba Hydro

June 2026

Submitted to Impact Assessment Agency of Canada

Land Acknowledgement

Manitoba Hydro has a presence across Manitoba – on Treaty 1, Treaty 2, Treaty 3, Treaty 4 and Treaty 5 lands – the original territories of the Anishinaabe, Anishininew, Cree, Dakota, and Dene peoples and the National Homeland of the Red River Métis. Manitoba Hydro also acknowledges the ancestral lands of the Inuit in northern Manitoba. We acknowledge these lands and pay our respects to the ancestors of these territories who have stewarded the land since time immemorial, and to those who continue to care for the land. We acknowledge the impacts of our projects and operations on the lands and waters across Manitoba. The legacy of the past remains a strong influence on our relationships with the Indigenous nations today and we are committed to working collaboratively to strengthen and improve our relationships with Indigenous peoples and nations.

The proposed Brandon dispatchable capacity project is located near the boundary of Treaty 1 and Treaty 2. These treaties overlap with the original territories of the Anishinaabeg, Anishininewak, Ininewak, and Dakota Oyate. The proposed project is also on the National Homeland of the Red River Métis.

We acknowledge these Nations who have occupied and cared for these lands for thousands of years and continue to do so. We also acknowledge their longstanding cultural and spiritual connections with the lands and waters. On this project, we remain committed to developing and maintaining meaningful and mutually beneficial relationships with Indigenous nations involved throughout the project and beyond. Through this we recognize the importance of learning and considering the unique perspectives and insights these nations share as we move forward together in a spirit of truth, reconciliation and collaboration.

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1.0 Part A - General Information

1.1 Introduction

Manitoba Hydro is pleased to submit this initial project description for the Brandon dispatchable capacity project (the project), a new generation initiative designed to enhance Manitoba Hydro's ability to meet peak electricity demand, respond to extreme weather events, and provide system reliability during droughts and contingency conditions.

The dispatchable capacity project (the "project") includes the following three components:

1. a Generating Station that includes three heavy frame simple cycle combustion turbines (SSCT) each with a capacity of approximately 250 MW
2. two new interconnection transmission lines and transmission upgrades to deliver the electricity generated by the SSCT units
3. a new natural gas pipeline to serve the combustion turbines.

This initial project description has been prepared following the Impact Assessment Agency of Canada (IAAC) Guide to Preparing an Initial Project Description and a Detailed Project Description (IAAC 2025).

Manitoba Hydro's 2025 Integrated Resource Plan (IRP; Manitoba Hydro 2026) Road Map has identified that peak demand for electricity will exceed Manitoba Hydro's capacity by 2029/2030, and we will need approximately 1760 megawatts (MW) of added capacity by 2035. Included in the recommended development plan is 750MW of capacity from combustion turbines.

The IRP Road Map identifies that dispatchable capacity resources will be an essential part of meeting demand in the next decade, especially during Manitoba's coldest winter days.

To contribute towards addressing this need, Manitoba Hydro is pursuing approval for a new power generation plant that will feature three (3) new simple cycle combustion turbines (SCCTs) within Manitoba Hydro's existing Brandon generating station (GS) property in Brandon, Manitoba.

The three proposed SCCTs will add approximately 750 megawatts (MW) of new electricity generation capacity and therefore constitute a designated physical activity under Section 31 of the federal Physical Activities Regulation.

To fuel the power generation plant, natural gas will be supplied via a new pipeline, approximately 30-km long, that will initiate at Centra Gas Manitoba Inc. (Centra Gas)'s Moore Park primary gate station and terminate at the Brandon GS.

As the project is intended for limited, non-base load use (i.e., peak electricity demand, response to extreme weather events, and provision of system reliability during droughts and contingency conditions for peakload), it is anticipated that on average, the power generation plant will run less than 5% of the time with higher utilization only under extreme drought or severe winter conditions.

In addition to the power generating components, the balance of plant will consist of natural gas treatment components, generator step-up transformers, associated power distribution modules, demineralized water treatment facility, and diesel (the back-up power for natural gas), with associated storage tanks.

The electricity produced will be put into Manitoba Hydro's provincial grid via three, 230-kV circuits on two new electric interconnection transmission lines that would run between the Brandon GS and nearby Cornwallis 230 kV electrical station.

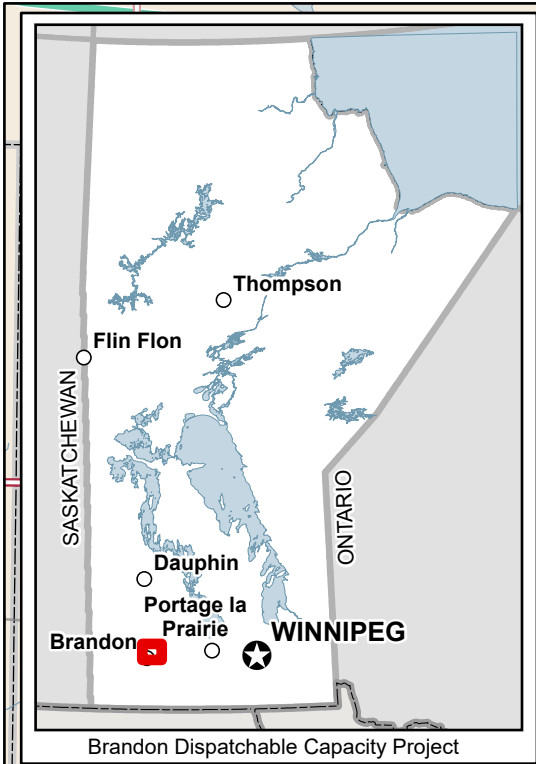
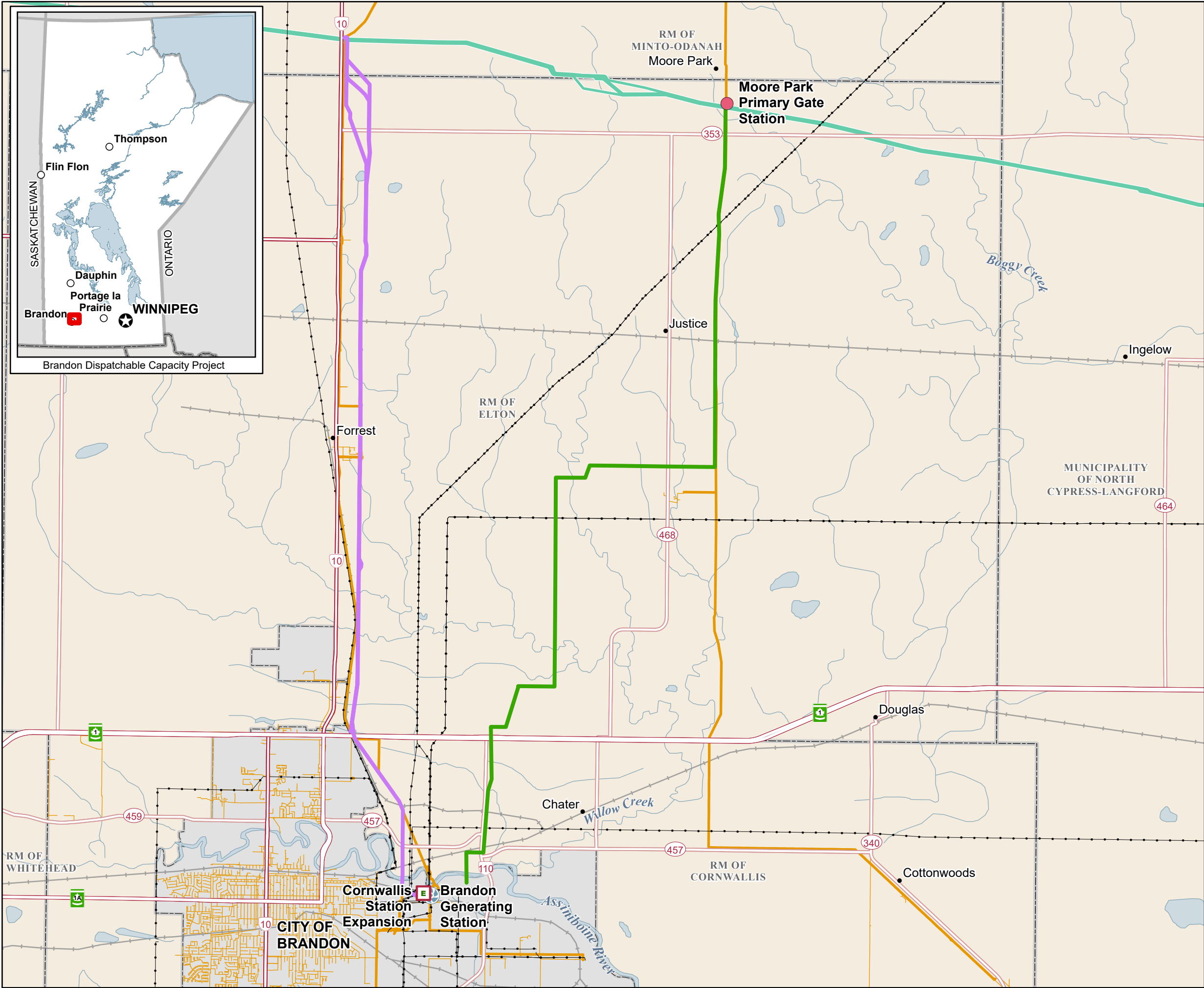
Ancillary components associated with the project include the new natural gas pipeline and electrical transmission infrastructure, as well as the following:

- Electrical terminations at Cornwallis electrical station
- Construction of new water supply infrastructure for operation of the combustion turbine units
- Civil work / laydown area for the storage of materials during project construction.

Although it is not clear in Manitoba Hydro's view whether all these ancillary components are part of the "designated project" under the *Impact Assessment Act* (see s. 2.4.2), information is provided on these ancillary components in this document to provide further context and understanding of the project.

The project's location is shown on Map 1-1 and the components of the project are described in more detail in Chapter 2.0 (Part B - Project information).

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Brandon Dispatchable Capacity Project

Project Components

-  Cornwallis Station
-  Brandon Generating Station
-  Moore Park Primary Gate Station

Preferred Route

-  Preferred Route

Existing Infrastructure

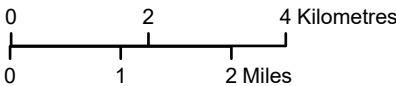
-  Existing Unit 6 & 7 Source Pipelines
-  Transmission Pressure Gas Line
-  Existing Gas Pipeline
-  Existing Transmission Line
-  TC Energy's Canadian Mainline

Landbase

-  TransCanada Highway
-  Provincial Highway
-  Provincial Road
-  Railway
-  First Nation
-  City/Town
-  Rural Municipality

Manitoba Hydro acknowledges that the proposed Brandon Dispatchable Capacity project is located on Treaty 1 and Treaty 2 territory and on the traditional territories of the Anishinaabeg, Anishininewak, Ininew, and Dakota Oyate, and the National Homeland of the Red River Métis.

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date: June 1, 2026



Project Location

1.2 Proponent

The proponent of the project is Manitoba Hydro. Manitoba Hydro is a provincial Crown Corporation and one of the largest integrated electricity and natural gas distribution utilities in Canada. Manitoba Hydro's vision and mission are to empower Manitoba's future with affordable and reliable energy, and to meet customer's energy needs. Contact information relevant to the project is provided in Table 1-1.

Table 1-1: Proponent contact information

Name of Project:	Brandon dispatchable capacity project
Name of Proponent:	Manitoba Hydro
Address of Proponent:	360 Portage Ave, Winnipeg, MB R3C 0G8
Project Website:	https://www.hydro.mb.ca/community/engagement/brandon-dispatchable-capacity/
Principal / Environmental Contact Person:	David Block Enterprise Projects Environmental Lead, Environmental Assessment and Regulatory Review Lead Manitoba Hydro T: +1 (204) 805-3425 dblock@hydro.mb.ca
Technical Contact Person:	Alex Karagiannis Dispatchable Capacity Project Delivery, Project Manager Manitoba Hydro T: +1 (204) 360-7969 akaragiannis@hydro.mb.ca

1.3 Summary of Engagement

The purpose of engagement on the project is to understand and consider concerns and interests in project decisions, while building lasting relationships and supporting Manitoba Hydro's environmental licensing applications for the project.

Engagement will help shape key project decisions including valued component selection, potential impacts and mitigation measures, priorities and interests, and the natural gas pipeline right-of-way route selection.

Manitoba Hydro has developed a project engagement strategy, which will remain adaptable and responsive to the feedback and preferences learned from engaged audiences. The strategy is guided by the following principles:

- Respect
- Transparency
- Proactiveness
- Inclusivity
- Accountability
- Trust-building
- Flexibility
- Continuous evaluation

Project decisions will be evaluated using feedback from the engagement process, alongside key factors including project effects on the natural and built environments, engineering considerations, system requirements, economic feasibility, and legal obligations.

Where feedback cannot be incorporated, Manitoba Hydro will explain the rationale to engaged audiences to support transparent decision-making.

Manitoba Hydro's project engagement process consists of two sub-processes:

- First Nation and Métis Engagement Process (FNMEP), designed to support culturally appropriate and nation-specific engagement.
- Interested Parties Engagement Process (IPEP), focused on broad, accessible and inclusive participation.

Key objectives include early engagement, clear communication, and flexible approaches that adapt to audience needs.

Success will be measured through documented feedback, sustained relationship building, and demonstrated incorporation of input into decision-making.

Manitoba Hydro launched pre-engagement for the project on November 17, 2025, and went live with broader engagement on January 26, 2026.

Pre-engagement involved initial outreach to select audiences to gauge engagement interest and preferences for future engagement efforts. The following sections summarize the project engagement conducted to-date.

1.3.1 Engagement with Jurisdictions or Agencies

Federal, provincial, and municipal agencies engaged regarding the project are listed in Table 1-2. Manitoba Hydro's engagement with the listed agencies has been influenced by the project components and location as well as potential project effects and concerns.

Table 1-2: Summary of engagement with jurisdictions or agencies

Agency	Date	Purpose of engagement and key feedback (as of April 2026)
Federal		
Impact Assessment Agency of Canada (IAAC)	February 2026 - ongoing	Share initial project information and answer questions
Provincial		
Manitoba Agriculture	February 2026 - ongoing	Share initial project information and answer questions
Manitoba Environment and Climate Change	February 2026 - ongoing	Share initial project information and answer questions
Community and Regional Planning	February 2026 - ongoing	Share initial project information and answer questions
Manitoba Natural Resources and Indigenous Futures	February 2026 - ongoing	Share initial project information and answer questions
Manitoba Business, Mining, Trade and Job Creation	February 2026 - ongoing	Share initial project information and answer questions
Manitoba Indigenous Economic Development	February 2026 - ongoing	Share initial project information and answer questions
Manitoba Indigenous Reconciliation	February 2026 - ongoing	Share initial project information and answer questions

Agency	Date	Purpose of engagement and key feedback (as of April 2026)
Manitoba Sport, Culture, Heritage and Tourism	February 2026 - ongoing	Share initial project information and request heritage data records for the vicinity of the project footprint area
Manitoba Transportation and Infrastructure	February 2026 - ongoing	Share initial project information and answer questions
Municipal		
Rural Municipality of Elton	November 2025 - ongoing	Share initial project information and answer questions. Key feedback to date has related to potential impacts to property owners associated with natural gas pipeline infrastructure.
Rural Municipality of Cornwallis	November 2025 - ongoing	Share initial project information and answer questions. Key feedback to date has related to potential impacts to property owners associated with natural gas pipeline infrastructure.
City of Brandon	November 2025 - ongoing	Share initial project information and answer questions. Key feedback to date has related to economic development opportunities.

1.3.2 Engagement with interested parties

Manitoba Hydro applies the following criteria to identify interested parties to include in the engagement process:

1. Proximity to the project area, including potentially affected landowners, adjacent landowners, and local municipalities
2. Governance and regional oversight, including rural municipalities (RMs) and government representatives
3. Demonstrated interest in similar projects, based on engagement or feedback provided on past projects or initiatives
4. Relevant local or regional impact, including audiences with specific connections to or concerns about the project area, such as local businesses, resource users, or organizations with expertise in the affected environment or community

In addition to the government agencies outlined in Table 1-2, as of March 2026, Manitoba Hydro has sent project information (Appendix A) via email to the following identified interested parties:

- Potentially affected landowners
- Agricultural representative groups
 - Chicken Producers of Manitoba
 - Dairy Farmers of Manitoba
 - Keystone Agricultural Producers
 - Manitoba Beef Producers
 - Manitoba Beekeepers Association
 - Manitoba Chicken Producers
 - Manitoba Egg Farmers
 - Manitoba Organics
 - Manitoba Pork Council
 - Manitoba Pulse and Soybean Growers
 - Organic Producers of Manitoba Co-Operatives Inc
- Canadian Parks and Wilderness Society
- Consumers Association of Canada
- Manitoba Chamber of Commerce
- Manitoba Climate Action Team
- Sustainable Brandon
- Technical Advisory Committee ¹

¹ The Technical Advisory Committee (TAC) is a group of provincial experts who formally review *Environment Act* Proposals and provide technical comments to Manitoba Environment and Climate Change's Environmental Approvals Branch before a licensing decision is made. While membership varies by project, the TAC typically includes specialists from Manitoba government departments and agencies with relevant expertise, e.g., water resources, wildlife and habitat, public health, Indigenous relations, climate and air quality, municipal and land-use planning. .

- Travel Manitoba

1.3.3 Engagement with Indigenous Audiences

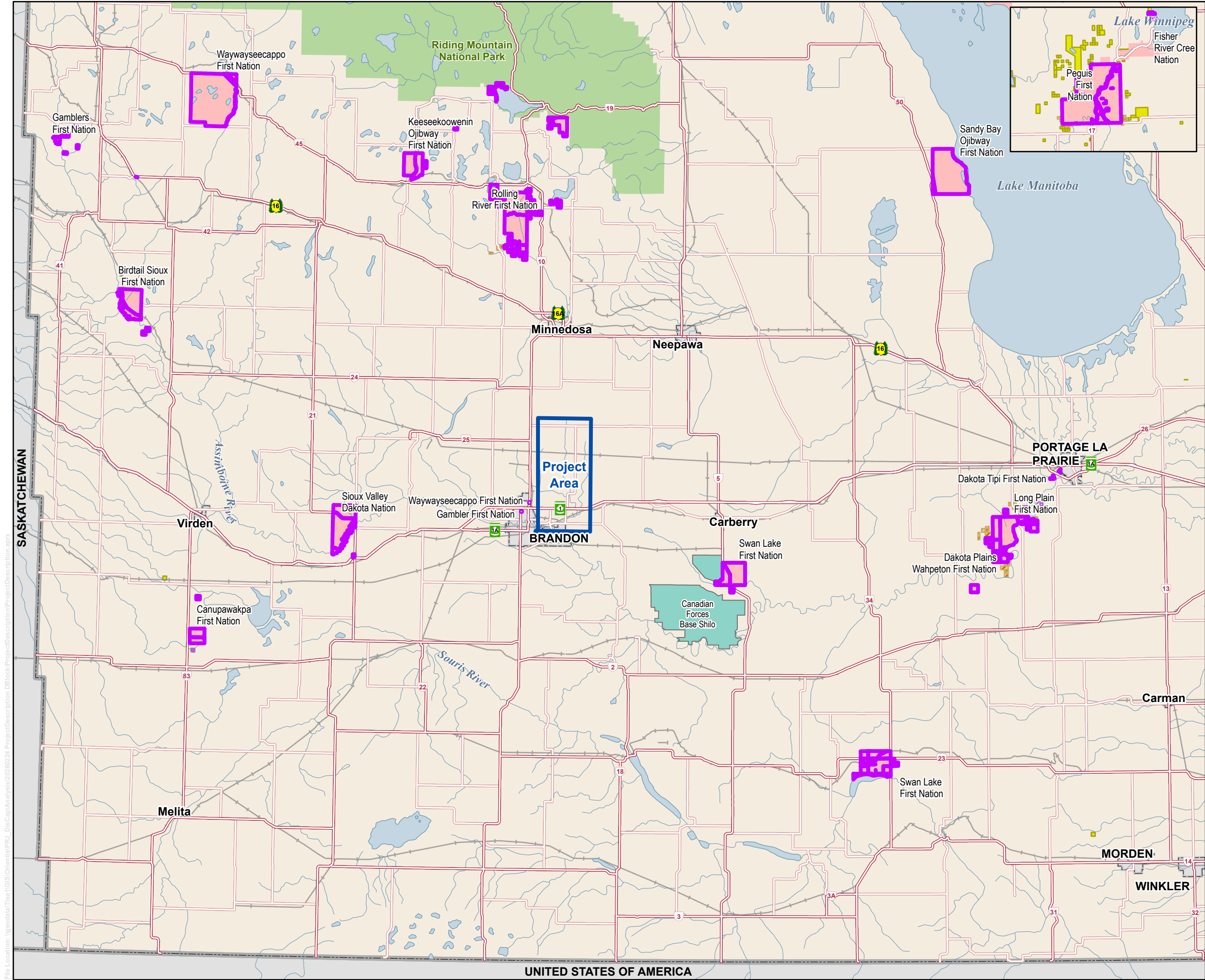
This project is situated on Treaty 1 and Treaty 2 lands that overlap with the original territories of the Anishinaabeg, Anishininewak, Ininewak, and Dakota Oyate. The proposed project is also on the National Homeland of the Red River Métis.

Recognizing that treaty boundaries were imposed by government and may not fully reflect the breadth of traditional and contemporary Indigenous territories, Manitoba Hydro applied the following criteria to identify Indigenous audiences to engage with:

1. Known historical and/or contemporary use of the potential project area
2. Treaty and asserted rights in the area and recognized Red River Métis rights
3. Demonstrated interest in similar projects, based on engagement or feedback provided on past projects or initiatives
4. Anticipated inclusion in regulatory processes, including Crown consultation

Considering the criteria outlined above, as of March 2026, Manitoba Hydro has engaged the following 14 Indigenous audiences (Map 1-2):

- Birdtail Sioux Dakota Nation
- Canupawakpa Dakota Nation
- Dakota Plains Wahpeton First Nation
- Dakota Tipi First Nation
- Gambler First Nation
- Keeseekoowenin Ojibway First Nation
- Long Plain First Nation
- Peguis First Nation
- Rolling River First Nation
- Sandy Bay Ojibway First Nation
- Sioux Valley Dakota Nation
- Swan Lake First Nation
- Waywayseecappo First Nation
- The Manitoba Métis Federation (MMF)



Brandon Dispatchable Capacity Project

Project Components

Project Area

Engaged Indigenous Groups

Engaged Indigenous Groups

Landbase

- TransCanada Highway
- Yellowhead Highway
- Provincial Highway
- Provincial Road
- Railway
- First Nation
- Treaty Land Entitlement
- Non TLE Agreements
- TLE Acquisitions
- TLE Inquiries
- Canadian Forces Base Shilo
- City/Town

Organization Engaged:

- Manitoba Métis Federation

Manitoba Hydro acknowledges that the proposed Brandon Dispatchable Capacity project is located on Treaty 1 and Treaty 2 territory and on the traditional territories of the Anishinaabeg, Anishininewak, Ininew, and Dakota Oyate, and the National Homeland of the Red River Métis.

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date: May 11, 2026

0 10 20 Kilometres
0 10 20 Miles

1:800,000

Location of Indigenous Groups and Federal Lands

Draft/Confidential: For Discussion Purposes Only

Map 1-2

Manitoba Hydro remains open to adapting the list of Indigenous audiences should we learn other nations, communities, or Indigenous organizations are interested in the project.

Based on discussions with Province of Manitoba to date, our understanding is that Manitoba Hydro's list of engaged nations aligns with the nations that the province anticipates including in their Section 35 Crown Indigenous consultation process.

To-date, Manitoba Hydro has offered individual meetings with First Nations and the Manitoba Métis Federation to discuss how to best support Nation-led activities, including funding, to understand and document potential project effects and mitigation measures, consider Indigenous knowledge, and better understand key concerns and interests from each engaged Nation.

1.3.4 Engagement Activities Undertaken

1.3.4.1 Pre-engagement

Pre-engagement letters were distributed to 13 First Nations, the Manitoba Métis Federation, the City of Brandon, and the RMs of Elton and Cornwallis in November 2025.

The letter introduced the Brandon dispatchable capacity project, provided a high-level description of the project, and invited audiences to meet with the project team to discuss engagement preferences and early interests and concerns (see Appendix A)

1.3.4.2 Round 1 engagement

Round 1 engagement materials were distributed to all audiences identified in Sections 1.3.1, 1.3.2 and 1.3.3 in January and February 2026.

Communication about the project and upcoming engagement events included: letters and emails to audiences identified in Sections 1.3.1, 1.3.2 and 1.3.3 (see Appendix A), newspaper advertisements, social media posts and advertisements, radio advertisements, and the development of a project-specific webpage to share engagement events: www.hydro.mb.ca/brandonturbines.

In the Round 1, Manitoba Hydro sought feedback on the proposed project, including information on the proposed route segments, and understanding initial concerns and key areas of interest and opportunities. Manitoba Hydro provided a variety of in person and virtual opportunities to share project information and seek out feedback, recognizing that different audiences have different preferences, accessibility needs,

and levels of comfort with how and when they would like to be engaged. Round 1 engagement events are included in Table 1-3.

Table 1-3: Round 1 engagement events and opportunities

Date	Event	Notes
January 29 – March 30, 2026	Online survey	69 responses
February 19, 2026	Virtual information session	3 participants
February 24, 2026	Virtual information session	6 participants
February 25, 2026	Virtual information session	3 participants
February 28, 2026	In person open house	4 participants
March 3, 2026	In person open house	~30 participants
March 4, 2026	Virtual information session	10 participants
March 11, 2026	Information session with Technical Advisory Committee	20 participants
March 20, 2026	Multi-nation Indigenous engagement circle	14 participants

The presentation shared in the virtual information sessions and storyboards at the in-person open houses are shared in Appendix A.

In addition to the engagement events in Table 1-3, Manitoba Hydro has also held individual meetings with:

- The Rural Municipality of Elton
- The Rural Municipality of Cornwallis
- Peguis First Nation
- Manitoba Métis Federation
- Gambler First Nation
- Birdtail Sioux Dakota Nation
- Swan Lake First Nation

1.3.5 Results of Engagement and Key Feedback

As of March 2026, key feedback on the project has primarily related to:

- Training, employment and business opportunities for Indigenous and local businesses during project construction
- Potential impacts to existing and future land use, including agriculture and residential development
- Concerns related to groundwater impacts
- Interest from nearby residents/landowners to receive natural gas service for residential or commercial purposes
- Concerns related to fossil fuel use and associated increased emissions at the Brandon GS facility

A summary of the Round 1 engagement events and feedback gathered to date is detailed in the following sections.

1.3.5.1 Online Survey

The online survey on the project webpage received 69 responses and included a wide variety of feedback. While some participants expressed concerns with utilizing natural gas to meet future energy demand, other participants shared support for the project and its need.

Participants' concerns included the potential for increased greenhouse gas emissions, project cost, effects to agriculture, noise, and changes to road access during construction.

Some participants shared feedback on specific route segments and expressed interest in learning more about the project as it proceeds.

Some participants perceived the project as a good opportunity for the Brandon regional area and indicated that investing in a variety of diverse energy sources like this project will be beneficial for the province in meeting future energy demands.

1.3.5.2 Virtual Information Sessions

Participants at the virtual information sessions primarily asked questions related to the project scope (e.g., anticipated fuel sources, schedule and timelines, and potential for future upgrades). Participants shared feedback on the proposed route alternatives to the project, and shared concerns related to impacts to agricultural practices, including site-specific concerns on individual properties, as well as questions regarding easements for the pipeline right-of-way. Some participants shared their experiences with capacity constraints in the area and expressed support

for the project and an interest in potential opportunities to connect to natural gas infrastructure in the future.

1.3.5.3 In Person Open Houses

Participants at the open houses asked questions about the scope of the project including timelines and construction methods.

Participants expressed concerns about increased fossil fuel emissions because of the combustion turbine component of the project, including impacts to local and regional air quality.

Participants shared concerns about potential effects of the natural gas pipeline to agricultural operations and practices (e.g., tile drainage, soil transport, soil temperature changes in the vicinity of the pipeline, and interruptions to agricultural activities during construction).

Participants expressed concerns about increased fossil fuel emissions because of the combustion turbine component of the project, including impacts to local and regional air quality.

Participants also shared feedback on the potential route options proposed for the natural gas pipeline right-of-way, including planned and future developments and site-specific information regarding concerns on individual properties.

1.3.5.4 Technical Advisory Committee Information Session

During the Technical Advisory Committee information session, TAC participants asked questions about Manitoba Hydro's environmental assessment scope with a focus mostly on groundwater resources and climate change aspects.

Participants also discussed renewable fuels and the capability of the combustion turbines to utilize different fuel blends, and asked questions related to anticipated project timelines.

1.3.5.5 Multi-Nation Indigenous Engagement Circle

Manitoba Hydro invited the 14 Indigenous audiences engaged on the project to participate in collaborative discussions between and among nations and Manitoba Hydro to gather feedback to contribute to route selection, the environmental assessment, mitigation measures, and the environmental protection plan.

The engagement circle included a presentation on the project and the environmental assessment process from Manitoba Hydro and then guided participants through breakout groups to gather feedback and information.

Participants asked questions and shared feedback related to the need for the project, the scope of the project, and the licensing and engagement process. Participants shared feedback on historical events contributing to changes to the landscape and the relationships that First Nations peoples and Red River Métis citizens have with land in the project area, mapped areas of interest in the project area, and provided feedback on how the engagement process could be more meaningful.

Key feedback related to water quality and quantity for both surface water and groundwater, economic benefits to nations because of the project, and the importance of assessing the impacts of the project on culturally important species.

Related to areas of interest in the project area, participants shared concern about potential downstream impacts to the Assiniboine River, impacts to the movement of moose and elk, and a general routing preference to parallel the proposed gas pipeline along highways and existing infrastructure to reduce impacts to grasslands and wildlife habitat.

Participants shared ways the engagement process could be made more meaningful, including more Elder, youth, and leadership participation in engagement activities, sharing the agenda and project information materials more in advance, providing capacity funding to nations to support participation, and more inclusion of First Nation and Métis perspectives in the development and review of the environmental assessment process.

Participants expressed an interest in continuing to be engaged on the project, and learning more about potential future opportunities including monitoring, heritage fieldwork, and employment opportunities.

Information shared from participants at the engagement circle will inform Manitoba Hydro's regulatory submissions on the project, including developing an understanding of the potential project effects, as well as developing potential mitigation measures. Specific information gathered about the project area and activities undertaken along the project route will be taken into consideration as Manitoba Hydro continues to develop its preferred route.

Information shared will also be considered in the effects assessment for the valued components of the project and will be incorporated into the relevant assessment of effects and/or mitigation measures where possible.

1.3.6 Plans for Future Engagement

Manitoba Hydro began Round 2 engagement in May 2026.

Current engagement and notification activities on the project will include:

- Project-specific engagement webpage
- Open houses
- Virtual information sessions
- Online survey
- Online feedback portal
- Multi-nation Indigenous engagement circles
- Audience-specific meetings, upon request
- Project notifications and ongoing updates of project information through emails, letters, and/or phone calls

Manitoba Hydro will continue to seek feedback until summer 2026 for the combustion turbine and electrical transmission components, and until fall 2026 for the natural gas pipeline.

Engagement feedback will support development of two provincial submissions pursuant to *The Environment Act* (Manitoba):

- a Notice of Alteration for the addition of the three CT units and electrical transmission components to Manitoba Hydro's existing Brandon Combustion Turbine Plant regulated per *Environment Act* Licence Number [2497 R](#), and
- an *Environment Act* proposal for the natural gas pipeline.

Manitoba Hydro will continue to engage with all audiences after the noted regulatory submissions to support the development of the project-specific environmental protection plan, heritage fieldwork, and project benefits and opportunities, and is committed to working with all engaged audiences to engage throughout the project lifecycle.

Manitoba Hydro plans to host additional multi-nation Indigenous engagement circles on the project, building upon the feedback from the first engagement circle.

Participants from the first multi-nation Indigenous engagement circle identified an interest in continuing discussions on the heritage process. Future multi-nation Indigenous engagement circles will include discussions on identifying potential areas to monitor for cultural and heritage resources along the proposed route, as well as continuing discussions about potential monitoring opportunities.

Manitoba Hydro will continue to engage with Indigenous audiences on their interest and capacity in support of developing appropriate monitoring opportunities throughout the project.

1.4 Regional Assessment

There are no known regional assessments, conducted under Sections 92 or 93 of *The Impact Assessment Act*, for the area in which the project is located.

1.5 Strategic Assessment

No strategic assessments have been carried out that are relevant to the project. However, a Strategic Assessment of Climate Change (Government of Canada [GOC] 2020) conducted under Subsection 95(2) of the *Impact Assessment Act* could be applicable to the project.

2.0 Part B - Project Information

Manitoba Hydro owns and operates the Brandon Combustion Turbine Plant, which consists of two, natural gas fired, simple cycle combustion turbine (SCCT) units constructed at the Brandon GS site in 2002, with a combined capacity of 280 MW.

2.1 Project Purpose

The purpose of the project is to enhance the supply of reliable, dispatchable, back up generation to serve peak demand and act as a backstop resource (i.e., provides power on demand) during periods of drought, extreme weather, or during other system contingencies.

Dispatchable capacity resources are those that can be turned on and off quickly and easily to meet changes in demand. The project's dispatchable nature will contribute to providing a safe and reliable source of energy to address anticipated future shortfalls in the system during peak demand periods, such as the province's coldest winter days, when additional capacity is essential.

2.2 Project Need

Manitoba Hydro is responsible for providing safe, reliable energy to all Manitobans. Manitoba Hydro's 2025 Integrated Resource Plan (IRP)² plays a key step in preparing for tomorrow's energy needs (Manitoba Hydro 2026). An IRP is a widely used planning approach across North American utilities, adapted to each organization's specific circumstances, and serving as a strategic framework to guide investment decisions and broader energy planning over a defined period.

Manitoba Hydro's 2025 IRP outlines a 10-year development plan and provides a roadmap to support the province's long-term energy needs, including the addition of almost 30% more electricity capacity to Manitoba Hydro's supply.

Manitoba Hydro's 2025 IRP was undertaken as a crucial step in identifying new sources of capacity and energy to meet projected needs and combines data-driven insights and feedback from customers and interested parties to guide planning decisions.

² Manitoba Hydro's 2025 [Integrated Resource Plan](#)

The 2025 IRP indicates that Manitoba's projected peak electricity demand will exceed available capacity by 2029/2030, requiring approximately 1,760 MW of additional capacity by 2035.

The 2025 IRP also identified that dispatchable capacity resources will be an essential part of meeting demand in the next decade and recommends 750 MW of capacity from SCCTs by 2030.

To address the projected energy shortfall utilizing the guidance laid out in the IRP, Manitoba Hydro is pursuing the development of three additional combustion turbine units at the Brandon GS property to offer a reliable, dispatchable capacity resource that can be developed relatively quickly. The project will provide reliable access to energy to support the increasing need for power at critical times.

2.3 Physical Activities Regulation Description

The *Impact Assessment Act* has two regulations applicable to the project:

- Physical Activities Regulations
- Information and Management of Time Limits Regulations

The Physical Activities Regulations lists the activities and types of projects (designated projects) potentially requiring an impact assessment. Section 31 of the Regulations includes the following:

'The expansion of an existing fossil fuel-fired power generating facility, if the expansion would result in an increase in production capacity of 50% or more and a total production capacity of 200 MW or more'

The project is an expansion of a fossil fuel-fired power generating facility with an anticipated increase in production capacity of approximately 750 MW to the existing capacity of 280 MW, bringing the total production to approximately 1,030 MW.

The project is therefore considered a designated physical activity under Section 31 of the Physical Activities Regulation.

The Information and Management of Time Limits Regulations set out the information that must be included in a project description. This report sets out to provide all information required in Schedule 1 of the regulations.

The regulations also include criteria under which the legislated timelines can be suspended.

2.4 Project Components

This section outlines the existing infrastructure at the Brandon GS property as well as the project and project ancillary features.

The dispatchable capacity project consists of the following three main components:

1. a combustion turbine plant that includes three heavy frame simple cycle combustion turbines (SSCT), each with a capacity of approximately 250 megawatts (MW)
2. transmission interconnection:
 - a. two new, 230 kV interconnection transmission lines
 - b. rerouting of the existing Unit 6&7 transmission to terminate at Cornwallis station, instead of Brandon GS switchyard
 - c. Transmission line terminations at Cornwallis Station
 - d. Breaker replacements at Brandon GS switchyard
3. a new natural gas pipeline to serve the proposed SCCTs

Component 1 presents a modification of the existing Brandon Combustion Turbine Plant which was constructed within the Brandon Generating Station (GS) property and has been operational since 2002 per *Environment Act* Licence 2497 R.

The existing Brandon Combustion Turbine Plant is a Class 3 development per the Classes of Development Regulation, M.R. 164/88 under the *Environment Act* (Manitoba) since it is an electrical generating facility with a generating capacity greater than 100 MW.

A notice of alteration to *Environment Act* Licence 2497 R will be submitted to the provincial regulator in summer 2026, in pursuit of regulatory approval for the modification of the plant (i.e., addition of three new SCCTs).

Transmission lines of 115 kV and over but not exceeding 230 kV typically constitute a Class 2 development per the above-mentioned regulation. However, because of the short lengths of the proposed transmission interconnection footprints, the provincial regulator indicated a separate regulatory application would not be required for them, and that they could be included in the notice of alteration for the combustion turbine plant. The inclusion of transmission components in the notice of alteration is consistent with the scope of the existing licence.

Component 3 constitutes a Class 2 development per the Classes of Development Regulation, M.R. 164/88 under the *Environment Act* (Manitoba) since it involves a pipeline greater than 10 km in length.

An *Environment Act* proposal will be submitted to the provincial regulator in fall 2026, in pursuit of approval for the construction and operation of the new natural gas pipeline.

2.4.1 Existing Infrastructure Within the Brandon Generating Station

The Brandon GS property is south of the Assiniboine River on the east side of the City of Brandon, Manitoba, on land owned by Manitoba Hydro, within a portion of the southwest quarter section of Section 20 Township 10 Range 18 WPM, in an area zoned for heavy industrial use.

The proposed project will be within the property, east of existing infrastructure.

Initially developed as a coal fired generating station, construction started in 1958 with Units 1 - 4, each with a capacity of 33 MW. In 1970, Unit 5 was added with a capacity of 105 MW. Units 1 to 4 were taken offline in 1996 due to the cost of installing new environmental controls, while Unit 5 was upgraded to meet the new regulations. In the summer of 2018, Unit 5 was retired from active generation service and was converted to operate as a synchronous condenser.

The generator component of Unit 5 continues to operate as a synchronous condenser providing electrical support to the transmission system in the Brandon area.

Retired assets associated with Units 1 to 5 of the coal fired generating station remain at the property.

The existing Brandon Combustion Turbine Plant, built within the property in 2002, primarily consists of two simple cycle combustion turbine units (Units 6 & 7) which run on natural gas, with diesel backup.

A series of original asset components including a water treatment plant, water supply, cooling tower, and switchyard, shown on Figure 2-1, continue to function supporting the operation of Units 6 and 7.

2.4.1.1 Previous Provincial Environmental Assessments

The Brandon GS property is host to two developments licenced under *The Manitoba Environment Act* (Manitoba).

The property was initially developed for the Brandon Thermal Generating Station operated per *Environment Act* Licence No. 1703 RR which was initially issued in 1993 and has been revised twice, once in each of 1994 and 2019.

The Brandon Combustion Turbine Plant, built in 2002, is comprised of a building housing two natural gas-powered SCCTs (the existing Units 6 and 7), and is operated per *Environment Act* Licence No. 2497 R, which has been revised once in 2003.

In 2006, Manitoba Hydro conducted an environmental assessment, as required by the existing *Environment Act* licence (then 1703 R), in pursuit of continued operation of the coal fired unit 5 past 2006 (Manitoba Hydro 2006).

A notice of alteration was submitted in 2018 regarding the pending conversion of Unit 5 from coal combustion to synchronous condenser operation (Manitoba Hydro 2018). This was approved in 2019 resulting in the current *Environment Act* Licence No. 1703 RR.

Manitoba Hydro conducted an environmental assessment for the construction and operation of the existing CT Units 6 & 7 SCCTs (Manitoba Hydro 2000), the review of which culminated in the initial *Environment Act* Licence No. 2497.

An alteration to the development was proposed in 2003, resulting in the current *Environment Act* Licence No. 2497 R.

2.4.1.2 Anticipated project-related changes at Brandon GS

Changes anticipated at the Brandon GS property due to the project include the following.

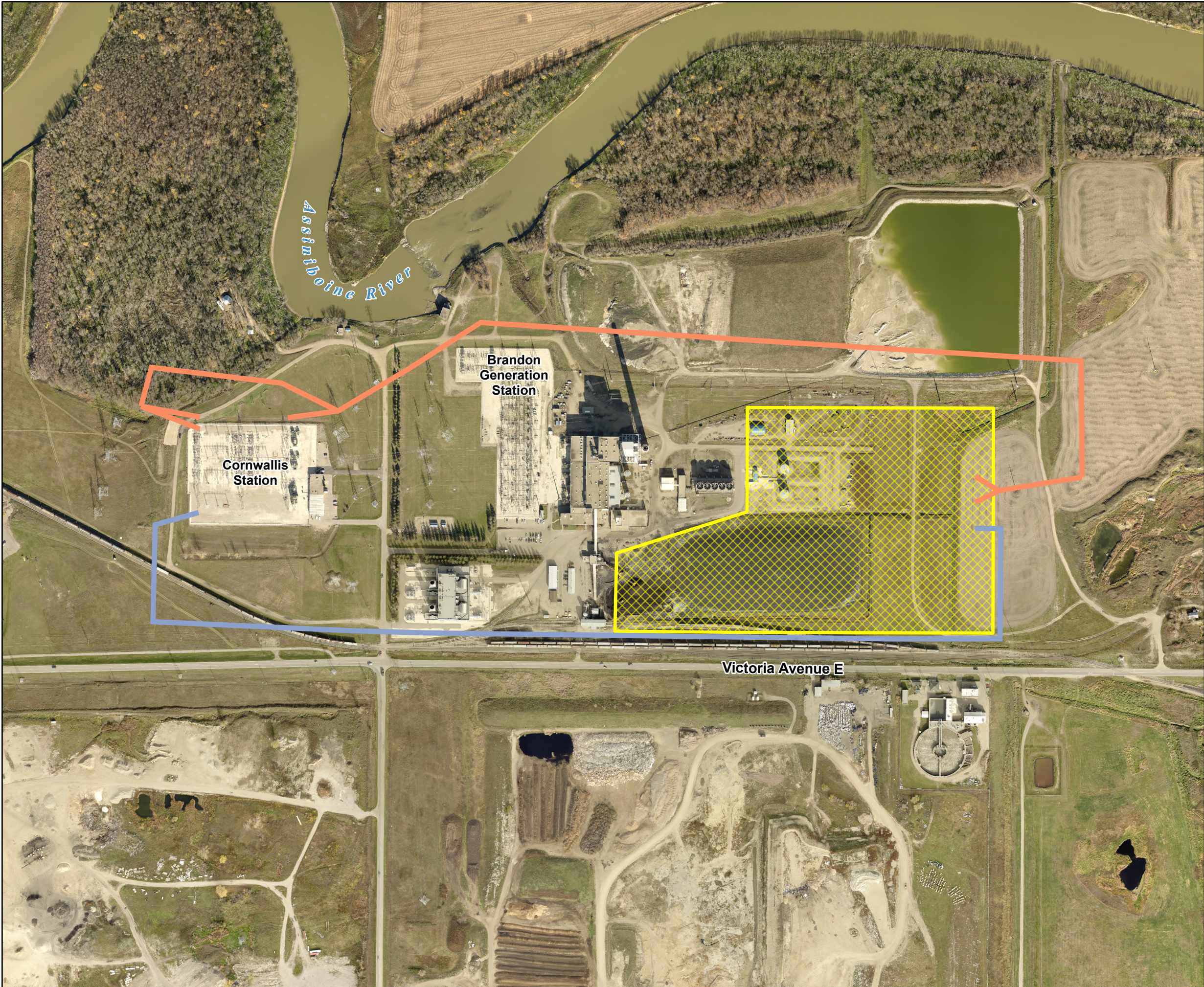
- The control room currently used for operation of SCCT units 6 and 7 will no longer be in use following the commissioning of the new generation plant.
- Water withdrawal from the Assiniboine River may not be required for continued operation of the existing SCCTs following the commissioning of the new system, which is anticipated to include a water treatment plant and the potential for a water pipeline from the current Brandon wastewater treatment plant.
- Operation of Unit 5, currently used as a synchronous condenser for the existing SCCTs, will cease following the commissioning of the new units.

Decommissioning of retired infrastructure is beyond the scope of this project except where required to facilitate execution.

Manitoba Hydro is currently working on an environmental site assessment of the former coal pile. Part of the area will be capped and designed as a laydown area for construction. The cap will consider current contamination as well as plans for rehabilitation.

There are currently no plans for any other work on retired infrastructure.

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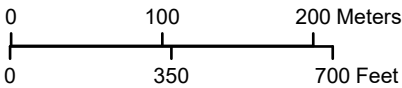
Brandon Dispatchable Capacity Project

Project Components

-  Double Circuit Line
-  Single Circuit Line
-  Approximate Footprint of New Combustion Turbine Infrastructure

Manitoba Hydro acknowledges that the proposed Brandon Dispatchable Capacity project is located on Treaty 1 and Treaty 2 territory and on the traditional territories of the Anishinaabeg, Anishininewak, Ininew, and Dakota Oyate, and the National Homeland of the Red River Métis.

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date: May 11, 2026



Transmission Interconnections

2.4.2 The Project

Approval is being sought for a power generation facility with an approximate capacity of 750 MW, consisting primarily of three simple-cycle combustion turbine (SCCT) units designed to operate on natural gas, with diesel available as a backup fuel.

The proposed power generation facility presents an addition to the existing two simple cycle combustion turbine units generation facility at the Brandon GS, which has been operational since 2002.

Ancillary components anticipated for the project include the following:

- Three 230-kV circuits on two new electric interconnection transmission lines (total length of approx. 3.46 km) will run between the three new SCCTs and nearby electric Cornwallis station. The transmission lines will have footprint on land within portions of southeast quarter section of Section 20 Township 10 Range 18 W1M, southwest quarter section of Section 20 Township 10 Range 18 W1M, and southeast quarter section of Section 19 Township 10 Range 18 W1M
- Electrical terminations at Cornwallis station in southeast quarter section of Section 19 Township 10 Range 18 W1M
- New natural gas pipeline, approximately 30 kilometres (km) long, running from Moore Park primary gate station to the property, traversing portions of land within the RMs of Elton and Cornwallis, and the City of Brandon. Moore Park primary gate station will also require upgrades
- Construction of new water supply infrastructure for the operation of the existing two and anticipated three new combustion turbine units
 - Manitoba Hydro is pursuing the use of treated wastewater sourced from the City of Brandon's Water Reclamation Facility, 2.5 km east of the Generating Station

While the ancillary transmission lines and pipeline facilities will support operation of the SCCTs, it is not clear they fall under the scope of this federal review.

The definition of "designated project" in section 2 of *the Impact Assessment Act* ("Act") includes not only the physical activities specified by the *Physical Activities Regulations* but also includes "any physical activity that is incidental to those physical activities".

Despite the broad reference to incidental activities, Manitoba Hydro's understanding is that the definition was not intended to capture physical activities that would not be subject to *Impact Assessment Act* review if undertaken on a stand-

alone basis. Including such facilities would create an inconsistency in interpreting the Act as a whole.

Regarding the assessment of transmission lines and natural gas pipelines under the Act, Manitoba Hydro notes that the *Physical Activities Regulations* only specify the construction of international power lines, certain interprovincial power lines and interprovincial or international pipelines as designated projects (see sections 39, 41). Accordingly, the proposed new transmission lines and pipeline facilities associated with the project would not be subject to review under the Act if undertaken on their own, as they are intraprovincial facilities.

As explained in more detail in section 4.3.2.2 of this document, the environmental effects of these facilities are being thoroughly assessed and require approval under separate provincial processes pursuant to *The Environment Act (Manitoba)*.

Despite the uncertainty regarding their characterization as part of the “project”, Manitoba Hydro is including information about these ancillary facilities in this document to provide further context and understanding of the project.

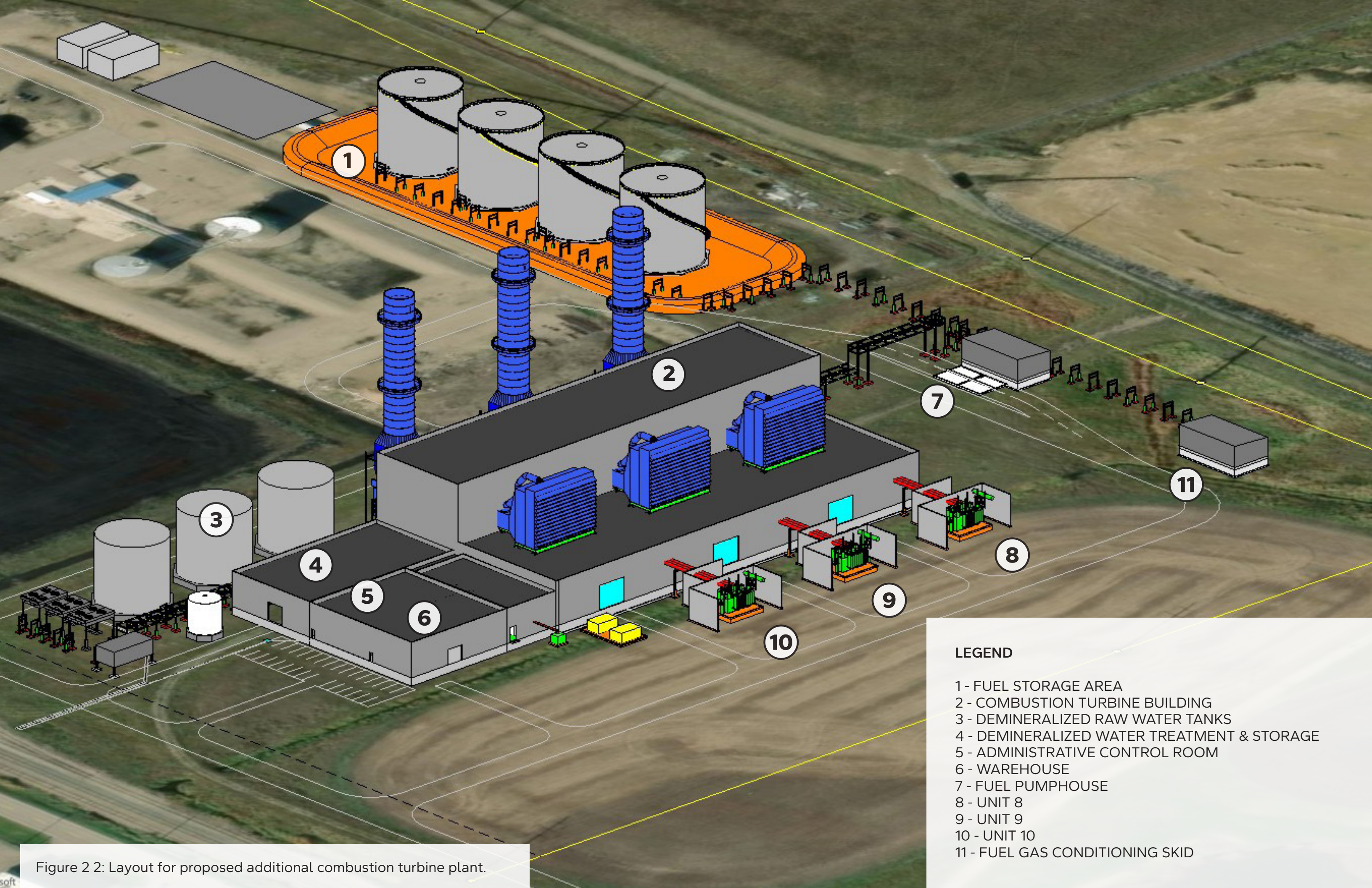
2.4.2.1 New combustion turbine plant building and ancillaries

The project would require a range of new structures to support the SCCT generators and associated balance of plant components (Figure 2-2). Below is a description of the key structures:

1. **Powerhouse:** a winterized space that fully encloses all units plus space for maintenance disassembly, space for balance of plant systems, a powerhouse crane, and is clear span with minimal columns. The structure is generally equivalent to a large industrial building with major structural elements.
2. **Administration Building:** includes a control room, office space, meeting room, lunchroom, washroom/locker room, maintenance shop, hot and cold storage. The building would be a separate yet connected structure from the powerhouse building as it requires a simpler single story steel building design.
3. **Water Treatment Building:** includes space to fully enclose the water treatment plant system consisting of clarifiers, demineralization system, and pumps. The building would be separate from the administration building and powerhouse building.
4. **Electrical Building:** includes space to house all electrical controls and associated equipment.

5. **Exhaust Stacks:** includes one exhaust stack per generating unit, located directly adjacent to the unit on the exterior of the powerhouse building. It would be of medium height and composed of steel.
6. **Diesel Fuel Tanks:** includes large industrial sized tanks made of steel. To improve operability there would be 2 to 4 individual tanks that are interconnected. The fuel storage tanks are required to be enclosed within a containment dike to manage potential fuel spills. The total onsite diesel storage capacity will be 17,000 m³ to enable operation of Units 6 & 7 and the three new units for 72 hours

The four primary building structures would be co-located near each other and interconnected with weather enclosed walkways to facilitate effective operations, particularly during winter operations.



LEGEND

- 1 - FUEL STORAGE AREA
- 2 - COMBUSTION TURBINE BUILDING
- 3 - DEMINERALIZED RAW WATER TANKS
- 4 - DEMINERALIZED WATER TREATMENT & STORAGE
- 5 - ADMINISTRATIVE CONTROL ROOM
- 6 - WAREHOUSE
- 7 - FUEL PUMPHOUSE
- 8 - UNIT 8
- 9 - UNIT 9
- 10 - UNIT 10
- 11 - FUEL GAS CONDITIONING SKID

Figure 2 2: Layout for proposed additional combustion turbine plant.

2.4.2.2 Simple Cycle Combustion Turbines

The three SCCTs, each with approximately 250 MW capacity, and auxiliary equipment will have the following main features and be installed in a single new building east of existing structures at the Brandon GS property.

- Combustion turbine and generator
- Air intake system with a filter system, a safety blow-in door and silencers
- Anti-icing system to preheat the intake air in cold and damp weather conditions to avoid icing on the filter and first compressor stages
- Fuel gas block containing the hardware for natural gas main shut-off, natural gas straining, natural gas pre-heating and natural gas relief. It supplies the natural gas to the control valve block
- Fuel oil block with a diesel fuel high-pressure pump, containing the hardware for diesel fuel main shut-off, diesel fuel filtering and diesel fuel return. It will supply the diesel fuel to the control valve block
- NO_x water block with a demineralized water high-pressure pump, containing the hardware for NO_x water main shut-off and NO_x water return. It will supply the NO_x water to the control valve block for natural gas and diesel fuel firing modes.
- Control valve block including:
 - natural gas and diesel fuel system for regulating the supply to the burner
 - NO_x water system for regulating the supply to the burner
 - hydraulic trip valve unit for protecting the combustion turbine unit
- Auxiliary block containing the hardware for the lube and power oil supply, consisting of lube oil section, power oil section, lube/power oil tank, and plate type heat oil/water exchanger
- Air-cooled closed loop lube oil cooling system. The generator air coolers and the plate type heat exchanger will be supplied with cooling via a water/glycol mixture in a closed system. The water/glycol mixture will be cooled by the air/water/glycol cooler located outside the gas turbine building. Lubricating oil will be cooled by a plate heat exchanger and the generator cooling air by air/water/glycol coolers located in the base of the generator
- Compressor off-line/on-line cleaning equipment used for periodic washing of the compressor to improve efficiency and power output.
- Indoor acoustical enclosures - both the turbines and generator will be in an acoustical enclosure to mitigate noise
- Exhaust stack, with silencer
- Electronic control system with the capability to, start-up and shut down the SCCT unit, control speed, control frequency/load with subordinated temperature and

pressure control, safety and protection control, and monitoring and conditioning of various on-line measured parameters

- Static frequency converter to enable the use of the generator as a synchronous electric motor to start the combustion turbine unit

The major utilities required to operate the power generation plant are natural gas, diesel fuel, treated water, compressed air, fire suppression water (for the plant building and the combustion turbine units).

Design of an emissions monitoring system is currently underway that will ensure compliance with all required targets. It will be designed to measure emissions characteristics, including oxygen, NO_x, and carbon monoxide (CO).

Additional features of the CT system are expected to include:

- Fire detection and suppression systems.
- Fin coolers to cool and maintain temperatures of operating equipment by pumping a mixture of water/glycol through radiator fans to discharge heat.
- Compressed air supply system including air compressors and holding tanks.
- Emergency standby diesel generator to supply power for the required safe and controlled shut down of all project equipment in the event of an outage of the 230 kV provincial electricity grid supply.
- Noise mitigation components, with equipment-specific specifications to be determined as the project progresses.
- Protection and control equipment

2.4.2.3 Water Supply and Treatment

Raw water is currently pumped from the Assiniboine River to the Brandon GS under a licensed water withdrawal for operation of the existing SCCT units 6 and 7.

The existing water intake, pumphouse, and piping are undergoing refurbishment, to maintain operations of units 6 & 7 until the new system is constructed.

The anticipated new system will supply water for all five units (i.e., existing two units and anticipated three new units).

Manitoba Hydro is currently working with the City of Brandon on an agreement to use treated wastewater as the new water source to supply all five units.

Currently, the City of Brandon releases treated wastewater to the Assiniboine River approximately 2.5 km east of the Brandon GS.

Infrastructure required to enable use of treated wastewater for the SCCTs would include a new wastewater diversion structure, pumphouse, and approximately 2.5 km force main (Figure 2-3).

Onsite water storage (tanks or reservoir) provides a buffer for pumping and treatment as well as ensuring availability of water in case of temporary interruptions of supply. There is potential for the storage of demineralized water as well as storage of treated wastewater. Details will be determined during final design.

Potable water and fire water will be sourced from the City of Brandon. No other sources of water are anticipated

Treated wastewater is demineralized for injection into combustors of combustion turbines to lower the combustion temperature which decreases the production of NO_x. The demineralized water is vaporized. The reject water from demineralizing will be managed, either by sending it back to the Water Reclamation Facility or by sending it to the existing lagoon.

It is possible water could be sourced from the Assiniboine River. If after further investigation, using City of Brandon treated wastewater proves not feasible, then Manitoba Hydro would design a new system using Assiniboine River water. This would include new water intake in the river and associated piping and pumps.

2.4.2.4 Civil Works

Civil works at the site will include roadways, parking, drainage, flood protection/diking, and security related features (e.g., fencing and access points).

2.4.2.5 Laydown Area

Manitoba Hydro is currently working on an assessment of the former coal pile. Part of the former coal pile (see Figure 2-3) will be capped and designed as a laydown area for construction. The cap will consider current contamination as well as plans for future rehabilitation.



BRANDON GENERATING
STATION

VICTORIA AVE E

PUMP WATER 2.5 KM

CITY OF BRANDON WATER
RECLAMATION FACILITY

65TH ST E

ASSINIBOINE RIVER

Figure 2-3: City of Brandon wastewater effluent and potential forcemain.

2.4.2.6 Ancillary Systems

The main ancillary systems associated with the new combustion turbine plant are a closed loop glycol/water cooling system to provide generator cooling, potable water system expansion, fire suppression water, an instrument air system, domestic solid waste, turbine wash system, and lubricant oil storage infrastructure.

Domestic wastewater will likely be disposed of by connecting to the City of Brandon municipal wastewater system or a holding tank may be used.

2.4.3 Transmission Interconnection

Interconnection transmission line studies are currently underway. The scope of work, based on concept level pre-planning, includes a transmission interconnection between the proposed SCCTs on the east end of the Brandon GS to Cornwallis station on the west end to accommodate line terminations, and breaker replacements in the switchyard.

Three circuits would be required to connect the three combustion turbine units to Cornwallis station on two overhead transmission lines (Map 2-1).

To integrate the additional units into the local electrical grid, upgrades at Cornwallis station will be required.

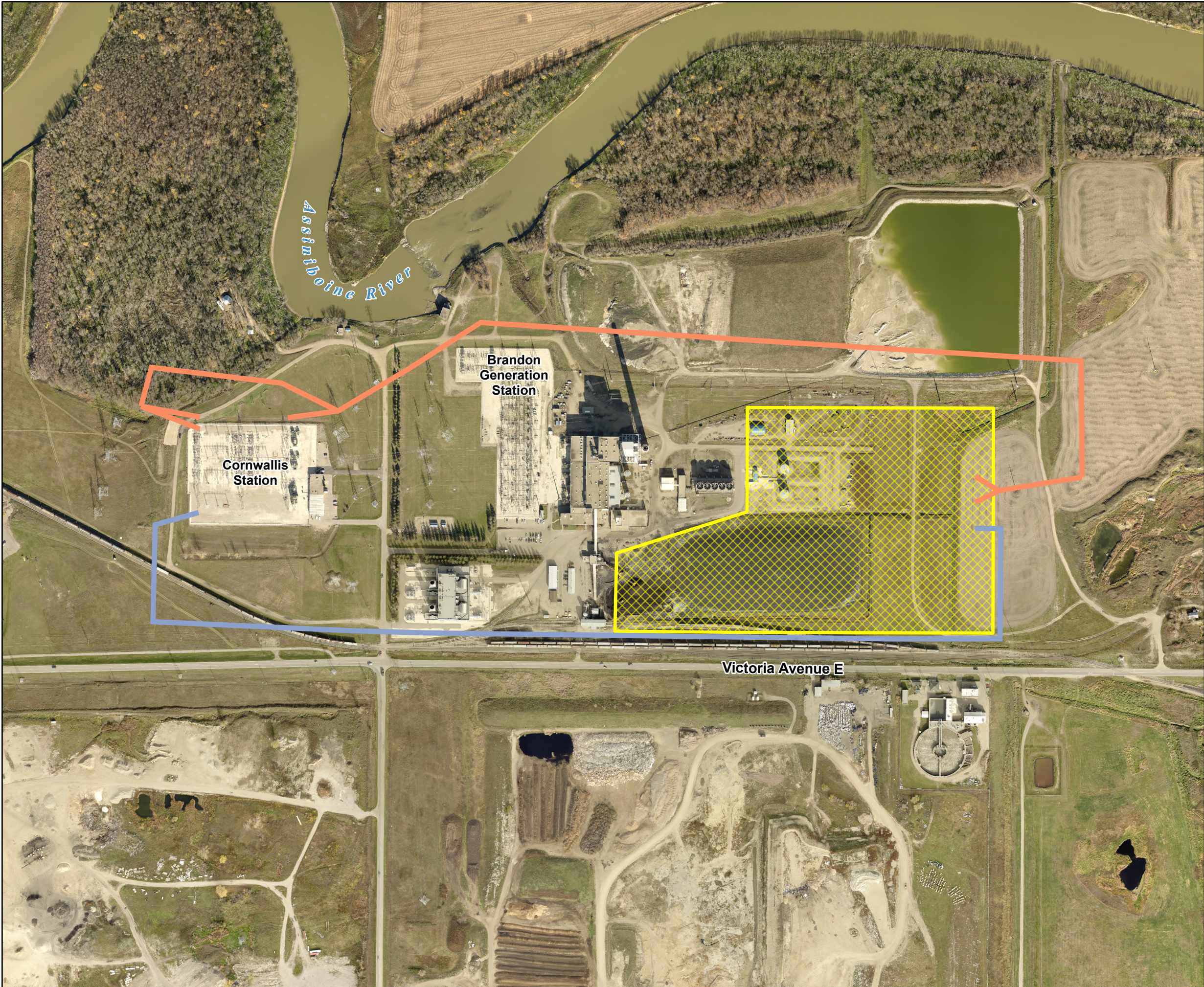
These upgrades include new 230 kV breakers to support the new generation connections.

Additionally, replacement of various 115 kV circuit breakers located in the Brandon GS substation yard will be required as they will no longer meet the required short circuit rating with the addition of the new generation.

A berm which also serves as a road, with a footprint north of Cornwallis station, will be realigned to accommodate expansion to the north.

The new transmission lines, and associated substation work will be included as part of the Notice of Alteration submitted to the provincial government to Alter the existing Brandon GS *Environment Act* license 2497r.

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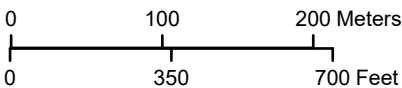
Brandon Dispatchable Capacity Project

Project Components

-  Double Circuit Line
-  Single Circuit Line
-  Approximate Footprint of New Combustion Turbine Infrastructure

Manitoba Hydro acknowledges that the proposed Brandon Dispatchable Capacity project is located on Treaty 1 and Treaty 2 territory and on the traditional territories of the Anishinaabeg, Anishininewak, Ininew, and Dakota Oyate, and the National Homeland of the Red River Métis.

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date: May 11, 2026




1:5,000

Transmission Interconnections

2.4.4 Natural Gas Supply

The existing combustion turbine units 6 and 7 are serviced by an existing natural gas pipeline that does not have capacity to also provide natural gas for the planned three new SCCTs. As a result, a new pipeline is proposed to service additional CTs. The new pipeline will run from Moore Park primary gate station on the TC Energy mainline north of Brandon, to the Brandon GS (Map 1-1).

The overall pipeline length is approximately 30 km and will have an approximate diameter of 20" inches.

A new gate station will be required at each of the south side of the TC Energy Mainline (Figure 2-4) and Brandon GS.



Figure 2-4: Moore Park primary gate station

Pipelines greater than 10 km in length fall under the Classes of Development Regulation, M.R. 164/88, under The Environment Act, C.C.S.M. c. E125. Manitoba Hydro will be submitting the pipeline and associated station work to the provincial regulator, to obtain an *Environment Act* license.

2.5 Project Activities

The project involves three main components, the combustion turbines, the transmission interconnection, and the pipeline. The sections below describe the activities required to design, build and operate these three main components. Unless otherwise noted, the activities apply to all components.

2.5.1 Construction

The following sections describe project activities that will take place during the construction phase of the project.

2.5.1.1 Mobilization and workforce presence

Mobilization includes the movement of Manitoba Hydro and contractor staff, vehicles, and equipment to the job site.

It also includes the presence of workers staying in the local community, including their commute to and from the work site.

The capacity of the local community to support the workforce and availability of adequate short-term accommodations is likely sufficient, so there is little potential for a work camp. This will be confirmed during detailed design.

Mobilization will be ongoing throughout the construction phase as different types of equipment will be required for specific project activities. Based on the planned construction schedule, as shown in Table 2-1, there is the potential for over 300 people to be in the area at peak.

However, based on high level planning, the main workforce for each component will likely not overlap.

Table 2-1: Anticipated workforce for the project and ancillary components

Activity	Average workforce	Peak workforce
Generation plant construction	20	125
Transmission line construction	30	100
Pipeline construction	20	100

2.5.1.2 Access

The station is presently accessible via a permanent all-weather road access from a municipal road running off Victoria Avenue.

A new access point may be developed on the east side of the Brandon GS to accommodate construction and serve as permanent access to the new facilities.

Access for the natural gas pipeline right-of-way will typically be from adjacent or intersecting roadways, existing approaches, or trails. The development of construction access routes, drainage facilities, and erosion and sediment control plans will be developed by the contractor, subject to provincial and municipal regulations, the project *Environment Act* Licence, and the access management plan referenced in the Environmental Protection Program. Manitoba Hydro will secure all provincial permits as required. Manitoba Transportation and Infrastructure will be contacted for access from provincial highways.

2.5.1.3 Machinery Operation

Machinery operation may include excavators, loaders, dozers, graders, backhoes, excavators, cranes, semi-trailers, dump trucks, tracked vehicles, pick-up trucks, drill rigs, bucket trucks, telehandlers, tensioners, pullers, person lifts, all-terrain and support vehicles as well as generators, compressors and other small construction equipment, as required.

2.5.1.4 Material Hauling

Construction equipment and materials will be transported by rail and along existing roads to a central compact on-site staging or laydown area. From the storage area, materials and equipment will be transported to the construction site.

Marshalling yards may also be established near the pipeline route for the storage and assembly of construction materials and equipment for eventual deployment to the construction site.

2.5.1.5 Site Preparation

Early works include the physical preparation of the site and installation of supporting infrastructure for project equipment. Site preparation activities will include but are not limited to:

- Surveying and flagging the right-of-way pipeline alignment, above grade valve site/control points, and areas for the temporary work areas
- Installing erosion and sediment control measures

- Installing temporary stormwater management systems and transition to permanent stormwater management systems over the course of construction
- Clearing of vegetation and stripping of topsoil for limited areas including the administration building including warehouse and maintenance shops, and for the gas pipeline connection and gas compressor. Some areas will be restored after construction and vegetation will be re-established
- Grading (rough grading adjustments) to subgrade elevation. The objective of site grading will be to balance cut/fill within the site boundary. Where slope stability cannot be achieved with natural grading, retaining walls will be used in areas to support finished grades and other project features
- Removing topsoil, on agricultural land, in a manner to reduce mixing of topsoil with subsoil and either stored in stockpiles or windrowed along the right-of-way in locations where it will not be disturbed or contaminated. The topsoil will be stripped to the full depth of the topsoil in all excavation area
- Preparing the site roads for use during construction
- Resurfacing of the contractor parking lot and laydown areas, if required
- Excavating, with most expected to be shallow in nature. Deeper excavations will be required in some locations depending on the final foundation designs, and may require some dewatering
- Installing grounding grid, buried conduits and ducts, and buried pipes and cables

2.5.1.6 Foundation Installation

Combustion turbines

Concrete piles and slab on grade foundations will be required to support installation of structures and equipment at the station. Foundations to attach steel lattice structures to support electrical components and bus work will largely consist of concrete caps on deep piles.

The piles will be driven or cast in place. Slab on grade foundations without piles may be used for low-seated equipment. Slab on grade foundations supported by multiple piles may be used for standalone equipment such as transformers, switches and reactors.

Transmission lines

Self-supporting lattice steel structures will be supported by either mat, cast-in place, or helical pile foundations. Helical pile foundations will involve individual piles or pile

groups, for each leg of the structure. Granular backfill materials required for construction will be purchased from local suppliers.

Cornwallis station

Concrete piles and slab on grade foundations will be required to support installation of structures and equipment at the station. Foundations to attach steel lattice structures to support electrical components and bus work will largely consist of concrete caps on deep piles.

Slab on grade foundations without piles will be used for low-seated equipment which can tolerate foundation movement.

2.5.1.7 Equipment Placement and Installation

Once the site is ready to receive the equipment, placement and installation activities will include but are not limited to:

- Final concrete finishing, cable placement, and grouting
- Use of cranes and other equipment to offload, place, and secure major equipment to their respective foundations
- Erect scaffolding around major equipment for worker access, structural steel for building construction, and install cable trays
- Install aboveground piping and ductwork and perform welding/pipefitting
- Pull electrical and control cables through conduit/duct/pipes or cable tray, and cable inspection
- Terminate low/medium and high voltage cables
- Installation of acoustic walls
- Install permanent lighting and fencing

Conventional building methods will be used for construction of the administration building.

A variety of manufactured steel structures will be installed for new equipment. Standalone equipment required for Cornwallis station will have steel supporting structures manufactured, supplied and then attached to foundations.

2.5.1.8 Oil Filling

Transformers will likely be transported to site empty and filled on site by vacuum filling.

The process of vacuum filling a transformer employs the force of atmospheric pressure to move insulating oil. The process works when a low-pressure area created inside a transformer tank is connected to an oil filled storage container vented to normal atmospheric pressure. Due to the pressure differential, the oil flows into the transformer tank to equalize and fill the low-pressure area.

The oil filling procedure also involves circulating the oil through a processing unit where the oil is heated, dehydrated and degassed before entering the transformer.

2.5.1.9 Oil Containment

Manitoba Hydro will conduct an oil containment assessment for the station to determine the level of containment required. Oil containment will meet the requirements of the following guidelines.

- IEEE Standard 980-1994 (R2001) *"IEEE Guide for Containment and Control of Oil Spills in Substations"*
- USDA Bulletin 1724E-302 *"Design Guide for Oil Spill Prevention and Control at Substations"*
- Canadian Councils of Ministers of the Environment (CCME) code of practice (CCME 2003)

2.5.1.10 Transmission Towers

Tower assembly

Once the site is prepared and foundations are in place, tower structures can be constructed and erected. Tubular steel stand structures will be used to support major equipment. Steel lattice structures are typically taller to accommodate clearances for required voltages on equipment such as bus conductors. Tower structures are generally assembled onsite or in designated marshalling yards and transported to the construction site by truck or helicopter. Insulators will be attached to the cross-arms of each structure prior to structure erection.

Conductor stringing

Once the towers are erected and the structures in the station are erected, insulator strings will be attached to the structure cross-arms. The insulators will separate the conductors from the structures. Conductors will be transported to the site in reels, then suspended from the insulator strings and tensioned by machine to provide the ground to conductor design clearances specified at the mid-span points of maximum sag.

To create a continuous conductor, the ends of conductor reels are spliced together by use of implosive sleeves. The implodes create a flash and a loud boom like the sound of a 12-gauge shotgun blast (about 110 decibels).

The installation of implosive sleeves in the province of Manitoba must be supervised by a certified blaster with a valid certified Manitoba Blaster's Certificate (High Energy Joining) and Transportation of Dangerous Goods certification.

The detonation of implosive sleeves is generally timed to occur on all the conductors that need splicing at splicing locations at the same time to minimize the frequency and amount of noise generated. Nearby residents and businesses will be notified in advance of the use of implosion sleeves.

2.5.1.11 Pipeline Installation

Topsoil stripping: On agricultural land, topsoil will be stripped in a manner to reduce mixing of topsoil with subsoil and either stored in stockpiles or windrowed along the right-of-way in locations where it will not be disturbed or contaminated.

Installation: Most of the pipeline will be installed in an open-cut trench. The exception to this would be for areas such as road crossings, existing underground utilities, and water bodies where the pipe will be installed by horizontal directional drilling.

Stringing: Once the construction right-of-way has been sufficiently cleared and topsoil has been stripped, sections of pipe are laid out along the right-of-way.

Welding: Welding will be required for pipe joints, reducers, elbows, flanges, etc., including aligning, necessary cutting, and bevelling.

Lowering: The pipe is lowered into the trench utilizing a pipelaying crane or excavator.

Backfilling: After the pipeline is placed in the trench, backfilling would be completed by first placing sub-soil and then topsoil to minimize admixing.

Pipeline testing: Once the trench has been partially backfilled and prior to putting the pipeline into service, the pipeline will be pressure-tested following Manitoba Hydro Natural Gas Standard 620.05, to test for strength and leaks. Water will be used as the test medium (i.e., hydrostatic pressure testing).

2.5.1.12 Hazardous Material Transportation and Handling

Fuels and hazardous materials likely to be used during construction include:

- Diesel / gasoline (construction equipment / vehicle fuel)
- Propane (heating)
- Paints / epoxies / solvents (control building)

- Mineral oil (cooling insulating the transformer)
- Sulphur hexafluoride / carbon tetrafluoride (interrupting electrical faults)
- Chromated copper arsenate (wood preservative)

Management procedures for specific hazardous materials will follow procedures laid out in the project specific construction and operational environmental protection plans.

2.5.1.13 Waste Disposal

Wastes will be managed, collected and disposed of in accordance with current provincial and/or federal regulations. Protective measures will include general guidelines for non-hazardous waste management. Opportunities to reduce, reuse, and recycle the wastes will be taken whenever possible. Wastes will be stored in designated areas and disposed of regularly to reduce potential for unsafe conditions and adverse impacts. Typically, waste will be disposed of by haulage to an existing permitted waste disposal site.

2.5.1.14 Clean up and Final Restoration

The final steps in construction are clean-up, demobilization and if required, rehabilitation and landscaping activities.

Construction clean-up will occur throughout construction. As soon as possible after completion of construction, the sites will be cleaned up and left in standard operating condition. All non-toxic materials will be disposed of using existing, appropriately licensed local facilities.

Material supply and waste handling will be subject to conventional Manitoba Hydro codes of practice and relevant provincial and federal legislation. All clean-up and rehabilitation activity will be subject to the requirements of the environmental protection program to be developed for the project.

Demobilization includes the movement of Manitoba Hydro and contractor staff, vehicles, and equipment from the job site, as well as clean-up (and if required rehabilitation) of the right-of-way, marshalling or fly yards, and access routes.

Once the project is constructed, all excess materials and equipment, including debris and unused supplies, will be dismantled, if required, removed from the site, and disposed of according to provincial and municipal regulations.

Rehabilitation of any disturbed sites will be undertaken as required. All cleanup and rehabilitation activity will be subject to the requirements of the project environmental protection program.

2.5.2 Operations and Maintenance

Manitoba Hydro will own and operate the SCCTs and associated infrastructure at the Brandon GS. Day to day operation and maintenance at the Brandon GS will be provided by Manitoba Hydro staff including operators, engineers, and support staff, totaling approximately 40 people.

The new CTs would be a generation resource designed for peaking, partial load, quick response, brief and extended operations as well as providing support for drought or other contingency events.

Each unit would be capable of frequent start-ups and shutdowns as well as occasional full-load rejections. The CTs would be capable of starting in approximately 10 minutes, able to operate as synchronous condensers to provide voltage support, have flexibility for potential conversion to combined cycle in the future, and flexibility for alternative fuel integration.

On average, the anticipated annual utilization factor for all of Manitoba Hydro's CT units (both new and existing) is expected to be up to 5% most years, more during events such as drought.

The new CTs can be expected to support Manitoba's system in the following ways:

- Capacity during winter cold snaps
- Energy during winter cold snaps
- Energy during extreme droughts
- Forced, Planned, Extreme, or Multiple Contingencies (e.g., events such as an extended HVDC outage)
- Back stop variable wind generation (i.e., CT operation may be required to back stop wind generation from time to time to support system energy and capacity needs)
- Short term market support & opportunity revenue (i.e., where Manitoba Hydro may be called upon to provide capacity to support contingency events within the combined MH-MISO system)
- Transmission operational support (i.e., operates in synchronous condenser mode to provide reactive power)

2.5.3 Decommissioning

The plant and associated components are being designed to operate within an expected economic life of 30 years. Precise timing for the decommissioning and abandonment of the facility cannot be predicted at this time, and this life span may

be extended as approved. When a decision is made to decommission the plant, a plan will be developed and submitted to regulatory authorities for approval. This plan will recognize the existing decommissioning standards of the time.

Any asset to be decommissioned will be disconnected from the system to allow for the safe dismantling of the project.

Salvage will involve removing and salvaging materials to be removed from site.

Soil will be excavated surrounding foundations allowing them to be cut off below grade. Surrounding soil will be used to backfill the excavation and graded to allow for re-vegetation.

After dismantling, high value components will be removed for re-use or recycling. The remaining materials will be reduced to transportable size and removed from the site for disposal. Waste handling and disposal will be subject to conventional Manitoba Hydro codes of practice and relevant provincial and federal legislation.

Following removal, the footprint will be restored to the surrounding land use.

Disturbed areas will be graded to original contours, and the soils will be restored to a condition consistent with intended land use.

Disturbed areas will be rehabilitated consistent with the rehabilitation and invasive species management plan developed for the project. This will include the restoration of any access no longer required.

If seed is applied, any erosion and sediment control measures required on-site would be left in place until seed is fully established, as determined by an environmental officer.

2.6 Production Capacity

The plant would operate with the following approximated parameters, shown in Table 2-2, which are preliminary and will be finalized once the turbines and generators are procured

Table 2-2: Generation technical parameters		
Description	Units	Value
Nameplate Capacity	MW	700**
Accredited Firm Winter Capacity	MW	744**

Accredited Firm Summer Capacity	MW	654**
Average Annual Utilization Factor	%	<1.0*
Average Drought of Record Utilization Factor	%	16*
Average Annual Energy Production	GWh/year	<65*
Average Drought of Record Energy Production	GWh/year	1050*
Start-up Time	Minutes	10
Projected Service Life	years	30
*Based on the operational requirements of the Manitoba Hydro integrated Generation and Transmission System resulting in an annual utilization factor as much as 5% in most years and as much as 25% during the drought of record, or the year after. The Average Annual Utilization Factor value does not include extreme conditions. **Capacities assumed in 2025 Integrated Resource Plan. These capacities vary among turbine and generator manufacturers.		

2.7 Schedule

The anticipated project schedule is presented in Table 2-3.

Table 2-3: Project schedule

Date	Project phase
Q4 2025 to Q2 2026	Field surveys and technical studies
Q2 to Q3 2026	Regulatory approval application submissions
Q2 2025 to Q1 2028	Detailed engineering and procurement
Q4 2027 to Q1 2031	Construction
Q2 2030 to Q1 2031	Start up / commissioning
Q2 2030 to Q1 2031	In service

2066 to 2068	Project decommissioning and abandonment (after estimated (30-year life)
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2.8 Project Alternatives

2.8.1 Alternative Means of Carrying out the Project

Alternative means of carrying out the project were considered in respect of:

- Combustion turbine facility siting
- Transmission line routing
- Pipeline routing

2.8.1.1 Combustion Turbine Facility Siting

Initial planning for the project included looking at alternative locations for the proposed power generation facility.

Compared to other locations considered, the Brandon GS has two key advantages. The brownfield nature of the site is anticipated to result in expedited project timelines, enabling an in-service date as early as 2030, critical for meeting future capacity requirements.

The location is near a gas supply, water supply, existing transmission lines and substation which all reduce costs for developing that type of infrastructure.

Transmission Infrastructure

Existing transmission infrastructure near the site can accommodate additional capacity with some upgrades and minimizes new transmission infrastructure construction, reducing schedule risk and cost.

Additional generation in southwest Manitoba enhances grid reliability, supports renewable integration, and alleviates transmission constraints caused by regional load growth and exports.

There are benefits to operational efficiency including:

- Operational expertise to operate new SCCTs
- Modernization of existing facilities enables remote operations for Units 6 & 7, reducing some ongoing O&M costs
- Synchronous condensing capability of the potential new units would facilitate the retirement of Unit 5, eliminating ongoing operation and maintenance costs

and avoiding occasionally operating Units 6 and 7 at low power output (4 MW) to provide reactive power, reducing greenhouse gas emissions

Environmental & Permitting

Brandon GS is a brownfield site in an industrial zone which may streamline the approval process compared to a greenfield site, preserving schedules for an earlier in-service date.

Access to existing water source and water license (Assiniboine River) supports operational needs. Manitoba Hydro is also exploring using treated wastewater from the City of Brandon.

Cost & Schedule

The site is fully serviced with robust transportation infrastructure, including road and railway access, which facilitates the movement of materials and personnel. The site is sufficiently large to accommodate additional dispatchable capacity infrastructure and is owned by Manitoba Hydro.

Using the existing infrastructure can result in a reduced development schedule when compared to a greenfield site, positioning Manitoba Hydro to fulfill the demand for new capacity by 2030. The limited upgrades required for the existing transmission infrastructure are a significant factor contributing to these scheduling benefits.

Regional & System Support

The addition of new dispatchable generation in southwest Manitoba will help accommodate regional load growth and alleviate related transmission pressures.

The capability of additional generation capacity to produce real power will also provide thermal loading relief on transmission lines in southwest Manitoba during peak periods.

Comparison to Alternative Locations

The Selkirk Generating Station has transmission infrastructure components nearing end-of-life and could require significant investment if new CTs were developed there.

Like new CTs at Brandon GS, a new pipeline would be required to fuel the CTs of a comparable generating capacity due to the existing limited gas supply capacity for the existing pipeline.

A greenfield site would require land acquisition if developed on property not currently owned by Manitoba Hydro. New transmission infrastructure and water

supply infrastructure may result in longer development timelines and higher capital costs relative to developing at Brandon GS.

2.8.1.2 Transmission Line Routing

The routing methodology used for this project is based on the EPRI-GTC Overhead Electric Transmission Line Siting Methodology (EPRI-GTC 2019).

The process focussed on alternative route evaluation which led to the selection of a preferred route.

Two models were used:

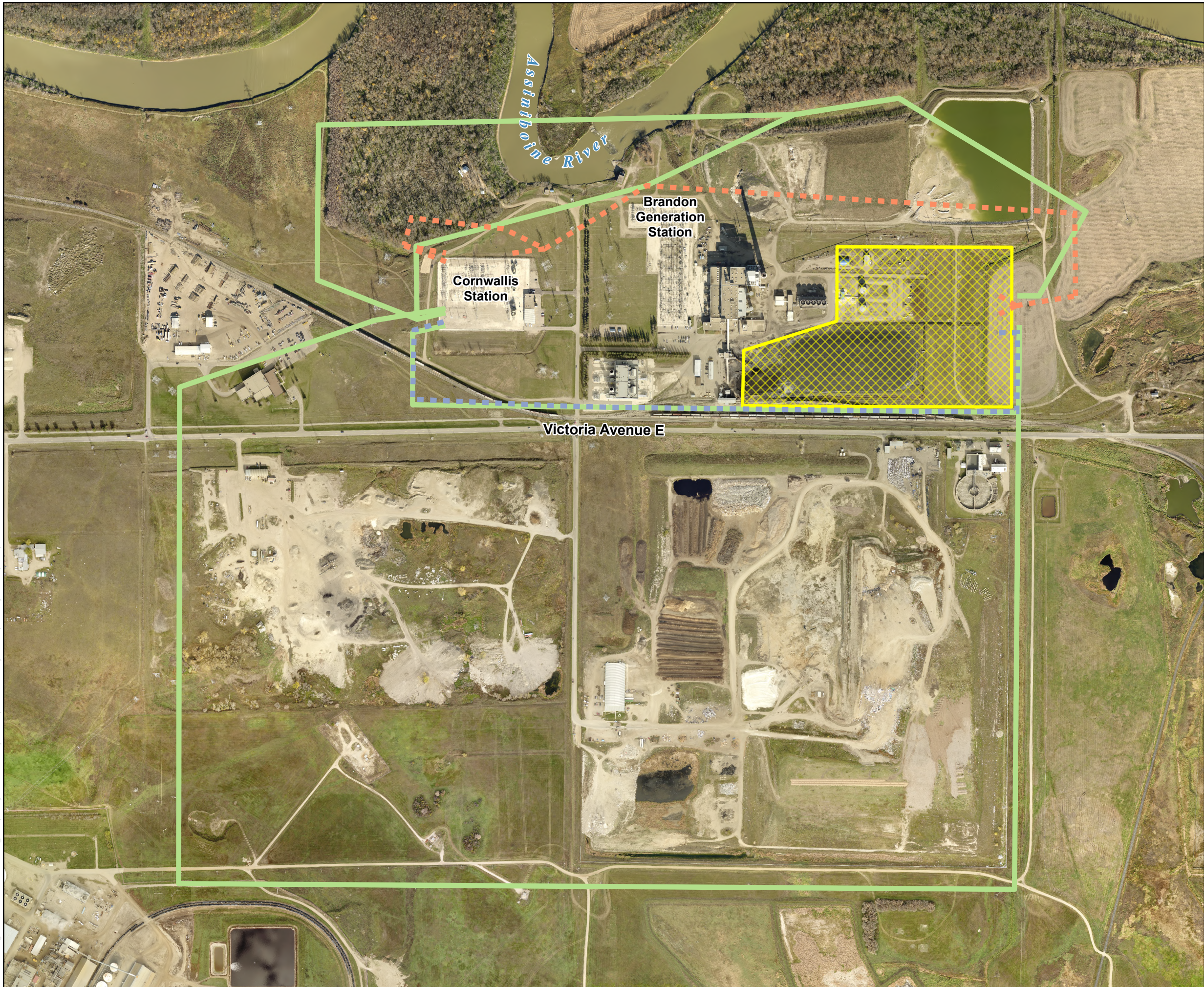
- 1) the alternative route evaluation model (AREM) compares routes based on criteria scoring grouped into the perspectives of built, natural and engineering
- 2) the preference determination model takes a selected subset of routes from the AREM step and compares them based on higher level decision-making criteria including cost, environment, and community feedback

Initially, there were 4 technically feasible options (see Map 2-2). The above models were used to help make decisions during the routing workshop. After the workshop, two options were selected as the preferred routes for the double (modified after further detailed design) and single circuit lines (Map 2-2).

2.8.1.3 Pipeline Routing

The EPRI-GTC methodology was also being used to select a preferred route (Map 1-1) for the natural gas pipeline. There were currently several options available to route from Moore Park Station to the Brandon GS (Map 2-3). The outcome of the routing process selected a preferred route that balances multiple perspectives and limits the overall effect.

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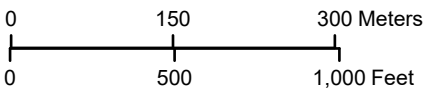
Brandon Dispatchable Capacity Project

Project Components

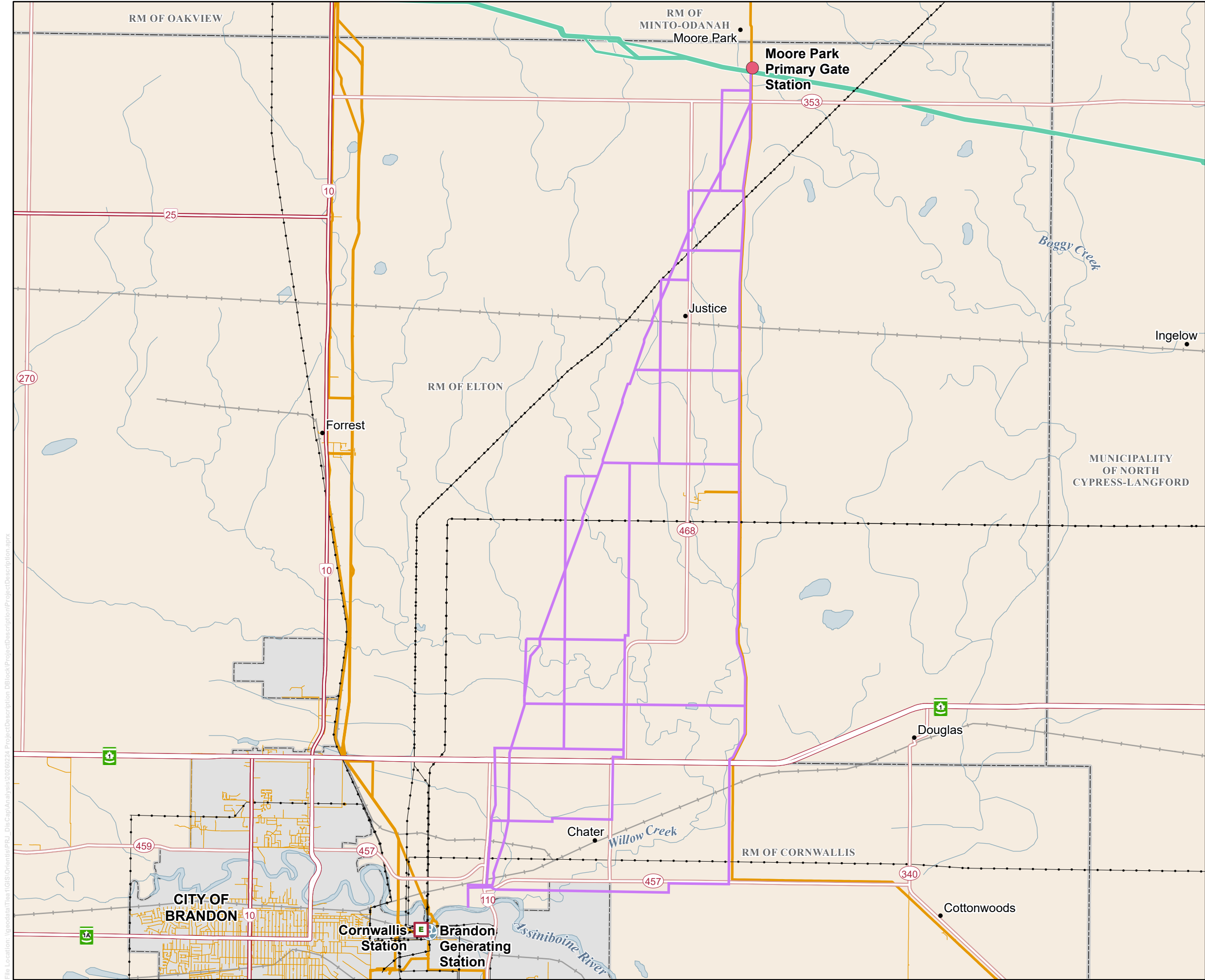
- Double Circuit Line
- Single Circuit Line
- Alternative Route
- Approximate Footprint of New Combustion Turbine Infrastructure

Manitoba Hydro acknowledges that the proposed Brandon Dispatchable Capacity project is located on Treaty 1 and Treaty 2 territory and on the traditional territories of the Anishinaabeg, Anishinewak, Ininew, and Dakota Oyate, and the National Homeland of the Red River Métis.

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date: May 11, 2026



Transmission Line Alternatives



Brandon Dispatchable Capacity Project

Project Components

-  Cornwallis Station
-  Brandon Generating Station
-  Moore Park Primary Gate Station

Alternative Route Segments

-  Alternative Route Segment

Existing Infrastructure

-  Transmission Pressure Gas Line
-  Existing Gas Pipeline
-  Existing Transmission Line
-  TC Energy's Canadian Mainline

Landbase

-  TransCanada Highway
-  Provincial Highway
-  Provincial Road
-  Railway
-  First Nation
-  City/Town
-  Rural Municipality

Manitoba Hydro acknowledges that the proposed Brandon Dispatchable Capacity project is located on Treaty 1 and Treaty 2 territory and on the traditional territories of the Anishinaabeg, Anishininewak, Ininew, and Dakota Oyate, and the National Homeland of the Red River Métis.

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date: May 11, 2026

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Pipeline Alternatives

Draft/Confidential: For Discussion Purposes Only

Map 2-3

2.8.2 Alternatives to the Project

Manitoba Hydro developed an integrated resource plan³ (Manitoba Hydro 2026) that includes the outcomes of comprehensive research, modelling and analysis.

The outcome was the recommended development plan which considered reliability, cost, environmental considerations and socio-economic impacts and enables a net-zero grid by 2035, supports a pathway to a net-zero economy by 2050, and aligns with Manitoba's Affordable Energy Plan.

Modelling and analysis from the 2025 integrated resource plan identified six potential resources to meet demand in the recommended development plan's 10-year timeframe. The following six potential options are considered feasible for the development plan because they:

- can be implemented within the 10-year development plan timeframe
- can provide the necessary reliability to meet energy and capacity needs
- are proven technologies with reliable fuel sources

The six options are:

- 1) Efficiency plan projection
- 2) Additional energy efficiency programs, demand response, and the curtailable rates program
- 3) Wind
- 4) Enhancements to existing hydropower
- 5) Short-term utility-scale batteries
- 6) SCCTs are fuelled by natural gas/biomethane.

The 2025 IRP recommended development plan is the portfolio of resources that includes developing 750 MW of natural gas-fired SCCTs within the next ten years to provide firm dispatchable capacity and help backstop the existing system.

Other resources considered include:

- New hydropower - Not feasible primarily due to long lead times for implementation (10+ years) and high up-front capital costs
- Nuclear small modular reactors (SMRs) - Not feasible due to long lead times, primarily due to regulatory requirements (none are yet operational in Canada) and high costs

³ Manitoba Hydro's 2025 [Integrated Resource Plan](#)

- Long-term battery storage – Not feasible due to high current costs and short asset life. This is also an emerging technology with limited market availability
- SCCTs fuelled by alternative fuels and carbon capture and sequestration – Not feasible due to limited fuel supplies in Manitoba and challenging or uncertain logistics in fuel procurement.

3.0 Part C - Location Information and Context

The project site is the existing Brandon GS, and includes the Cornwallis station, situated on Manitoba Hydro owned property in the East Brandon Industrial Area within the City of Brandon, Manitoba on part of SW/SE 20-10-18 WPM and SE 19-10-18 WPM at latitude 49° 50' 40.09" N (49.84), longitude 99° 53' 6.38" W (-99.88) (Map 3-1).

Land at the project site is designated as "LD - Limited Development Area" under the East Brandon Industrial Area Secondary Plan Zoning By-law No. 7274 (City of Brandon 2018). Industrial use is to be the predominant use within the "LD" designation. The City of Brandon Zoning By-law No. 7124 zones land at the site as "IH - Industrial Heavy" (City of Brandon 2024). Utilities and public works are permitted uses in this zone. Steam/thermal generating stations are conditional uses in this zone.

The nearest park/open space area is at the Riverbank Discovery Centre (i.e., Sprit Park [currently Optimist Park]) along the Assiniboine River in the centre of Brandon, approximately 3.6 km to the west of the project site. The closest natural area to the project site is the Brandon Hills Wildlife Management Area, approximately 9 km south of the city. The City of Brandon Airport is located approximately 8 km northwest of the project site.

Natural gas will be provided by a new pipeline from the TC Energy mainline, at the Moore Park Primary Gate Station approximately 30 km north of the project.

The project will be connected to Manitoba Hydro's existing Brandon GS and Cornwallis Substation via transmission line interconnections, approximately <4 km in length. The proposed pipeline from the Moore Park Primary Gate Station to the project site will be primarily on private land. Manitoba Hydro will obtain easements for the construction and operation of the pipeline.

3.1 Legal Land Description

The proposed project includes the project site within SW 20-10-18 WPM (Map 3-2) legal land description: SW ¼ of Section 20, Township 10, Range 18 West of the Principal Meridian excepting all that portion taken for Road Plan No. 30619 (2.64 acres) within the SW ¼ and Fractional SE ¼ of said Section; Right-of-Way Plan No. 369; and all portions of the road allowance lying between Sections 19 and 20-10-18 WPM that lie south of the south bank of the Assiniboine River at low-water mark.

The project site also includes transmission line terminations at Cornwallis Station in SE 19-10-18 W (Map 3-2) legal land description: Parcel A, Plan No. 30346, excepting

Right-of-Way Plan No. 369, and excepting all portions lying north and east of the Assiniboine River (8.0 acres).

The pipeline will run from the Moore Park Station in SE 31-12-17W to the project site (Figure 2-6).

3.2 Proximity to Communities and Residence

The project site is located within the “IH – Industrial Heavy” area zoned for heavy industrial development; residential development is not allowed. The nearest known rural residential dwelling is located approximately 1.5 km north of the project site. Existing urban residential development as part of the City of Brandon is approximately 2 km to the west of the project site. Rural dwellings and farmsteads dot the landscape in the region (Keystone Planning District 2024; Map 3-3).

Principal Settlement Centres in the RM of Elton consist of Justice, Forrest, and Douglas Station. In the RM of Cornwallis, outside of the City of Brandon, Principal Settlement Areas are located at Chater and Sprucewoods. A small Rural Settlement Area is located along PTH 1 south of the City of Brandon Airport in the RM of Elton. Rural Settlement Areas in the RM of Cornwallis are located east of the City of Brandon at Cottonwoods and Sprucewoods. Other Rural Settlement Areas in the RM of Cornwallis are located on the west side and south side of the City of Brandon and in the vicinity of the Brandon Hills (Keystone Planning District 2024). The project’s proximity to the nearest affected communities is shown in Map3-3.

3.3 Proximity to Indigenous Communities

The project site is in the Treaty 2 Area of southern Manitoba. There are no reserve lands within the project area (Map 3-4). The closest First Nation Reserve lands near the project site include Gambler First Nation Reserve land and Waywayseecappo Highway 10 Reserve land (5-6 km northwest of the Brandon GS, and 5-6 km west of the preferred pipeline route, in the City of Brandon; Map 3-5).

The next closest First Nation Reserve land is the Swan Lake Indian Reserve adjacent to Spruce Woods Provincial Park, approximately 39 km east of the project site and Sioux Valley Dakota Nation Reserve, approximately 40 km west (Map 1-2).

Metis population centres proximate to the project site include Brandon, and Carberry, Glenboro, Oak Lake, Rivers, and Rapid City in the surrounding region (i.e., RMs of Cornwallis and Elton, Census Division No. 7, Prairie Mountain Health Region) (Statistics Canada 2024).

There is no First Nations reserve land, non-treaty land entitlement, or treaty land entitlement acquisition within the project area.

As the project site is located on land owned by Manitoba Hydro and is within an area currently zoned for industrial use, the use of the project site for Indigenous harvesting or other traditional uses is unlikely, although the Assiniboine River (immediately north of the generating station) may provide harvesting and traditional use areas that could be used by Indigenous members and the public. Section 1.3 outlines the summary of engagement including a list of Indigenous communities engaged on the project.

3.4 Traditional Land Use

The project site is on Treaty 2 lands, the original territories of the Cree, Oji-Cree, Dakota, Dene, Anishinaabeg, and the National Homeland of the Red River Metis. The project lies in southwestern Manitoba, a region that has been altered substantially since colonialism, beginning with agricultural settlements and the establishment of Brandon House, a Hudson Bay Trading Post built in the late 1700s along the Assiniboine River. The region was further altered with the establishment of the Canadian Pacific Rail line and City of Brandon in the late 1800s, disrupting the ways in which rights-based activities practiced by First Nations peoples and Red River Métis citizens occur in the area.

Over the past 150 years, the City of Brandon has grown into a regional centre with a diverse economy that includes agriculture, health care, manufacturing, food processing, education, business services, and transportation. Ongoing developments in the region include electrical and gas transmission and distribution lines, military infrastructure and operations, water and sanitation infrastructure, roads, settlements, and agricultural development.

The project site is located on developed land owned by Manitoba Hydro with ancillary pipeline infrastructure proposed primarily on private agricultural land.

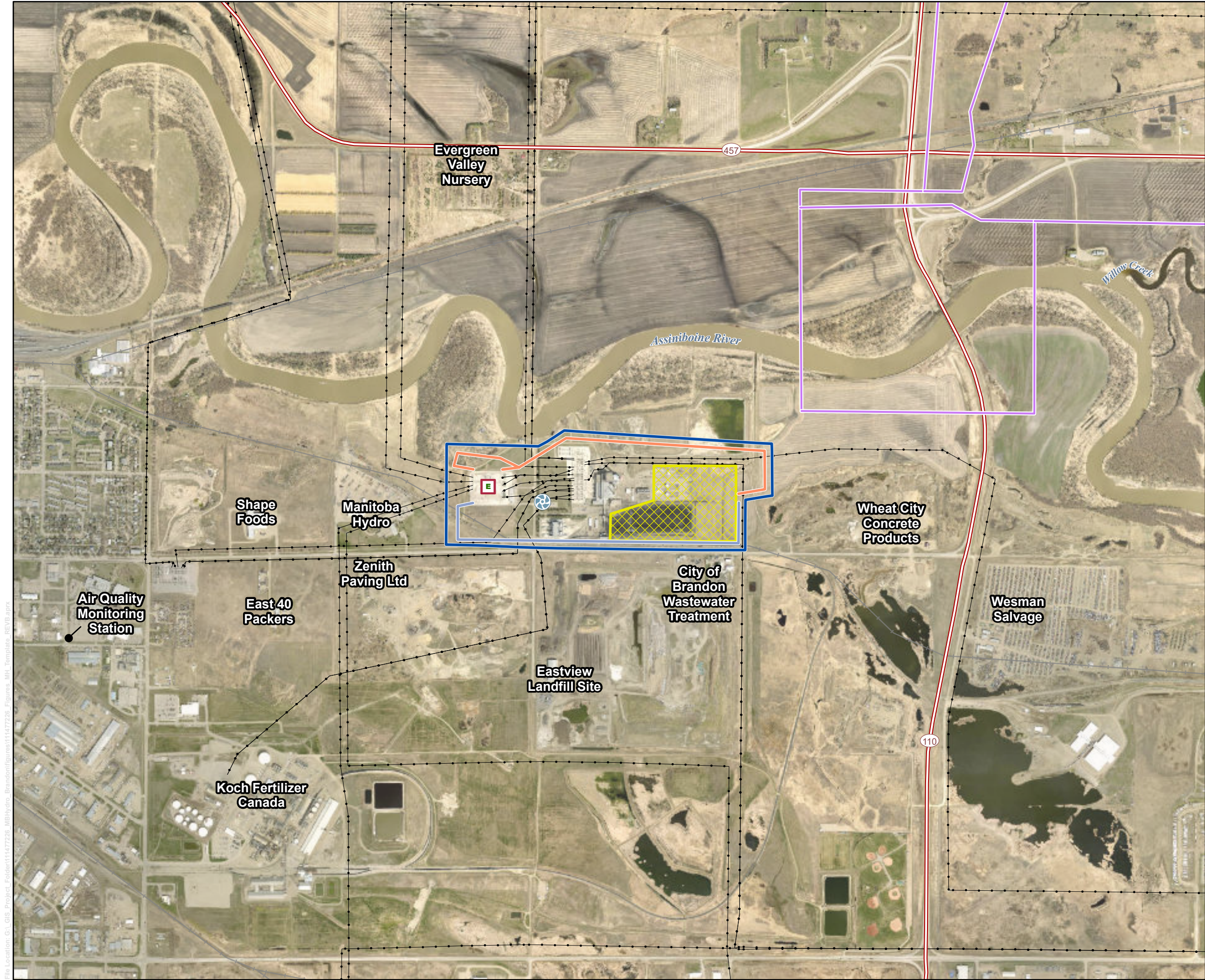
The project site is not associated with active treaty land entitlements or treaty land agreements; however, Manitoba Hydro acknowledges that the land in the area is all Indigenous traditional land.

While First Nations people and Red River Métis citizens have not specifically identified any use of private or Crown land for traditional activities in the project area through the engagement process to date, and the proposed project infrastructure does not overlap any Crown land, Manitoba Hydro understands that First Nations people and Red River Métis citizens have enduring connections to these lands and may continue to visit the area to practice rights-based activities today, both on private

land with landowner permission and on the small amount of Crown land that remains. Manitoba Hydro will continue to engage First Nations people and Red River Métis citizens to further understand land use in the project area.

3.5 Proximity to Federal Land

The project site is on land owned by Manitoba Hydro and does not overlap with any federally owned lands. The nearest federally owned lands are at Canadian Forces Base Shilo approximately 17 km southeast of the project (Map 3-6).



Brandon Dispatchable Capacity Project

- Project Components
-  Project Site
 - Transmission Line Routes

 -  Double Circuit Line
 -  Single Circuit Line
 -  Approximate Footprint of New Combustion Turbine Infrastructure
 -  Alternative Route Segment (Gas Segments)
 -  Cornwallis Station Expansion
 -  Brandon Generating Station

- Existing Infrastructure
-  Existing Transmission Line

- Landbase
-  Railway
 -  Provincial Highway
 -  Provincial Road

Manitoba Hydro acknowledges that the proposed Brandon Dispatchable Capacity project is located on Treaty 1 and Treaty 2 territory and on the traditional territories of the Anishinaabeg, Anishininewak, Ininew, and Dakota Oyate, and the National Homeland of the Red River Métis.

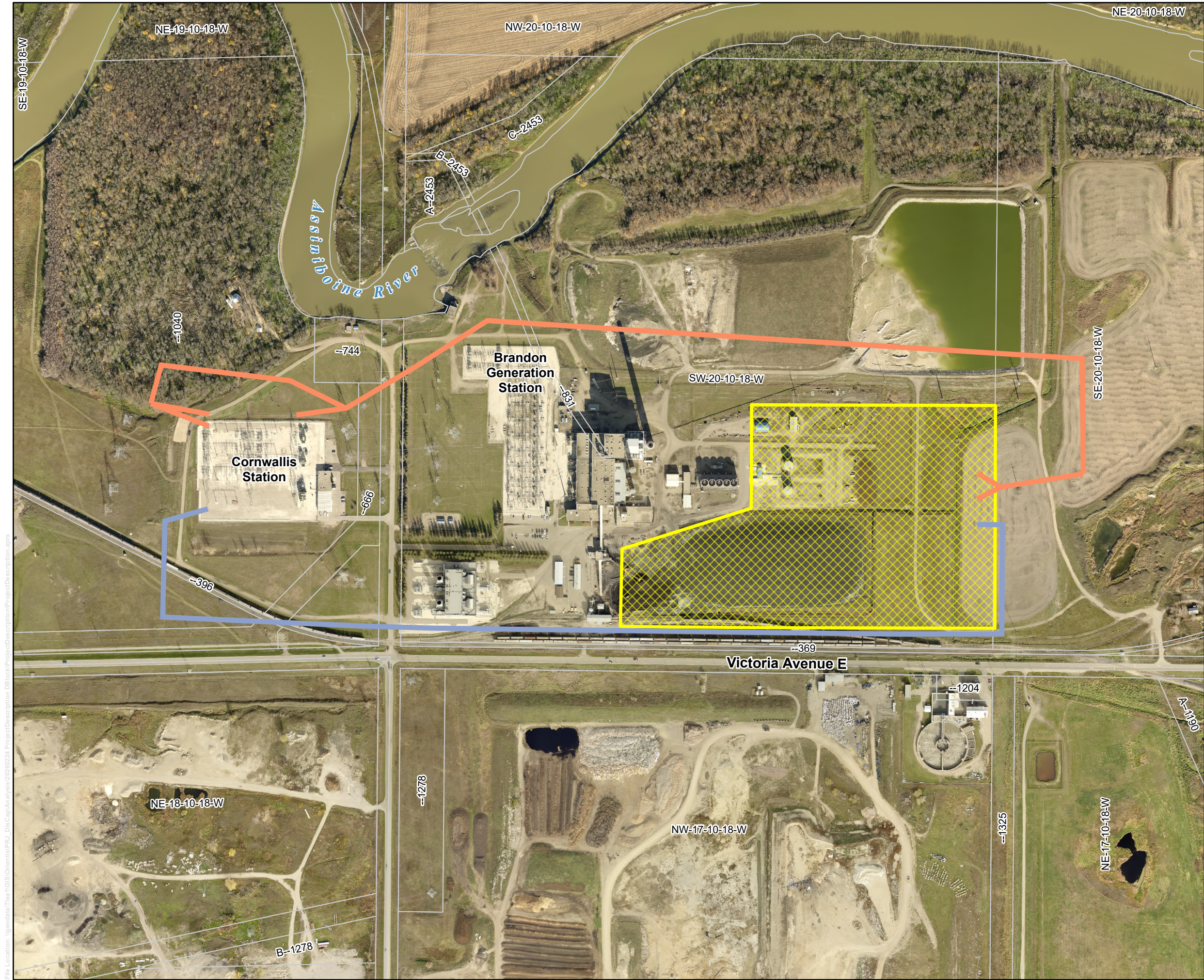
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Land Uses in Vicinity of the Project



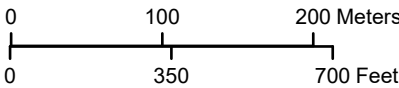
Brandon Dispatchable Capacity Project

- Project Components
- Double Circuit Line
 - Single Circuit Line
 - Approximate Footprint of New Combustion Turbine Infrastructure

- Landbase
- Parcel Fabric

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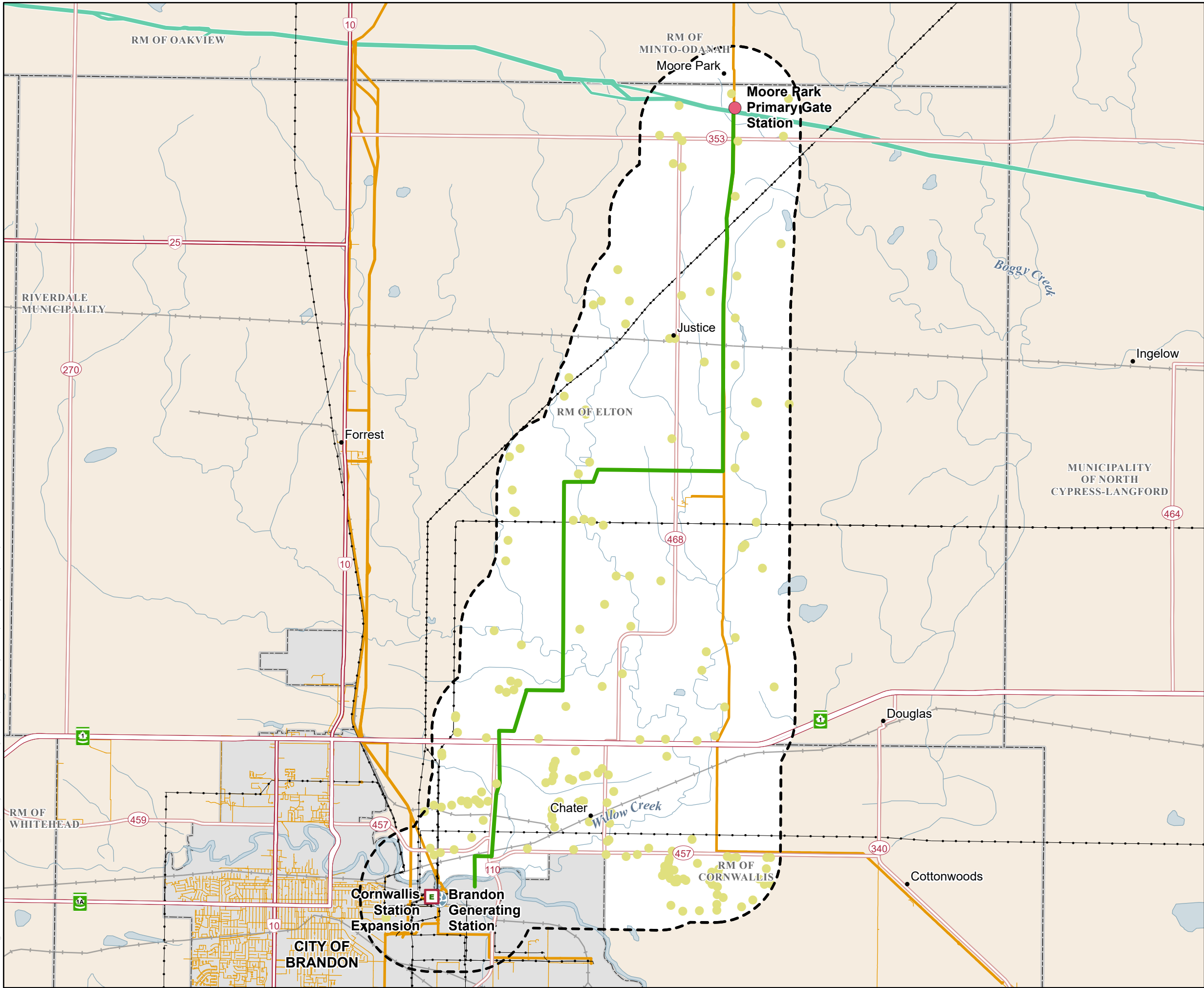
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Data Source: MBHydro, ProvMB, NRCAN
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Legal Land Description

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Brandon Dispatchable Capacity Project

Communities and Residences

- Occupied House

Preferred Route

- Preferred Route

Study Area

- Project Infrastructure (Buffer 2km)

Project Components

- Cornwallis Station Expansion
- Brandon Generating Station
- Moore Park Primary Gate Station

Existing Infrastructure

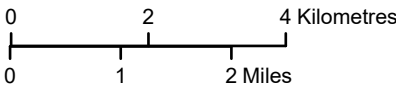
- Transmission Pressure Gas Line
- Existing Gas Pipeline
- Existing Transmission Line
- TC Energy's Canadian Mainline

Landbase

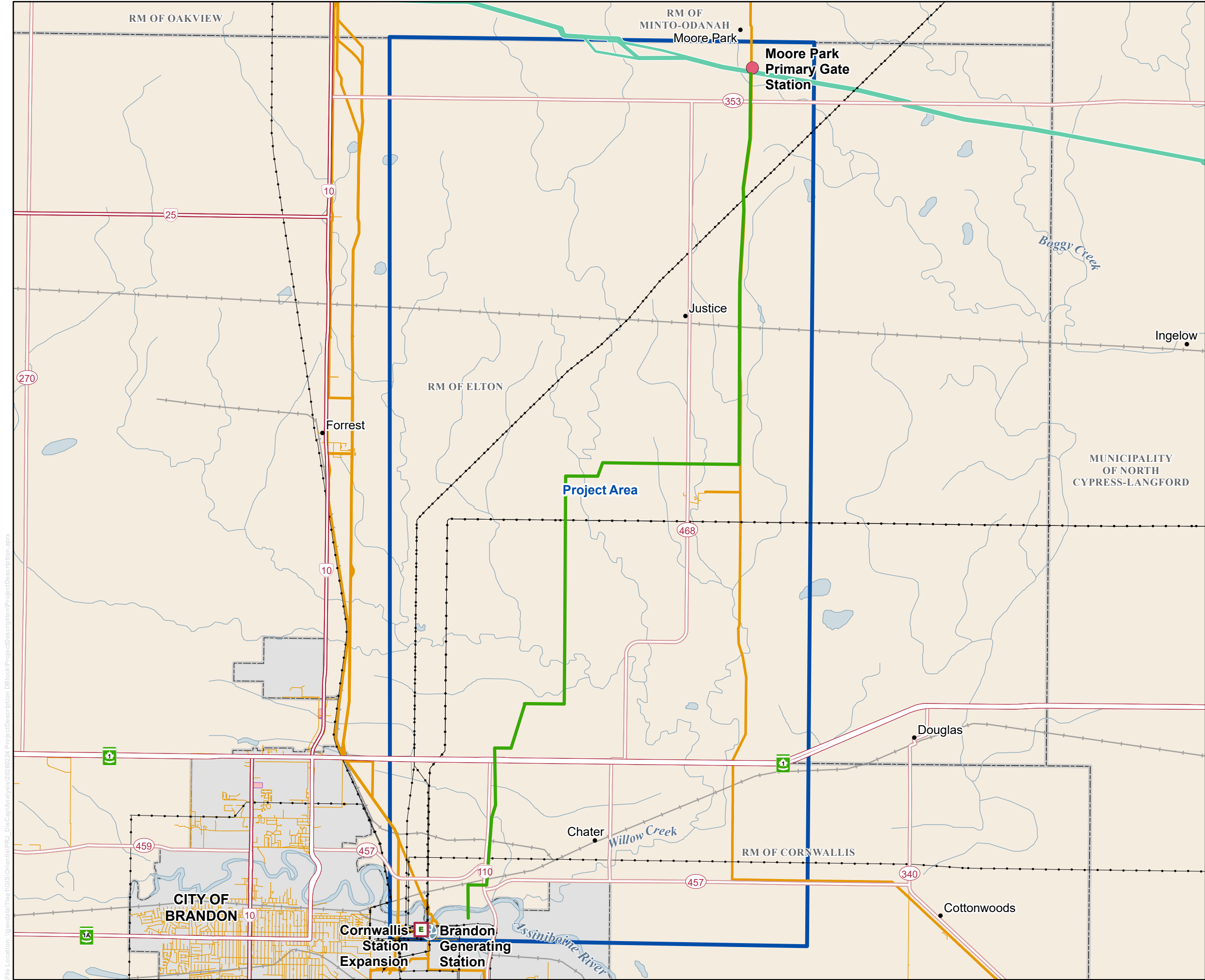
- Community/Village
- TransCanada Highway
- Provincial Highway
- Provincial Road
- Railway
- First Nation
- City/Town
- Rural Municipality

Manitoba Hydro acknowledges that the proposed Brandon Dispatchable Capacity project is located on Treaty 1 and Treaty 2 territory and on the traditional territories of the Anishinaabeg, Anishininewak, Ininew, and Dakota Oyate, and the National Homeland of the Red River Métis.

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date: June 1, 2026



**Communities and Residences
Within the Project Area**



Brandon Dispatchable Capacity Project

Project Components

-  Cornwallis Station Expansion
-  Brandon Generating Station
-  Moore Park Primary Gate Station
-  Project Area

Preferred Route

-  Preferred Route

Existing Infrastructure

-  Transmission Pressure Gas Line
-  Existing Gas Pipeline
-  Existing Transmission Line
-  TC Energy's Canadian Mainline

Landbase

-  TransCanada Highway
-  Provincial Highway
-  Provincial Road
-  Railway
-  First Nation
-  Canadian Forces Base Shilo
-  Treaty Land Entitlement
-  TLE Inquiries
-  TLE Acquisitions
-  City/Town
-  Rural Municipality

Manitoba Hydro acknowledges that the proposed Brandon Dispatchable Capacity project is located on Treaty 1 and Treaty 2 territory and on the traditional territories of the Anishinaabeg, Anishininewak, Ininew, and Dakota Oyate, and the National Homeland of the Red River Métis.

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date: June 1, 2026

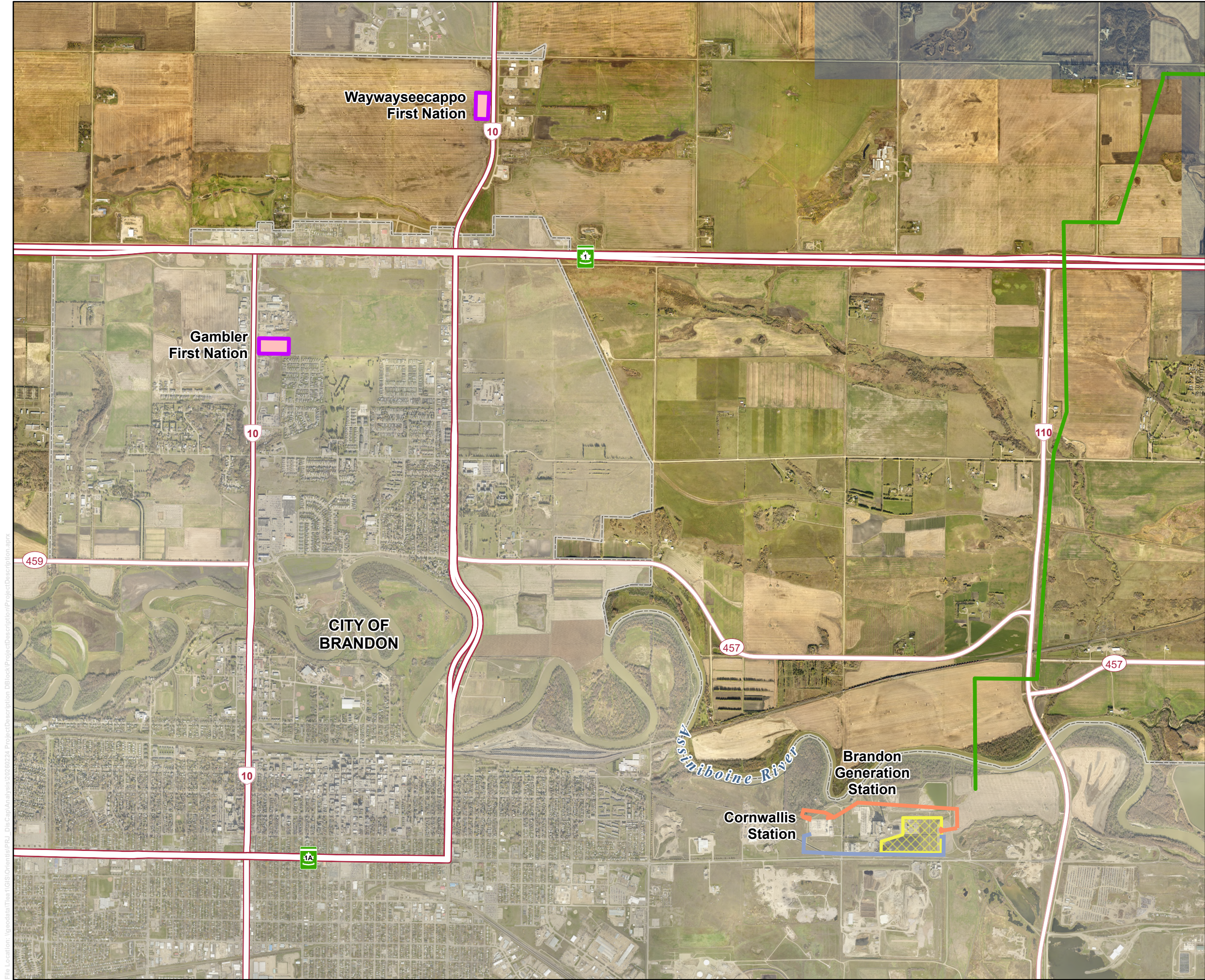
0 2 4 Kilometres
0 1 2 Miles

1:100,000

Indigenous Land, Treaty Land Entitlement Within the Project Area

Draft/Confidential: For Discussion Purposes Only

Map 3-4



Brandon Dispatchable Capacity Project

Project Components

- Double Circuit Line
- Single Circuit Line
- Approximate Footprint of New Combustion Turbine Infrastructure

Natural Gas Pipeline Preferred Route

- Preferred Route

Landbase

- TransCanada Highway
- Provincial Highway
- Provincial Road
- Engaged Indigenous Groups

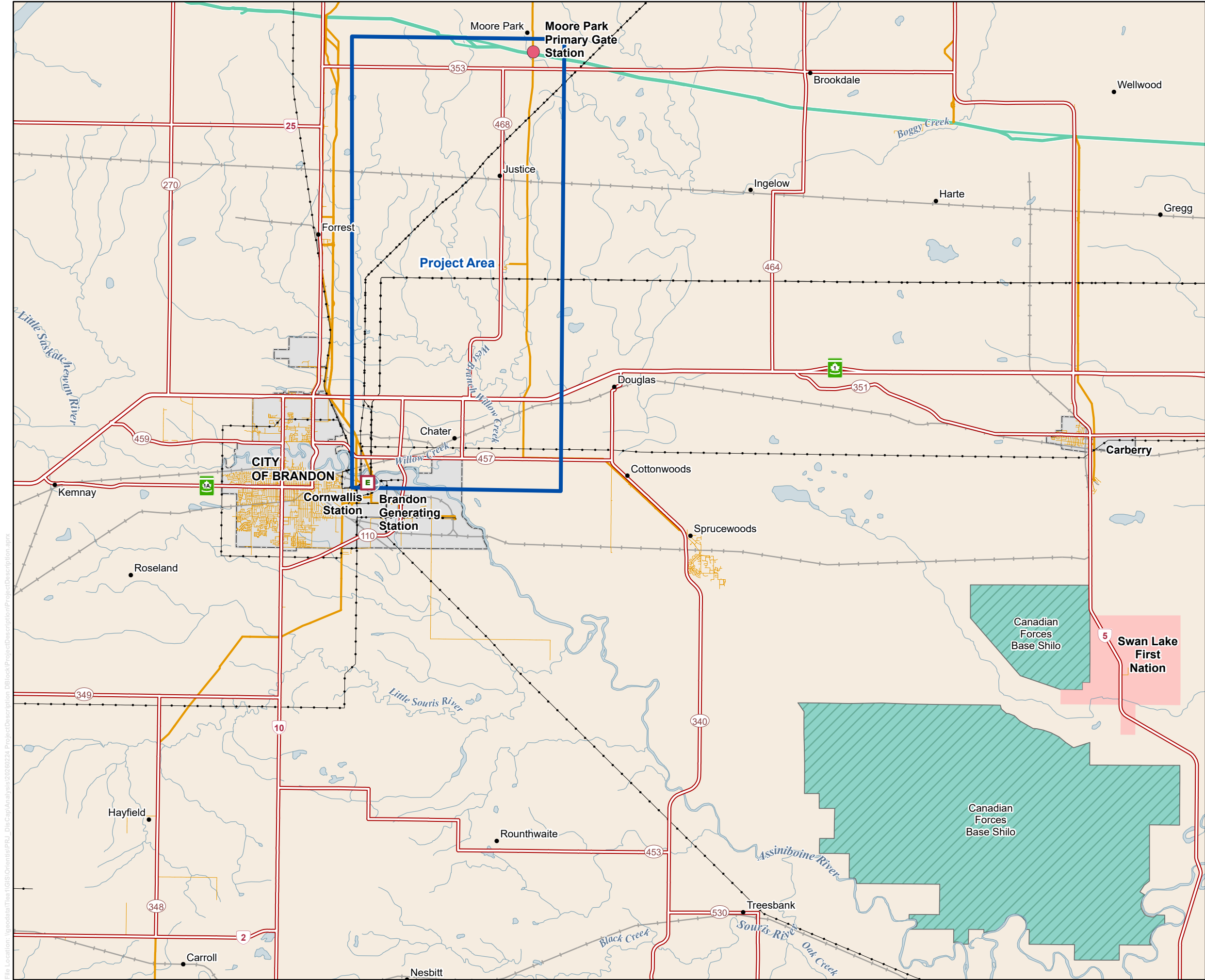
Manitoba Hydro acknowledges that the proposed Brandon Dispatchable Capacity project is located on Treaty 1 and Treaty 2 territory and on the traditional territories of the Anishinaabeg, Anishininewak, Ininew, and Dakota Oyate, and the National Homeland of the Red River Métis.

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date: May 29, 2026

0 630 1,260 Meters
0 2,000 4,000 Feet

1:30,000

Closest First Nation Reserve Lands



Brandon Dispatchable Capacity Project

Project Components

-  Cornwallis Station Expansion
-  Brandon Generating Station
-  Moore Park Primary Gate Station

Existing Infrastructure

-  Transmission Pressure Gas Line
-  Existing Gas Pipeline
-  Existing Transmission Line
-  TC Energy's Canadian Mainline

Landbase

-  Railway
-  Provincial Highway
-  Provincial Road
-  First Nation
-  City/Town
-  Canadian Forces Base Shilo

* Distance from Project Area to Canadian Forces Base Shilo is 17.4 km

Manitoba Hydro acknowledges that the proposed Brandon Dispatchable Capacity project is located on Treaty 1 and Treaty 2 territory and on the traditional territories of the Anishinaabeg, Anishininewak, Ininew, and Dakota Oyate, and the National Homeland of the Red River Métis.

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date: June 1, 2026

0 4 8 Kilometres
0 2.5 5 Miles

1:200,000

Federal Land

Draft/Confidential: For Discussion Purposes Only

Map 3-6

3.6 Biophysical Environment

The biophysical environment describes the existing natural conditions within the project site and surrounding region that may interact with or be affected by the project.

The following section includes descriptions of baseline conditions to provide context for the subsequent identification of project effects. Definitions of key terms used throughout this section are provided for clarity and consistency in the characterization of the biophysical setting:

A species of conservation concern (SOCC) is defined as a species that possesses one or more of the following attributes:

- Listed under Schedule 1, Schedule 2, or Schedule 3 of the federal *Species at Risk Act* (SARA) as endangered, threatened, or special concern (Government of Canada [GOC] 2026a)
- Listed under Threatened, Endangered and Extirpated Species Regulation in accordance with *The Endangered Species and Ecosystems Act* (ESEA) of Manitoba as extirpated, endangered, or threatened
- Listed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) as endangered, threatened, or special concern (COSEWIC 2023)
- Assigned a rank of S1, S2, S3, or SH (or a combination of these ranks) by the Manitoba Conservation Data Centre (MBCDC) (2024a)
- Included on the MBCDC tracking list

The term Species at Risk (SAR) is used to describe a subset of SOCC that have been granted legal protection under ESEA and/or SARA.

An ecosystem of conservation concern (EOCC) is defined as an ecosystem listed under the Endangered and Threatened Ecosystems Regulation of Manitoba in accordance with ESEA.

3.6.1 Air Quality

The Brandon GS property is located in the East Brandon Industrial Area within the City of Brandon, Manitoba on land zoned as “IH - Industrial Heavy” (City of Brandon 2024), with multiple industrial facilities on neighboring properties including Koch Fertilizer approximately 1 km to the southwest, Zenith Paving approximately 200 m to the southwest, and Wheat City Concrete Products approximately 500 m east of the project. The City of Brandon operates a waste disposal ground and wastewater treatment plant directly adjacent to (south of) the Brandon GS (Map 3-1).

The nearest air quality monitoring station is within the City of Brandon at 1430 Victoria Avenue East approximately 1.3 km west of the Brandon GS. Representative baseline ambient air quality concentrations for the project were determined based on analysis of ambient air quality monitoring data from the Brandon monitoring station and two ambient air quality monitoring stations located within the City of Winnipeg at 65 Ellen Street and 299 Scotia Street, approximately 200 km east of the Brandon GS.

The Brandon station monitors nitrogen dioxide (NO₂), sulphur dioxide (SO₂) and particulate matter with aerodynamic diameter less than 2.5 µm (PM_{2.5}). Ambient concentrations of carbon monoxide (CO) are not measured at the Brandon station; therefore, CO measurements from the Winnipeg Ellen Street monitoring station are used to determine representative baseline CO concentrations.

Continuous ambient air quality monitoring data from the Brandon and Winnipeg stations was obtained from the Manitoba air quality monitoring website (MECC 2026) for the most recent 5-year period with available monitoring data – 2021 to 2025 for NO₂, SO₂ and PM_{2.5} and 2016 to 2020 for CO.

Appendix B summarizes the baseline ambient air concentrations representative for the project. The baseline concentrations are based on concentrations measured during the most recent 5-year period. Since there are several years within the 5-year period that have missing or incomplete data record, the maximum value of the 90th percentile concentrations measured in the most recent 5-year period with complete data record (more than 75% complete) was selected to represent the baseline air quality levels for each substance of interest.

The measured PM_{2.5} concentrations in 2025 at all three monitoring stations are very high compared to previous years because of the wildfires in Manitoba in 2025.

Therefore, the baseline PM_{2.5} concentrations were determined from measured concentrations at the Winnipeg Scotia Street station in 2024; the monitoring datasets from the Brandon and Winnipeg Ellen Street stations in 2024 are less than 75% complete and the 2021 to 2023 monitoring data is missing.

The Baseline Air Quality Concentrations table (Appendix B) shows that the baseline concentrations of NO₂, SO₂ and CO are 0.3% to 12% of the Manitoba Ambient Air Quality Criteria (MAAQC; MECC 2005). The PM_{2.5} baseline concentrations are 67% and 79% of the 24-hour and annual Canadian Ambient Air Quality Standards (CAAQS; CCME 2017), respectively.

The latest annual Manitoba air quality report (2017-2019; MECC 2023) prepared as part of the Air Quality Management System reports that ambient PM_{2.5} levels in the province ranged from 15 µg/m³ to 38 µg/m³ (24-hour averages) and from 4.3 µg/m³

to 7.8 µg/m³ (annual averages) during the 2017 to 2019 reporting period. Wildfire smoke influenced PM_{2.5} levels at all monitoring stations during the reporting period. In Brandon, the average 24-hour PM_{2.5} concentration was 26 µg/m³ during the reporting period and it was less than the CAAQS (27 µg/m³) (See Appendix B).

3.6.2 Acoustic Environment

The Brandon GS is in an industrial setting with agricultural land use to the north, an active waste disposal ground (Eastview Landfill) to the south, an aggregate/gravel crushing/screening facility and a wastewater treatment plant to the east and southeast, and the Koch fertilizer manufacturing facility to the far southwest (Map 3-1). In addition, there are two switchyards, the Cornwallis station immediately west of the Brandon GS with four transformers (usually energized) and a second one located at the southwest corner of Victoria Avenue East and 17th Street East. These noise sources, along with traffic noise from Victoria Avenue E. contribute to the ambient noise environment in the vicinity of the proposed new SCCTs plant.

Noise sources on the Brandon GS site include the transformers, switchyard, cooling towers, natural gas pressure reducer building, the natural gas conditioner, combustion turbine building, and on-site mobile equipment.

A baseline noise study for the Brandon GS was previously conducted in 2006 and indicated that average ambient noise levels at receptors close to the project area along 17th Street E. were below 55 dB and are generally characterized by traffic noise, while ambient noise from the existing Brandon GS at the property boundaries were predicted to be below 70 dB, with the energized transformers and traffic noise contributing to the ambient noise levels (SENES 2006).

3.6.3 Geology and Hydrogeology

The Brandon GS property is located on an extensive deltaic deposit on the Assiniboine River Plain physiographic region known as the Upper Assiniboine Delta. The area has been subjected to numerous erosional and depositional events over time, resulting in a regional overburden thickness of 70-100 m consisting of approximately 6 to 15 metres of clay underlain by a complex sequence of interlayered sands, gravels, clays and glacial tills to the bedrock surface. Surficial geology of the area is reported as distal glaciofluvial sediments made up of fine sand, minor gravel, thin silt and clay interbeds; 1-75 m thick; subaqueous outwash fans; deposited in glacial Lake Agassiz by meltwater turbidity currents; commonly reshaped by wave erosion and reworked by wind (Matile and Keller 2004). The

bedrock consists of carbonaceous and calcareous shales of the Vermillion River Formation (Manitoba Geological Services 1979).

Groundwater originates from the unconfined surficial aquifers and confined aquifers at depth in the overburden sequence. Groundwater flow patterns in the region are expected to be topographically driven from regional topographic highs in the uplands (Marrinhurst Sandy Loams) with lateral flow through the Assiniboine Complex towards the Assiniboine River (Manitoba Hydro 2006).

The water table in the unconfined surficial aquifer is located near surface and is influenced by the surface water drainage ditches on and around the project site.

Based on historical groundwater monitoring for the existing Brandon GS property, groundwater levels have been known to range from 352 to 359 masl (approximately 0.7-7.0 m below ground surface) (Manitoba Hydro 2006). Results of groundwater monitoring have also shown that the groundwater flow direction varies locally on the project site, primarily flowing southeast, northeast, and northwest towards the Assiniboine River (Manitoba Hydro 2006).

The review of the provincial Water Well Database indicates several wells within 1 km of the project site; however, only three wells are listed as active wells for source water and are associated with the East 40 Packers and Zenith Paving commercial/industrial users southwest (upgradient) of the project site; respectively. An active production well and an active observation well are situated on the project site in SW20-10-18W, both to the underlying sand and gravel aquifer (Government of Manitoba 2026a). Wells with flowing artesian conditions and high-water levels have also been recorded near the project site. Two land parcels to the east of the Brandon GS have recorded water levels that are between 0 and 3 m above the ground surface, specifically in SE 20-10-18W and NE 17-10-18W (Iqbal et al. 2016).

Use of shallow groundwater in the area is limited due to low groundwater availability and the difficulty of developing wells with sufficient capacity to meet even domestic demands, thereby restricting its future potential as a drinking water source (Manitoba Hydro, 2006).

3.6.4 Soils and Terrain

The upper 1.5 metres of the regional overburden profile has been subdivided into two general soil associations consisting of the Marrinhurst Sandy Loams in the uplands and the Assiniboine Complex in the river valley lowlands (Michalyna et al, 1976). The Marrinhurst Sandy Loam soils are developed on gravel and coarse sand outwash deposits of shale, limestone and granitic origin. The surface soil texture

varies from a loamy coarse sand to sandy loam, with the coarser textures predominate. The Assiniboine Complex soils have been developed upon the alluvial deposits along the broad valley floor of the Assiniboine River. The texture of the soil varies considerably, from a loamy fine sand to clay depending on the underlying parent material (Manitoba Hydro 2006).

The Brandon GS property is primarily underlain by a combination of imperfectly drained soils ranging from loamy to clayey types derived from the underlying alluvium with moderately slow to slow permeability along with coarse, higher permeability, loams derived from the underlying lacustrine deposits (Manitoba Hydro 2006).

The clay within the property is generally brown in colour, silty and stiff in consistency, with a moisture content of approximately 20% (Manitoba Hydro 2000). The sand contains some silt, is medium dense, medium grained and has angular particles, while the till generally contains sand and trace gravel in a clay matrix with shale and gypsum fragments (Manitoba Hydro 2000). The till within the project site is known to be dark grey to black in colour with thin interbeds of bentonite and limestone (Manitoba Hydro 2000).

Surface water drainage within the Brandon GS property is towards the west, east and north and is generally collected in the main municipal ditch on the eastern edge of the project site and along the main access road on the western side of the property (Manitoba Hydro 2000).

3.6.5 Hydrology

The Brandon GS property is along the south bank of the Assiniboine River in the City of Brandon (Map 3-1), in the Central Assiniboine River Watershed District ().

A desktop review of hydrology was completed for the Assiniboine River utilizing information from Google Earth, Google Maps, ArcGIS, as well as other publicly available databases (e.g., Environment and Climate Change Canada [ECCC] 2026), imagery, and literature.

The headwaters of the Assiniboine River are in east central Saskatchewan. From its source near Greenwater Lake Provincial Park in Saskatchewan, the river follows a meandering course in a generally southeast direction for 470 km before turning east near Virden, Manitoba and flowing eastward for another 600 km until reaching its confluence with the Red River in Winnipeg, Manitoba, approximately 430 river km downstream of the project site (BRouter Web 2026).

The main tributaries of the Assiniboine River are the Qu'Appelle River and Souris River. Upstream of the Brandon GS property, the Little Saskatchewan River is another tributary which joins with the Assiniboine River approximately 10 km west of Brandon. Willow Creek is a small tributary to the Assiniboine which enters approximately 3 km downstream of the Brandon GS property.

Other notable tributaries to the Assiniboine River downstream of the Brandon GS property include the Little Souris River (18 river km downstream), Epinette Creek (125 km downstream), and the Cypress River (165 km downstream).

The Water Survey of Canada (WSC) operates a hydrometric gauging station year-round on the Assiniboine River at Brandon, Manitoba (Station 05MH001), located approximately 12 km upstream from the project site (ECCC 2026). This WSC station has a gross drainage area of 93,800 km². Between 2019 and 2024, the station recorded a mean discharge of 38.9 m³/s. Mean monthly discharge throughout this period indicates seasonally variable flows in the Assiniboine River near the project site; the maximum mean monthly discharge was 104.5 m³/s in May while the minimum mean monthly discharge was 13.1 m³/s in December (ECCC 2026).

3.6.6 Fish and Fish Habitat

The Assiniboine River near Brandon provides complex and diverse habitat that supports spawning, migration and overwintering for a variety of resident and non-resident fish species (Stewart and Watkinson 2004). Flow conditions in the river vary from fast-moving water in straight sections of the channel to slow-moving water in shallow pools along shores and sides of islands within the river.

Near the Brandon GS property (i.e., within 10 km), the Assiniboine River has a meandering course with wetted widths generally between 25 m and 125 m. Within the 5-km reach of river downstream of the property, there are three islands which may provide some localized areas with low-flow conditions.

Most notably, an island is located approximately 2.3 km downstream of the Brandon GS at the confluence of Willow Creek and the Assiniboine River. No barriers to fish passage in the Assiniboine River are known to occur within a 10-km radius of the project site (CWF 2026).

A review of historical fish capture data was conducted using existing literature (Stewart and Watkinson 2004) and historical catch information available through the federal inventory of streams in Manitoba (Milani 2013) to compile an inventory of species occurrences in the Assiniboine River.

The Government of Manitoba's (GOM) Lake Information for Anglers site (GOM 2026), as well as Travel Manitoba's Master Angler Webpage (Travel Manitoba 2026) were also consulted to supplement this review. The Fisheries and Oceans Canada (DFO) aquatic SAR mapping tool (DFO 2025a) was then used to identify potential aquatic SAR known to occur in the Assiniboine River near Brandon and whether critical habitat for these species may overlap with the project site. The resulting species list for the Assiniboine River was then refined to include only those species with historical records of occurrence or known distribution ranges overlapping the Brandon GS property.

A total of 57 fish species were identified with a known distribution that includes the Assiniboine River with potential to occur at, or near the Brandon GS property (Appendix C). Of all listed species, bigmouth buffalo (*Ictiobus cyprinellus*) is the only fish species currently listed on Schedule 1 of the federal *Species at Risk Act* (SARA; GOC 2026a). The Saskatchewan-Nelson River populations of bigmouth buffalo were listed under Schedule 1 of SARA in 2011 (GOC 2021). However, Manitoba assigned an S5 designation to the species in 2019, which considers a species to be widespread, abundant, and secure (MB CDC 2024; GOC 2021). Currently, lake sturgeon (*Acipenser fulvescens*) and silver lamprey (*Ichthyomyzon unicuspis*) have a COSEWIC assessment status of endangered and special concern, respectively and are therefore considered SOCC. Although neither of these species are listed on Schedule 1 of SARA, they are under consideration for listing (GOC 2026a).

By the time that the Portage la Prairie Diversion was constructed in the 1970s, lake sturgeon had been effectively extirpated from the Assiniboine River near the Brandon GS property (DFO 2010). However, stocking efforts in the Assiniboine River near Brandon between 1996 and 2015 have contributed to some recovery of the population (GOM 2026; DFO 2010), and lake sturgeon are frequently caught by anglers in the Assiniboine River upstream of the Portage la Prairie Diversion structure and near Brandon (Travel Manitoba 2026; Stewart and Watkinson 2004; DFO 2010). Lake sturgeon spawning has been recorded in the lower reaches of the Little Saskatchewan River, while other potential spawning areas such as Souris and Qu'Appelle rivers have also been identified (DFO 2010). Lake sturgeon is a bottom-dwelling species which feed over substrates of mud, sand, or gravel, and are usually found in water depths between 5 m and 10 m. Individuals have high site fidelity but will undergo migrations to spawn (DFO 2010; Stewart and Watkinson 2004). Spawning habitat consists of fast-flowing water (0.5 m/s to 1.3 m/s), in shallow water depths (0.6 m to 5 m) with hard substrates such as clay, sand, gravel, cobble, or boulder (GOC 2018; DFO 2010; Stewart and Watkinson 2004).

In addition to fish SOCC, mapleleaf (*Quadrula quadrula*), a freshwater mussel, was identified as an aquatic SAR with potential to occur in the Assiniboine River (DFO 2025a). Mapleleaf is currently listed as threatened under SARA (GOC 2026). In Manitoba, mapleleaf is known to occur in the Red and Assiniboine rivers and their tributaries. Habitat loss and the effects of pollution from industrial, municipal, and agricultural sources have led to declines in the freshwater mussel communities in Manitoba, and their declines may be further exacerbated by the presence of dreissenids where there is cooccurrence (e.g., zebra mussel [*Dreissena polymorpha*]; COSEWIC 2016). Typical mapleleaf habitat consists of firmly packed sand, gravel, or clay-mud mixtures in medium to large rivers with slow to moderate flow (COSEWIC 2016). While the Assiniboine River near the project site may contain appropriate habitat for mapleleaf, they have been infrequently documented upstream of Portage la Prairie and with very limited range (COSEWIC 2016). The Portage la Prairie Diversion structure is a functionally impassable barrier for host fish species in the lower Assiniboine River, which likely limits the establishment of mapleleaf in the Assiniboine River upstream of Portage la Prairie (COSEWIC 2016; Stewart and Watkinson 2004). There are very few records of mapleleaf occurrence in the Assiniboine River above the Portage la Prairie Diversion: a single individual was documented approximately 50 km upstream of the Portage Diversion and four individuals were documented near Brandon (COSEWIC 2016; Mazur 2007). While mapleleaf may occur near the project site, their abundance and frequency upstream of Portage la Prairie is very low. There is no mapped critical habitat for the species near the Brandon GS property (DFO 2025a).

The Aquatic Invasive Species (AIS) Control Zones in Manitoba (GOM n.d.) were reviewed to determine whether the project is located within an established AIS Control Zone and to assess the need for additional mitigation at the site to prevent the spread of AIS. The Red River/Lake Winnipeg/Nelson River Control Zone for zebra mussel and spiny water flea (*Bythotrephes longimanus*) includes the Assiniboine River from below the Portage la Prairie control structure to its confluence with the Red River. The Brandon GS property is located approximately 270 river km upstream and outside of this AIS control zone (BRouter Web 2026; GOM n.d.) and these species have not been documented near the site.

Restricted Activity Timing Windows (RATWs) have been developed by DFO (2013) to protect fish species and sensitive life stages that may be present in a waterbody. The specific RATW for a waterbody is based on the fish species that are present in the waterbody and depends on the season during which those resident fish spawn. The Brandon GS property is in the southern Manitoba zone (DFO 2013) and has known occurrence of spring spawning fish such as walleye (*Sander vitreus*), sauger (*Sander*

canadensis), white sucker (*Catostomus commersonii*) and summer spawning fish such as channel catfish (*Ictalurus punctatus*), goldeye (*Hiodon alosoides*), and mooneye (*Hiodon tergisus*). Therefore, the relevant RATW at the Site is April 1 to June 30 and in-water works (if applicable) should be avoided during this period. Brook trout (*Salvelinus fontinalis*) are also included in Appendix C because they have historically been stocked in streams and lakes within the Assiniboine River watershed, including Epinette Creek, a tributary to the Assiniboine downstream of Brandon (GOM 2026; Stewart and Watkinson 2004). However, the species is unlikely to occur near the Brandon GS property, as brook trout have a short life span of approximately 6 years and natural spawning of stocked trout rarely occurs in Manitoba (Stewart and Watkinson 2004). Further, no recent introductions have been made near the Brandon GS (GOM 2026), and suitable brook trout habitat (i.e., bedrock, boulders, rubble) is generally lacking in the Assiniboine River near the Brandon GS property. Therefore, the fall RATW for the southern Manitoba zone (DFO 2013) should not apply to in-water works at or near the Brandon GS property.

3.6.7 Vegetation and Wetlands

The vegetation study area includes the Brandon GS property and a surrounding one-kilometre buffer area. This buffer distance was selected based on the maximum recommended avoidance setbacks for plant SAR (300 m) and the potential for weed spread up to 1 km (Henderson 2011).

The vegetation study area is in the Stockton Ecodistrict within the Aspen Parkland Ecoregion of the Prairies Ecozone. The Stockton Ecodistrict is a pro-glacial lacustrine plain with variable topography that supports a variety of vegetation communities (Smith et al. 1998).

Vegetation in the Assiniboine River Valley portion of the ecodistrict is stratified, with alluvial floodplains supporting riparian deciduous forest. These native vegetation communities are typically dominated by American elm (*Ulmus americana*), green ash (*Fraxinus pennsylvanica*), Manitoba maple (*Acer negundo*), and balsam poplar (*Populus balsamifera*) with an understory of alder (*Alnus* spp.), dogwood (*Cornus* spp.), and highbush cranberry (*Viburnum opulus* var. *americanum*). While most of the upper river terraces have been deforested and are currently under cultivation, deciduous forest with bur oak (*Quercus macrocarpa*) may be present on the uppermost, driest terraces. Outside of the river valley, native vegetation historically consisted of trembling aspen (*Populus tremuloides*) and balsam poplar groves interspersed with areas of mixed-grass prairie dominated by fescues (*Festuca* spp.), wheatgrasses (*Elymus* spp.), and prairie junegrass (*Koeleria macrantha*); however, most of this land has been cultivated for use as cropland.

Land cover mapping for the vegetation study area was completed to identify current land uses and habitat types present. Land cover mapping was based on satellite imagery from various years as well as the Agriculture and Agri-food Canada (AAFC) Annual Crop Inventory (AAFC 2024) and Canadian Wetland Inventory (CWI) (Ducks Unlimited Canada [DUC] 2019a) datasets, which were reviewed and interpreted at a scale of 1:1,500 with a minimum polygon size of 0.01 ha (i.e., 10 m x 10 m). Mapping was completed in ArcGIS Pro (© 2025 Esri Inc. version 3.5.4) using land cover class definitions from the AAFC Annual Crop Inventory (AAFC 2025) with one variance: the water land cover class (Table 3-1) was amended to include dugouts and drainage channels where open water was visible. Wetland class definitions (Table 3-2) were obtained from Schedule C of The Water Rights Regulation as described in the Manitoba Prairie Wetland Classification Guide (DUC 2019b).

Table 3-1: Land cover classification

Land Cover Class	Definition
Agriculture	Dominated by seeded annual and perennial crops, usually a monoculture; excludes grassland.
Broadleaf	Tall woody perennial species (deciduous), greater than 10 m tall; predominantly broadleaf forests or treed areas.
Coniferous	Predominantly coniferous (evergreen) forests or treed areas
Exposed Land/Barren	Land that is predominately non-vegetated and non-developed. Includes glacier, rock, sediments, burned areas, rubble, borrow pits, other naturally occurring non-vegetated surfaces. Excludes fallow agriculture.
Grassland	Dominated by native grass species (>51% native species); may include some shrubland cover.
Mixedwood	Forest that is a combination of both the coniferous and broadleaf classes.
Pasture/Forages	Periodically cultivated such as tame pasture and hayland. Includes tame grasses and other perennial crops such as alfalfa and clover grown alone or as mixtures for hay, pasture or seed.
Shrubland	Predominantly woody vegetation of relatively low height; may include grass or wetlands with woody vegetation or regenerating forest.
Urban/Developed	Land that is predominantly built-up or developed and vegetation associated with these land covers. This includes houses, farms, road surfaces, railway surfaces, buildings and paved surfaces,

Table 3-1: Land cover classification

Land Cover Class	Definition
	urban areas, industrial sites, maintained lawns, lagoons, golf courses, etc.
Water ¹	Waterbodies (lakes, reservoirs, rivers, streams, salt water, etc.) as well as drainage channels and dugouts with open water.
Wetland	Land with a water table near, at, or above the soil surface for enough time to promote wetland or aquatic processes including hydrophytic vegetation and poorly drained soils (e.g., gleysols). Includes wetland classes 1 to 5 as defined in the Manitoba Prairie Wetland Classification Guide (DUC 2019b).

NOTE:

¹ Land cover class definition was amended by Stantec.

SOURCE: AAFC (2025)

Table 3-2: Wetland classification

Wetland Class	Definition
Ephemeral (Class 1)	Characterized by a low prairie zone that dominates the deepest part of the wetland area. Typically holds surface water for 1 to 3 weeks in early spring (April through early May) following snowmelt. Commonly occurring species include Kentucky bluegrass (<i>Poa pratensis</i>), fowl bluegrass (<i>P. palustris</i>), kochia (<i>Bassia scoparia</i>), and goldenrods (<i>Solidago</i> spp.).
Temporary (Class 2)	Characterized by a wet meadow zone that dominates the deepest part of the wetland area. Typically holds surface water for 2 to 6 weeks in spring (April through mid-June) and for several days following heavy rainfall events. Commonly occurring species include sedges (<i>Carex</i> spp.), rushes (<i>Juncus</i> spp.), prairie cordgrass (<i>Sporobolus michauxianus</i>), and foxtail barley (<i>Hordeum jubatum</i>).
Seasonal (Class 3)	Characterized by a shallow marsh zone that dominates the deepest part of the wetland area. Typically holds water from April through mid- to late July. Commonly occurring species include soft-stemmed bulrush (<i>Schoenoplectus tabernaemontani</i>), northern water plantain (<i>Alisma triviale</i>), water-parsnip (<i>Sium suave</i>), and sedges (<i>Carex</i> spp.).

Table 3-2: Wetland classification

Wetland Class	Definition
Semi-Permanent (Class 4)	Characterized by a deep marsh zone which dominates the deepest part of the wetland area. Typically holds water from April through September/October in 4 out of every 5 years. Example species include emergent plants like common cattail (<i>Typha latifolia</i>) and hard-stemmed bullrush (<i>Schoenoplectus acutus</i>), as well as submergent and floating plants like sago pondweed (<i>Stuckenia pectinata</i>), bladderworts (<i>Utricularia</i> spp.), and duckweeds (<i>Lemna</i> spp.).
Permanent (Class 5)	Characterized by a permanent open water zone that dominates the deepest part of the wetland area. Typically holds water year-round in 9 out of every 10 years. The open water zone is too deep to support emergent vegetation but often contains submergent and floating plants like sago pondweed, bladderworts, hornworts (<i>Ceratophyllum</i> spp.), and algal mats.

SOURCE: DUC (2019b)

The Brandon GS and adjacent Cornwallis station collectively cover approximately 8.23 hectares (ha) and primarily consists of urban/developed land (existing Brandon GS and Cornwallis station, maintained lawns, roads; 58.1%) and pasture/forages (tame grassland; 21.7%) with smaller amounts of agricultural cropland (6.4%), broadleaf forest (5.3%), exposed/barren land (active borrow pits and unvegetated sites; 5.1%), open water (drainage channels; 1.8%), coniferous forest (shelterbelts; 1.2%), and wetland (seasonal wetland; 0.4%).

The vegetation and wetlands, and wildlife and wildlife habitat (see 3.6.8) study areas cover 679.4 ha and primarily consist of pasture/forages (hayland, tame grassland; 29.7%), urban/developed land (existing Brandon GS and Cornwallis station, maintained lawns, roads, railways, wastewater lagoons and treatment facilities, decommissioned borrow pits, landfills, parking lots, recreational facilities, other industrial sites; 27.3%), and agricultural cropland (21.2%) with smaller amounts of broadleaf forest (8.2%), open water (Assiniboine River, drainage channels, dugouts; 4.9%), exposed/barren land (active borrow pits, stockpiled material; 4.2%), shrubland (1.0%), and coniferous forest (shelterbelts; 0.2%). Wetlands occupy approximately 3.3% of the study areas, including temporary (0.6%), seasonal (0.9%), semi-permanent (0.6%), and permanent wetlands (1.2%).

Wetland boundaries and classes are based on available desktop resources (i.e., AAFC Annual Crop Inventory and CWI datasets, multi-year satellite imagery) and have not been verified at the field level as per the Manitoba Prairie Wetland Classification Guide (DUC 2019b).

A summary of land cover is presented in Table 3-3 and is shown on Map 3-7.

Table 3-3: Land cover summary

Land Cover Class	Wetland Class	project Site		Vegetation and Wildlife Study Areas	
		Area (ha)	Proportion (%)	Area (ha)	Proportion (%)
Agriculture	-	4.4	6.4	144.3	21.2
Broadleaf	-	3.7	5.3	55.6	8.2
Coniferous	-	0.8	1.2	1.3	0.2
Exposed Land/Barren	-	3.5	5.1	28.5	4.2
Pasture/Forages	-	15.0	21.7	201.7	29.7
Shrubland	-	-	-	7.1	1.0
Urban/Developed	-	40.2	58.1	185.6	27.3
Water	-	1.3	1.8	33.0	4.9
Wetland	Temporary	-	-	4.0	0.6
	Seasonal	0.2	0.4%	6.1	0.9
	Semi-permanent	-	-	3.8	0.6
	Permanent	-	-	8.3	1.2
Total		8.2	100.0	679.4	100.0

NOTE: Potential for variances in sums due to rounding

Element occurrence data provided by the MBCDC identified eight plant SOCC with historical occurrences in the vegetation study area, all of which were documented within the vicinity of the Brandon GS (MBCDC 2026) (Appendix D). These eight species were last observed between 1922 and 1982 and lack recent verification. No historical occurrences of EOCC or plant SAR were identified in the vegetation study area; however, the MBCDC element occurrence data identified two historical

occurrences of SAR within five kilometres of the Brandon GS and Cornwallis station (i.e., within four kilometers of the study area) (MBCDC 2026):

- Rough agalinis (*Agalinis aspera*), which holds a provincial conservation ranking of S1 (critically imperiled) and is listed as endangered under both Schedule 1 of SARA and ESEA
- Small white lady's-slipper (*Cypripedium candidum*), which holds a provincial conservation ranking of S2S3 (imperiled to vulnerable), is listed as threatened under Schedule 1 of SARA, and is listed as endangered under ESEA

The rough agalinis occurrence was last observed in 2024 and has a high risk of extirpation due to population decline and poor apparent plant health (COSEWIC 2006; MBCDC 2026). The small white lady's-slipper occurrence was last observed in 2012, and it is believed to be extirpated (ECCC 2024; MBCDC 2026). A review of the land cover mapping results and COSEWIC assessments and status reports concluded that the likelihood of these two species occurring within the Brandon GS and Cornwallis station sites is low due to a lack of suitable habitat; however, suitable habitat may be present in the vegetation study area. Both species inhabit remnant fragments of moist, calcareous native prairie habitat, including patches of remnant prairie located in roadside ditches surrounded by agricultural fields (COSEWIC 2006, 2014). In Manitoba, rough agalinis favours sparsely vegetated sites with exposed patches of bare stony soil or limestone gravel. Small white lady's-slipper is shade intolerant and favours open sites with minimal woody vegetation cover. There is no critical habitat for plant SAR within the vegetation study area (GOC 2026b).

A query of the Early Detection and Distribution Mapping System (EDDMapS) database and the iNaturalist Research-grade Observations occurrence dataset identified six noxious weed species (i.e., species designated as tier 1, tier 2, or tier 3 noxious weeds under the Noxious Weeds Regulation in accordance with The Noxious Weeds Act) with historical occurrences in the vegetation study area (Table 3-4). Five of these species were documented within the vicinity of the Brandon GS (EDDMapS 2026; iNaturalist.org 2026).

Table 3-4: Noxious weed species with historical occurrences in the vegetation study area

Scientific Name¹	Common Name¹	Regulatory Designation²	Detected within the project Site (Y/N)
<i>Artemisia absinthium</i>	absinthe wormwood	Tier 3	Y
<i>Centaurea stoebe</i>	spotted knapweed	Tier 1	N
<i>Cirsium arvense</i>	Canada thistle	Tier 3	Y
<i>Euphorbia virgata</i>	leafy spurge	Tier 2	Y
<i>Hordeum jubatum</i>	foxtail barley	Tier 3	Y
<i>Sonchus arvensis</i>	field sow-thistle	Tier 3	Y

NOTES:

¹ Nomenclature follows the MBCDC species list (MBCDC 2024)

² Designations under *The Noxious Weeds Act*: Tier 1 - a significant threat; eradicate without conditions, Tier 2 - manage according to infestation size, Tier 3 - control if growth or spread would have a negative effect on the economy, the environment, or the wellbeing of nearby residents

SOURCE: EDDMapS (2026); iNaturalist.org (2026)

Vegetation and wetlands are not carried forward to Section 5.0 as project effects on plant SAR are not anticipated. This conclusion is based on the low likelihood of suitable habitat occurring within the Brandon GS and immediate surrounding area.

3.6.8 Wildlife and Wildlife Habitat

The wildlife study area (Map 3-7) includes the Brandon GS and Cornwallis station and surrounding 1 km buffer, based on the maximum recommended setback distance for bird species whose ranges overlap the project site (e.g., ferruginous hawk [*Buteo regalis*] nest; MBCDC 2021). The Brandon GS and Cornwallis station sites are in a highly disturbed area zoned for heavy industrial development and there is little natural habitat remaining. The wooded area to the north, the Assiniboine River, and wetlands in the wildlife study area could provide habitat for wildlife including migratory birds and SAR. There are no Important Bird Areas (Birds Canada and Nature Canada 2026), Special Conservation Areas, or Wildlife Management Areas (GOM 2024) in the wildlife study area or within 5 km of the Brandon GS and Cornwallis station. The project site is in Migratory Bird Nesting Zone B4, which has a regional nesting period from mid-April to late August (ECCC 2025).

The ranges of at least 144 migratory bird species overlap the wildlife study area (eBird 2026), some of which may breed within (Cornell Lab of Ornithology 2026). Land cover in the wildlife study area that may provide suitable nesting and foraging habitat for migratory birds includes broadleaf forest, shrubland, pasture/forages, and wetland. Species most likely to breed in the wildlife study area are those that occupy small patches of habitat within suburban areas such as American robin (*Turdus migratorius*), song sparrow (*Melospiza melodia*), and mallard (*Anas platyrhynchos*).

The ranges of 44 wildlife SAR (those listed as Endangered, Threatened, or Special Concern under SARA) overlap the wildlife study area, including 2 amphibians, 2 reptiles, 23 birds, 3 mammals, and 14 insects (Appendix E). Six of the bird SAR may overwinter in or migrate through the wildlife study area but do not breed within it. The MBCDC (2026) reports occurrences of five species at risk in the wildlife study area including one amphibian species and four insect species (Appendix E). Of these, occurrences of northern leopard frog (*Lithobates pipiens*) and historical occurrences of Dakota skipper (*Hesperia dacotae*) and yellow-banded bumble bee (*Bombus terricola*) have been recorded within the vicinity of the Brandon GS (MBCDC 2026). Occurrences of a reptile SAR, snapping turtle (*Chelydra serpentina*), eight bird SAR, and one insect SAR, monarch butterfly (*Danaus Plexippus*) have been reported within 5 km of the Brandon GS (Appendix E). No critical habitat for wildlife SAR has been identified at or within 5 km of the Brandon GS (GOC 2026b).

Based on habitat availability (Appendix E), it is unlikely that most wildlife SAR with ranges overlapping the wildlife study area would occur at or within immediate vicinity of the Brandon GS, particularly insect SAR that are found in sand dunes or sand blowouts, such as pale yellow dune moth (*Copablepharon grandis*), and gold-edged gem (*Schinia avemensis*). In addition to the four insect species reported at the Brandon GS by the MBCDC (2026), the wildlife SAR with the most potential to occur are eastern tiger salamander (*Ambystoma tigrinum*), which occupies similar seasonal habitats as northern leopard frog; chimney swift (*Chaetura pelagica*) and barn swallow (*Hirundo rustica*), which nest on or in human-made structures; snapping turtle (*Chelydra serpentina*), which occupy river edges (COSEWIC 2008); and bobolink (*Dolichonyx oryzivorus*), prairie loggerhead shrike (*Lanius ludovicianus excubitorides*), and red-headed woodpecker (*Melanerpes erythrocephalus*), which have been recorded within 5 km of the Brandon GS and for which there may be suitable habitat in the wildlife study area. Some foraging habitat (treed areas, the Assiniboine River) at or near the Brandon GS could be used by little brown myotis (*Myotis lucifugus*) and northern myotis (*Myotis septentrionalis*), which are Endangered bat species. Manitoba oakworm moth (*Anisota manitobensis*) may occur if bur oak is present at the Brandon GS.

File Location: G:\GIS_Project_Folder\11477226_MBHydro_Brandon\figures\11477226_Figures_MH_Template.aprx

Brandon Dispatchable Capacity Project

Project Components

-  Project Site
-  Double Circuit Line
-  Single Circuit Line
-  Approximate Footprint of New Combustion Turbine Infrastructure
-  Alternative Route Segment (Gas Segments)
-  Cornwallis Station Expansion
-  Brandon Generating Station

Study Area

-  Wildlife and Vegetation Study Areas (1km Buffer of Transmission Line Routes)

Landcover

- | | |
|--|---|
|  Agriculture |  Shrubland |
|  Broadleaf |  Urban/Developed |
|  Coniferous |  Water |
|  Exposed Land/Barren |  Wetland |
|  Pasture/Forages | |

Existing Infrastructure

-  Existing Transmission Line

Landbase

-  Railway
-  Provincial Highway
-  Provincial Road

Manitoba Hydro acknowledges that the proposed Brandon Dispatchable Capacity project is located on Treaty 1 and Treaty 2 territory and on the traditional territories of the Anishinaabeg, Anishininewak, Ininew, and Dakota Oyate, and the National Homeland of the Red River Métis.

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN, Stantec
Date: March 26, 2026

0 0.25 0.5 Kilometres
0 0.15 0.3 Miles



1:15,000

Landcover in the Wildlife and Vegetation Study Areas

3.7 Socioeconomic Environment

3.7.1 Heritage Resources

The Brandon GS is directly south of the Assiniboine River, which has high potential for heritage resources. During the Pre-contact era (11,000 to 350 years before present), major river systems, such as the Assiniboine River, were important for resources and transportation and archaeological sites tend to be concentrated nearby (Shay 2022). Following European contact in Manitoba in the early 17th century, the Assiniboine River served as an important transportation corridor during the fur trade and for early agricultural settlements (Marsh 2006).

A general inquiry was submitted to the Archaeological Assessment Services (AAS) unit of the Manitoba Historic Resources Branch (HRB; Manitoba Sport, Culture, Heritage and Tourism) in early 2026, to review the Brandon GS and immediate vicinity for potential effects on heritage resources. In memorandum responses dated March 20, 2026 (AAS File AAS-25-25166, AAS-25-25167 and AAS-25-25168), the HRB stated that following its review of the natural gas pipeline, transmission lines, and combustion turbines, it has reasons to believe that planned ground disturbing activities retain the potential to inadvertently impact heritage resources. Accordingly, as per Section 12(2) of The Heritage Resources Act, the Minister requires that a Heritage Resource Impact Assessment (HRIA) be completed for the project.

The required HRIAs are anticipated to be completed by Fall 2026, under a Heritage Permit issued by the Historic Resources Branch (HRB). Previously recorded heritage resources in the broader region indicate that intact archaeological materials may be present within undisturbed soils associated with native prairie grasslands and riparian areas, primarily near the Assiniboine River, flood plain, and on elevated or well-drained landforms in the Assiniboine River Valley. A technical report detailing the objective, methods and results of the HRIA will be compiled and submitted to the HRB for regulatory review.

3.7.2 Health, Social and Economics

The City of Brandon is an urban municipality located in southwestern Manitoba. The RMs of Cornwallis and Elton which make up the Keystone Planning District surround the City of Brandon. Several primary settlement areas are situated within the Keystone Planning District, including Chater, Douglas Station, Forrest, and Justice. The Brandon GS is located within the City of Brandon, in the eastern industrial area. Census Division 7 is a Statistics Canada region that encompasses approximately 50 km surrounding Brandon.

Between 2016 and 2021, the population of Brandon increased 5.0% from 48,883 in 2016 to 51,313 while the population of Census Division 7 increased 3.1% from 68,746 in 2016 to 79,868 in 2021 (Table 3-5). Compared to Manitoba, the provincial population increased 5.0% from 1,278,365 in 2016 to 1,342,153 in 2021 (Statistics Canada 2025). In 2021, 13.8 percent of Brandon's population identified as Indigenous while 12.3% of the population identified as Indigenous in Census Division 7, compared to 17.7% of the province (Statistics Canada 2025).

The unemployment rates in Brandon and Census Division 7 in 2021 were slightly lower (7.5% and 6.9%, respectively) than that of the province (8.3%) (Table 3-6) (Statistics Canada 2025). The labour force participation rates of Brandon and Census Division 7 were slightly higher than those of the province (67.8% and 68.1% compared to 64.4%) in 2021.

The median age of Brandon residents was 36.8 years in 2021. Census Division 7 had a median age of 37.2 in 2021. Manitoba's median age was 38.4 in 2021 (Statistics Canada 2025).

In 2020, Brandon's median total household income was \$76,000 while both Census Division 7's and Manitoba's were \$79,500 (Statistics Canada 2025).

In Brandon, the greatest proportion of the total labour force worked in sales and service occupations (28.3%) and trades, transport and equipment operators and related occupations (16.6%) in 2021. Members of the Census Division 7 labour force were mainly employed in sales and service occupations (25.3%) and trades, transport and equipment operators and related occupations (17.4%) in 2021. The trend continues provincially, where the Manitoba workforce was mainly employed in sales and service occupations (24.2%) and trades, transport and equipment operators and related occupations (18.6%) in 2021 (Statistics Canada 2025).

In 2021, The City of Brandon had 21,203 private dwellings occupied by permanent residents. More than half (52.1%) of these houses were semi-detached (Statistics Canada 2022). The average value of owned dwellings in Brandon in 2021 was \$303,200. In January 2026, there were 394 new homes, including single, semi-detached, row houses and apartments under construction (CMHC 2026).

In 2021, 39.2% of private dwellings were rented and average rent was \$977 (Statistics Canada 2022). Between October 2024 and October 2025, the vacancy rate in Brandon increased from 1.4% to 1.9%. In October 2025, Brandon had a total of 5,292 rental units, including studio, 1-bedroom, 2-bedroom, and 3-bedroom units (CMHC 2026).

According to TripAdvisor, there are 16 hotels and motels in Brandon with more than 1,300 rooms (TripAdvisor 2026).

Table 3-5: Population characteristics, 2021

Location	Total Population			Indigenous Population			Percent of Population of Indigenous Identity (2021)
	Population			Population			
	2016	2021	% change	2016	2021	% change	
Brandon	48,883	51,313	5.0	6,500	7,080	8.9	13.8
Census Division 7	68,746	70,896	3.1	7,800	8,695	11.5	12.3
Manitoba	1,278,365	1,342,153	5.0	223,310	237,190	6.2	17.7

Source: Statistics Canada 2025

Table 3-6: Labour characteristics, 2021

Location	Population (15 years +)	Labour Force	Participation Rate (%)	Employed	Unemployed	Unemployment Rate (%)
Brandon	40,445	27,410	67.8	25,340	2,060	7.5
Census Division 7	54,845	37,335	68.1	34,750	2,590	6.9
Manitoba	1,058,415	681,505	64.4	625,115	56,390	8.3

Source: Statistics Canada 2025

A household is in core housing need if its housing does not meet one or more standards for housing adequacy (repair), suitability (crowding), or affordability and if it would have to spend 30% or more of its before-tax income to pay the median rent (including utilities) of appropriately sized alternative local market housing. In 2021, the City of Brandon had 1,400 households in core housing need. Of these, 18.6% were owned dwellings and 81.4% were occupied by renters (CMHC 2026).

Brandon is within the Prairie Mountain Health (PMH) Regional Health Authority. In 2024, the population of PMH was 168,876, representing 12.6% of the Manitoba population. Prairie Mountain Health Regional Health Authority has 244 physicians, 20 acute care sites, and seven primary care centres (PMH 2024). The main hospital in the City of Brandon is the Brandon Regional Health Centre which provides 24-hour emergency medical service, has over 300 beds, and is the medical referral center for Southwestern Manitoba.

In 2021/2022, more women than men had a regular health care provider in both Manitoba and PMH (Table 3-7). In both geographies, women had lower rates than men of the chronic diseases diabetes and high blood pressure. Rates of smoking and heavy drinking were higher in PMH than Manitoba in 2021/2022. In both geographies, heavy drinking was more common amongst men than women (Statistics Canada 2026).

Women had higher rates than men of perceived life stress in Manitoba and PMH and fewer women than men perceived their mental health as very good or excellent. Sense of community belonging was higher in PMH than Manitoba in 2021/2022 with men having a slightly higher sense of community belonging than women in both geographies (Statistics Canada 2026).

Table 3-7: Health characteristics, Prairie Mountain Health and Manitoba, 2021/2022						
Health Characteristic	Manitoba			Prairie Mountain Health Region		
	Total	Male	Female	Total	Male	Female
General Health Indicator (%)						
Perceived health (very good or excellent)	56.4	56.6	56.3	56.3	55.0	57.5
Has a regular healthcare provider	87.4	82.8	92.2	86.6	81.9	91.1
Mental Health Indicators (%)						

Perceived mental health (very good or excellent)	55.3	59.7	51.0	57.0	62.5	51.6
Sense of community belonging (very strong or somewhat strong)	69.2	69.3	69.0	74.1	74.5	73.7
Perceived life stress (population aged 12 and over who reported perceiving that most days in their life were quite a bit or extremely stressful)	19.5	19.9	19.0	22.4	23.2	21.6
Life satisfaction (satisfied or very satisfied)	89.1	88.7	89.4	90.4	92.1	88.7
Rates of Chronic Disease (%)						
Arthritis (15 years and over)	19.1	15.1	23.1	21.0	18.2	23.7
Diabetes	7.6	8.2	6.9	7.7	9.0	6.5
High blood pressure	18.5	19.0	18.0	17.3	18.1	16.6
Rates of Substance Abuse and Healthy Living Indicators (%)						
Current smoker, daily or occasional	11.4	11.6	11.2	14.1	13.9	14.3
Heavy drinking	18.0	22.0	14.1	21.7	28.6	15.1
Source: Statistics Canada 2026						

4.0 Federal, Provincial, Territorial, Indigenous and Municipal Involvement and Effects

4.1 Federal Funding

There is currently no federal funding for the project and support is not required from federal authorities.

Applications for federal grants or funding opportunities may be explored, as available.

4.2 Federal Lands

The project will not be constructed or operated on federal lands.

4.3 Federal and Provincial Jurisdiction

4.3.1 Federal Regulatory Requirements

In addition to the *Impact Assessment Act*, the project will be subject to the following federal Acts:

- *Fisheries Act*
- *Migratory Birds Convention Act, 1994*
- *Species at Risk Act*

Other federal acts that could be relevant to the project include:

- *Canadian Navigable Waters Act* - current project site design does not involve works in or crossing a navigable water, therefore no authorization is required. Gas pipeline crossing of the Assiniboine River and other water bodies will be installed using directional drilling or similar methods to avoid effects on navigable waters.
- *Aeronautics Act* - the project is planned in proximity to the City of Brandon Airport (within approximately 8 km); based current design there will be no structures on site tall enough to require lighting for aviation safety as the closest airport is 8 km away from the Brandon GS.

Additional applicable federal regulatory criteria and guidelines that could be relevant include:

- Canadian Ambient Air Quality Standards

- Health Canada's Guidance for Evaluating Human Health Effects of Noise (Health Canada 2017).

4.3.1.1 Fisheries Act

Based on the limited potential for the project activities to affect fish-bearing streams, it is unlikely that the *Fisheries Act* will be applicable.

4.3.1.2 Migratory Birds Convention Act, 1994

Protection and conservation of migratory birds and their habitats, including nests, is provided through the federal *Migratory Birds Convention Act* (MBCA), 1994 and *Migratory Birds Regulations*, 2022. According to the MBCA, it is unlawful to disturb migratory bird nests during the sensitive breeding bird period.

The sensitive breeding bird window for migratory birds inhabiting the area of the project is April 19 to August 28 (GOC 2025). Any construction activities during this period would necessitate the consideration of regulations to avoid harm to migratory birds.

Construction activities will consider the restricted activity periods for migratory birds and either avoid or mitigate as necessary. Initiating clearing activity (if required) prior to, or after, the breeding bird period would serve to reduce the attraction for sensitive migratory birds and mitigate the project's potential effects on nesting birds.

4.3.1.3 Species at Risk Act

The *Species at Risk Act* (SARA) aims to prevent the disappearance of species, provide for the recovery of species that have become extirpated, endangered, or threatened due to human activity, and manage species of special concern to prevent them from becoming endangered or threatened.

Specifically, SARA prohibits the killing, harming, harassing, and/or capture of species designated as extirpated, endangered, or threatened as listed in Schedule 1 of the Act. Furthermore, the damage or destruction of habitat of listed extirpated, endangered, or threatened species is similarly prohibited.

The potential for the site to provide habitat for SAR and species of conservation concern (SOCC) based on species range overlap and the type of habitat present should be determined via a site investigation and terrestrial habitat assessment. project activities are not anticipated to result in any violations to SARA.

4.3.2 Provincial Regulatory Requirements

Provincial regulatory requirements that may affect the project are those associated with the following acts:

- *Manitoba Hydro Act*
- *Public Utilities Board Act*
- *Environment Act*
- *Heritage Resources Act*
- *Gas Pipeline Act*
- *Endangered Species and Ecosystems Act*

Other provincial regulatory acts that may apply to the project to varying degrees include:

- *Dangerous Goods Handling and Transportation Act*
- *Water Resources Administration Act*
- *Mines and Minerals Act*
- *Noxious Weeds Act*
- *Planning Act*
- *Water Rights Act*
- *Transportation Infrastructure Act*
- *Ozone Depleting Substances Act*
- *Pesticides and fertilizers Control Act*
- *Highway Traffic Act*
- *Climate and Green Plan Act*
- *Waste Reduction and Prevention Act*
- *Water Resources Conservation Act*
- *Workplace Safety and Health Act*

Additional applicable provincial regulatory criteria and guidelines that could be relevant include:

- Manitoba Ambient Air Quality Criteria
- Manitoba Guidelines for Sound Pollution

4.3.2.1 Manitoba Hydro Act

In accordance with subsection 38.1(1) of The *Manitoba Hydro Act*, Manitoba Hydro submitted, for approval by Lieutenant Governor in Council, its 2025 Integrated Resource Plan. On February 2, 2026, in accordance with subsection 38.1(4) of The *Manitoba Hydro Act*, the Lieutenant Governor in Council referred the 2025 IRP to the Public Utilities Board (“PUB”) for its review and recommendations pursuant to Order in Council No. 12/2026 (the “OIC”). The OIC further directed that in the event a proposed major new facility identified in the IRP is referred to the PUB for review and

recommendations, the review of the IRP must be conducted jointly with the review of the proposed major new facility.

The 2025 IRP outlines Manitoba Hydro's strategy to ensure safe, reliable energy and delivers a road map that includes the recommended development plan over a 10-year timeframe, an alternative development plan, key learnings, near-term actions and signposts that impact both Manitoba Hydro's electrical system and the natural gas system operated by Manitoba Hydro's subsidiary, Centra Gas Manitoba Inc.

A foundational assumption in the 2025 IRP is that Manitoba Hydro's existing system continues to deliver energy and capacity, and that the utility makes the investments necessary to sustain that system.

The analysis indicates that new electricity capacity is needed by 2030 and that new reliable energy will be required by 2032. The 2025 IRP recommended development plan includes developing a major new facility for generating power, consisting of 750 MW of natural gas-fired SCCTs in 2030/31.

Before approving the development of a major new facility for generating power, the Lieutenant Governor in Council must refer the proposed development to the PUB for its review and recommendation in accordance with subsection 16(3) of the Act.

4.3.2.2 Environment Act

The *Environment Act* establishes a robust environmental assessment and licensing framework for developments in Manitoba aimed at protecting the environment. Proponents of new developments specified in the Act's regulations must submit a proposal pursuant to the *Environment Act* and obtain a license prior to construction and operation.

The specified developments are listed in the Classes of Development Regulation (M.R. 164/88), which categorizes developments into one of three classes based on scale and potential impact. Alterations to existing licensed developments require the proponent to submit a Notice of Alteration to the director before proceeding.

If it is determined that the potential effects of an alteration will be insignificant or can be accommodated by the ongoing assessment process for the licensed development, the alteration may be approved, subject to certain limits, terms or conditions which are outlined in an amended licence.

The approval is posted in a public registry along with the name of a contact person who can provide information about the alteration to the public. The approval can be appealed by an affected person under section 27 or 28 of the Act.

If it is determined that the potential environmental effects of the alteration are not insignificant or cannot be accommodated by the existing assessment process, the proponent must file a proposal for a separate approval based on the class of the development.

The Brandon Combustion Turbine Plant is an existing Class 3 licensed development; therefore, a notice of alteration is required for the addition of the proposed three new SCCTs under section 14(1) of the Act. Manitoba Hydro is preparing a detailed environmental assessment report for its submission to the Environmental Approvals Branch, as part of the Notice of Alteration.

As agreed during discussions with the Environmental Approvals Branch in late 2025, the notice of alteration will include the generating capacity additions as well as the two new transmission lines, consistent with the scope of the existing licence.

If Manitoba Hydro is directed to file a proposal after review of the notice of alteration, the processing of a Class 2 development proposal (for the transmission lines) or Class 3 development proposal (for capacity additions) will require the following:

- Submission of a detailed proposal including information concerning the development, its environmental effects and socio-economic impacts as required by the Licensing Procedures Regulation (M.R. 163/88)
- Publication of a summary of the proposal in a public registry
- Notification of the public through newspapers and notification of affected departments
- Opportunity for comments and objections.

Assessment of the proposal may include any or all of the following:

- A requirement for the proponent to provide additional information
- A requirement for public consultation by the proponent
- A requirement for the proponent to file an assessment report including any of the following: studies, research, data and analysis, monitoring, alternatives to the development or its location and details of proposed environmental management practices
- A public hearing.

As mentioned in Section 2.4, a separate proposal under the *Environment Act* is required for the new gas pipeline as it constitutes a Class 2 development. Manitoba Hydro is preparing a separate environmental assessment report as part of the proposal.

This proposal will undergo the comprehensive review process noted above.

4.3.2.3 Heritage Resources Act

The *Heritage Resources Act* provides a regulatory framework for the protection, conservation, and management of archaeological sites, heritage objects and culturally significant resources, including those of importance to Indigenous peoples. Ground disturbing activities associated with the project site and associated linear infrastructure requires a screening by the Historic Resources Branch of Manitoba. The screening identifies the need for a pre-construction heritage resources impact assessment (HRIA).

A permit to conduct the HRIA must be obtained by a qualified archaeologist pursuant to the Act. If heritage resources are identified within the project footprint, avoidance, monitoring or recovery measures may be required in accordance with the provincial standards and conditions specified in the heritage permit.

Manitoba Hydro will obtain the necessary permit and have an HRIA conducted prior to the start of any work.

4.3.2.4 Gas Pipeline Act

The *Gas Pipeline Act* regulates the construction, operation and maintenance of gas pipelines within Manitoba. The natural gas pipeline segments for the project require provincial approval and must comply with applicable engineering, safety and operational standards, including requirements for routing, rights-of-way, inspections and emergency response planning.

The purpose of the Act is to address public safety, environmental protection, and damage prevention for pipeline infrastructure.

4.3.2.5 The Endangered Species and Ecosystems Act

The *Endangered Species and Ecosystems Act* provides legal protection for species and ecosystems designated as endangered, threatened, or of special concern in Manitoba. project activities such as vegetation clearing could potentially affect listed species or their habitats. If a designated species or ecosystem is present within the project footprint, mitigation measures, timing restrictions, or permits may be required to avoid or reduce adverse effects.

4.3.2.6 The Dangerous Goods Handling and Transportation Act

The *Dangerous Goods Handling and Transportation Act* regulates the handling, storage, transportation and disposal of hazardous substances that could pose risks to human health or the environment. Construction and operation of the project involve the transport of fuels, hydraulic fluids, oils and lubricants which must be managed in

accordance with requirements under this Act for containment, spill prevention, emergency preparedness, and spill reporting. The Act also provides authority for remediation and enforcement in the event of an accidental release.

4.3.2.7 The Water Resources Administration Act

The *Water Resources Administration Act* regulates the use, control, and alteration of surface water resources in Manitoba. Projects that involve water withdrawals, drainage works, watercourse crossings, or activities that could affect flow or water levels may require permits under this Act.

4.3.3 Municipal Regulatory Requirements

In planning its developments, Manitoba Hydro seeks to consider municipal regulations in the form of applicable development plans and zoning by-laws. Development plans and zoning by-laws of interest to Manitoba Hydro in the planning of the project include:

- The City of Brandon Development Plan (City Plan 2025) By-Law No. 7392 – the City Plan is intended to provide a long-term planning vision for the future growth of the city, focusing on addressing challenges in housing, transportation, economic development, infrastructure, and natural and socio-economic environments.
- The City of Brandon Zoning By-law No. 7124 (2016) Schedule A* (*adopted under the former Brandon and Area Planning District and Development Plan) and The City of Brandon Zoning By-law No. 7124 (Revised 2024) Schedule B. The purpose is to regulate and control the use and development of land and buildings within the city.

The project is in the east Brandon industrial area. A planning regulatory framework has been established for this area under a Secondary Plan. The East Brandon Industrial Area Secondary Plan By-law No. 7209 Schedule A (adopted under the former Brandon and Area Planning District Development Plan) purpose is to facilitate the development of the industrial area in the eastern part of Brandon.

5.0 Potential Effects of the Project

The following sections outline changes that, because of the carrying out of the project, may be caused to the following components of the environment that are within the legislative authority of Parliament:

- fish and fish habitat as defined in subsection 2(1) of the Fisheries Act
- aquatic species, as defined in subsection 2(1) of the *Species at Risk Act* (marine plants)
- migratory birds, as defined in subsection 2(1) of the *Migratory Birds Convention Act, 1994*

The carrying out of the project will not result in:

- Non-negligible adverse changes to the marine environment caused by pollution and that would occur outside Canada
- Non-negligible adverse changes to interprovincial waters or to boundary waters or international waters, as those terms are defined in subsection 2(1) of the Canada Water Act, that are caused by pollution.

For the purposes of assessing affects, a project footprint (Map 5-1), including Brandon GS, New CT plant, Cornwallis Station, and associated transmission interconnection (assumed up to 60 m ROW) was used. A 40 m ROW for the pipeline was assumed.

5.1 Fish and Fish Habitat

A review of the proposed works was completed based on the design and construction details available, which indicate that no in-water work is proposed.

The new SCCT units will be at the existing Brandon GS and are not anticipated to involve any in-water works. Two towers of the interconnection transmission line will be within the Assiniboine River floodplain, so there will be a requirement for some tree clearing in the floodplain.

The natural gas pipeline's footprint will traverse lands within portions of the RMs of Elton and Cornwallis, including several watercourse crossings. Pipeline installation across water channels will be done via horizontal directional drilling to minimize disturbance.

This review incorporated guidance from DFO's projects Near Water website (DFO 2025c), Pathway of Effects (DFO 2024), and Measures to Protect Fish and Fish Habitat (DFO 2025b).

Based on the description of the proposed works, potential effects to fish and fish habitat, including species at risk, have been identified and are presented in Table 5-1.

Changes to the project work plan or design may result in additional effects being identified that would be re-assessed in consultation with DFO.

Table 5-1: Potential effects on fish and fish habitat for the proposed works		
Potential Effect	Effect pathway	Project component
Change in or loss of riparian habitat / habitat structure and cover	Use of machinery on land / alteration of riparian vegetation including activities such as grading, excavation, grubbing, vegetation clearing and maintenance, stockpiling, riprap armouring of bank	Land-based activities - construction / installation of turbine combustion units, transmission lines, natural gas pipeline
Sedimentation of fish habitat		
Change in fish mortality risk	Accidental spills and releases from the use of machinery on land near water	

5.1.1 Mitigation Measures

The primary mitigation measure to reduce the risk of adverse effects on fish and fish habitat within the vicinity of the project site during construction and operation is the avoidance of works, undertakings, and activities in or near water.

By carrying out all works, undertakings, and activities on land and outside of the riparian zone, the risk of a harmful alteration, disruption, or destruction (HADD) of fish habitat is reduced. This includes the avoidance of the following:

- Conducting in-water work
- Placing fill or other structures (temporary or permanent) below the high-water mark
- Fording the watercourse
- Disturbing or removing materials from banks, shorelines, or beds
- Building structures in areas that may result in erosion and/or scouring of stream bed and banks
- Building structures in areas that are inherently stable

If work within the riparian zone is required, the mitigation measures outlined in Table 5-2 can be implemented to reduce the risk of adverse effects on fish and fish habitat within the vicinity of the project area. These mitigation measures assume that no in-

water work will occur and if in-water work becomes necessary, additional review and mitigation measures will be required.

Further site-specific mitigation measures, including measures for sensitive species or features, will be developed, if needed.

Any potential effects to fish and fish habitat from construction and operation of the generating station, transmission lines, or natural gas pipeline will be mitigated.

Carrying out of the project has no potential to cause any non-negligible adverse changes to aquatic species, as defined in subsection 2(1) of the Species at Risk Act.

Table 5-2: Mitigation Measures for Fish and Fish Habitat

Potential Effect	Effect Pathway	Mitigation Measures
Sedimentation of fish habitat	Use of machinery on land/alteration of riparian vegetation (grading, excavation, clearing, stockpiling, riprap armouring)	• Work, undertakings, or activities in the riparian zone will be scheduled to avoid wet, windy, and rainy periods that may increase potential erosion and sedimentation. • An Erosion and Sediment Control Plan will be developed and implemented that mitigates the risks of sedimentation in the drainages during the various phases of the project. Erosion and sediment control measures will be maintained until disturbed ground has been stabilized, and runoff water is clear. The plan will include, but not be limited to, the following practices where applicable: ○ Temporarily suspend work in the event of weather that could increase the potential for erosion and sedimentation (e.g. forecasted >10 mm precipitation within a 24-h period) ○ Install effective erosion and sediment control measures before starting work to prevent sediment from entering the watercourse. ○ Regularly inspect and maintain erosion and sediment control measures and structures during construction. ○ Repair erosion and sediment control measures and structures if damage occurs. ○ Remove non-biodegradable erosion and sediment control materials once the Site is stabilized. ○ Excavated materials and debris will be placed above the ordinary high water mark (OHWM) until the materials can be backfilled, and in such a way as they do not enter the water channel. ○ Use clean materials for construction, free of fines and debris. ○ Material for backfill will be of the same quality and gradation that was removed. • Measures for containing and stabilizing waste material (e.g. construction waste and materials, uprooted or cut plants, accumulated debris) will be developed to be above the OHWM to prevent entry to the watercourse. If spoil piles are to be exposed for greater than one week, consider covering or installing sediment fencing around piles to mitigate and contain erosion.

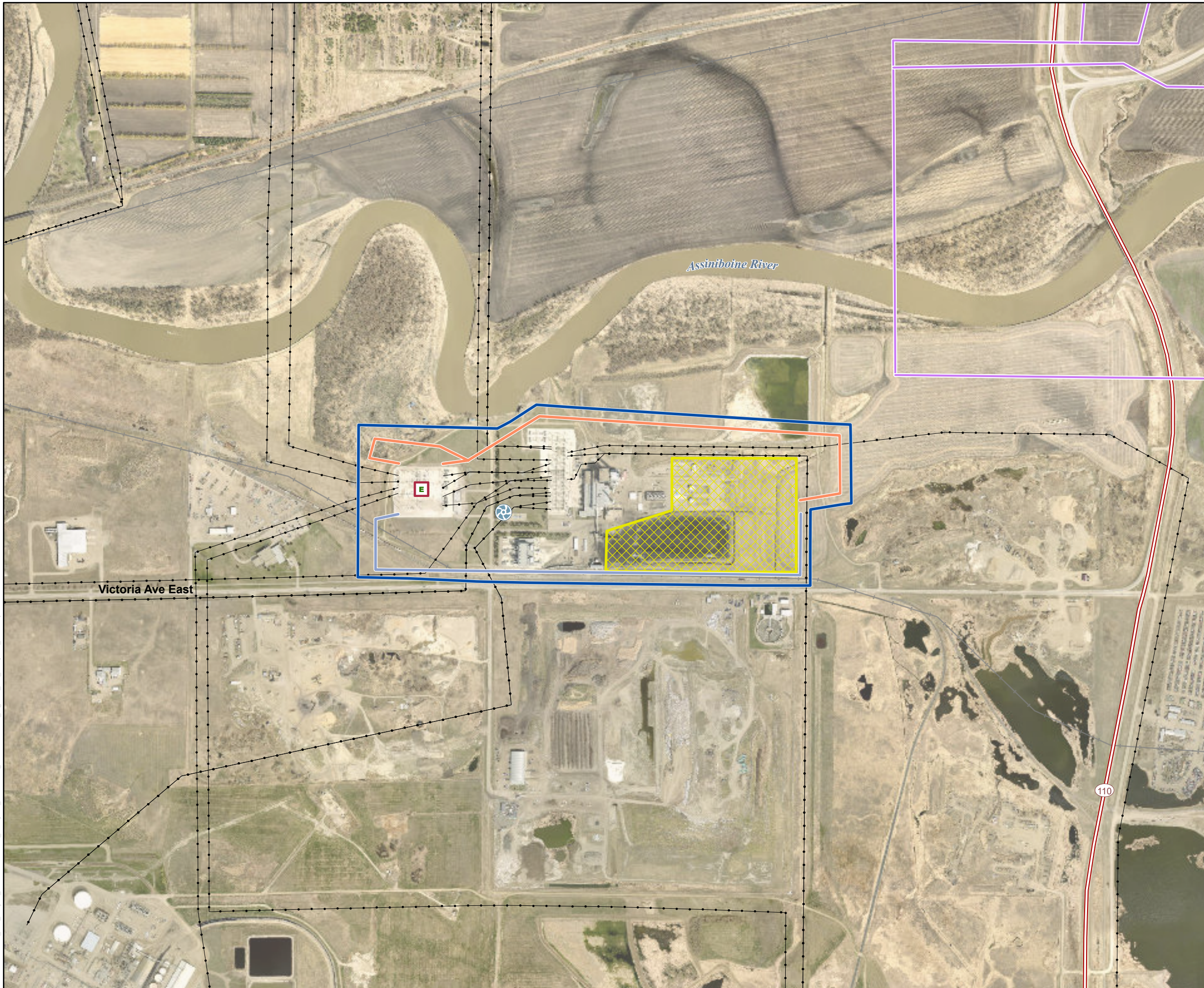
Table 5-2: Mitigation Measures for Fish and Fish Habitat

Potential Effect	Effect Pathway	Mitigation Measures
Change in or loss of riparian habitat / habitat structure and cover	Use of machinery on land/alteration of riparian vegetation (grading, excavation, clearing, stockpiling, riprap armouring)	• Mitigation measures as described to reduce sedimentation of fish habitat • Establish an appropriate vegetative buffer (i.e. set-back) from the OHWM. ◦ Standard 30 m buffer, increasing with increasing slope • Implement subsurface drainage controls, where appropriate, to maintain groundwater and surface water interactions and to maintain the stability of reclaimed land. The type and location of subsurface drainage controls should be determined through onsite investigation with considerations for: subsurface flow potential, erodibility of backfill materials, and degree of slope. • All construction materials will be removed from the site following construction completion. • No materials will be removed from below the OHWM. • Surface (i.e. terrestrial) disturbance will be revegetated following construction works. The Site will be stabilized after construction is complete (e.g. cover exposed areas with erosion control blankets to keep the soil in place and prevent erosion) and vegetated the following spring. • The immediate vicinity (i.e. 30 m) of the watercourse will not be fertilized unless approved by DFO. • The watercourse banks and approach slopes will be revegetated with an appropriate native seed mix or erosion control mix. • Site-specific procedures will be developed to prevent the invasion or spread of undesirable or non-native vegetation (e.g. purple loosestrife, Eurasian watermilfoil, <i>Phragmites</i> spp.). This includes, but is not limited to, pre-access vehicle and equipment inspections. • Approaches will be designed and constructed to minimize loss or disturbance to riparian vegetation. • Riparian vegetation removal will be kept to a minimum. When practicable, the top vegetation will be pruned instead of grubbing or uprooting. Riparian vegetation will not be removed if the riparian area is identified as part of critical habitat of an aquatic listed SAR. • Herbicides will not be used for clearing or maintenance of riparian vegetation unless otherwise approved and in accordance with applicable provincial and federal laws and regulations. ◦ Limit disturbance of the watercourse banks and immediately stabilize and reclaim the site to pre-construction conditions where possible.

Table 5-2: Mitigation Measures for Fish and Fish Habitat

Potential Effect	Effect Pathway	Mitigation Measures
Direct or indirect changes in fish mortality	Accidental spills and releases from the use of machinery on land near water	• An emergency preparedness and response plan will be developed and implemented that will minimize risk of accidental spills or releases from entering the watercourse during all phases of the project. • Machinery will be washed, refueled, and serviced. Fuel and other materials for the machinery will be stored in such a way as to prevent any deleterious substances from entering the watercourse. • Fuel tanks and other containers of hazardous liquids will be stored/placed within secondary containment having 110% of the capacity of the largest vessel inside the containment and stored with sufficient distance to ensure that no spills can reach the watercourse. Where possible, refueling of equipment, vehicles and machinery should occur at least 100 m away from the watercourse.

File Location: G:\GIS_Project_Folder\11477226_MBHydro_Brandon\figures\11477226_Figures_MH_Template_REV04.aprx



Brandon Dispatchable Capacity Project

Project Components

 Project Site

Transmission Line Routes

 Double Circuit Line

 Single Circuit Line

 Approximate Footprint of New Combustion Turbine Infrastructure

 Alternative Route Segment (Gas Segments)

 Cornwallis Station Expansion

 Brandon Generating Station

Existing Infrastructure

 Existing Transmission Line

Landbase

 Railway

 Provincial Highway

 Provincial Road

Manitoba Hydro acknowledges that the proposed Brandon Dispatchable Capacity project is located on Treaty 1 and Treaty 2 territory and on the traditional territories of the Anishinaabeg, Anishininewak, Ininew, and Dakota Oyate, and the National Homeland of the Red River Métis.

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date: May 11, 2026

0 0.15 0.3 Kilometres
0 0.1 0.2 Miles

1:10,000



Project Site

Draft/Confidential: For Discussion Purposes Only

Map 5-1

5.2 Migratory Birds and Species At Risk

5.2.1.1 Construction

No project construction effects on plant SAR are anticipated as suitable habitat is unlikely to be present within the project site.

Potential project effects on migratory birds and wildlife SAR during construction include changes to habitat availability and changes in mortality risk. Direct loss or alteration of habitat may result from vegetation clearing and ground disturbance within the existing Brandon GS property, which is already highly disturbed, as well as for the Cornwallis Substation upgrades, and the three new interconnection 230 kV transmission lines.

Construction-related sensory disturbance (e.g., noise, human activity, and equipment operation) may result in indirect habitat loss through avoidance by migratory bird and wildlife SAR. While the project is not expected to create physical barriers to wildlife movement, vegetation removal associated with transmission line rights-of-way may affect local wildlife movements.

Table 5-3 summarizes potential project construction phase effects on migratory birds and wildlife SAR, along with associated effect pathways.

Mitigation measures to address potential construction-phase effects are summarized in Section 5.2.2.1.

Table 5-3: Potential construction phase effects on migratory birds and wildlife species at risk		
Potential Effect	Effect Pathway	Project Component
Changes to habitat	• Direct loss or alteration of habitat resulting from vegetation removal and ground disturbance • Indirect loss of habitat effectiveness resulting from sensory disturbance	• Added combustion turbine units • Transmission lines • Pipeline
	• Alteration or impediment of wildlife movement from vegetation removal	• Transmission lines • Pipeline
Changes in mortality risk	• Vegetation clearing and ground disturbance resulting in destruction of key habitat (e.g., migratory bird nests, mammal dens)	• Transmission lines • Pipeline

Table 5-3: Potential construction phase effects on migratory birds and wildlife species at risk

Potential Effect	Effect Pathway	Project Component
	• Vehicle and equipment movement and ground disturbance resulting in accidental mortality of small, less mobile wildlife (e.g., amphibians, juvenile birds) and destruction of migratory bird nests • Vehicle-wildlife collisions • Human-wildlife conflict	• Added combustion turbine units • Transmission lines • Pipeline

5.2.1.2 Operation

No project operation effects on plant SAR are anticipated as suitable habitat is unlikely to be present within the project site.

Potential project effects on migratory birds and wildlife SAR habitat during operation include changes to habitat availability and changes in mortality risk. Because the added combustion turbine units will be installed within an existing facility, no new or additional effects are anticipated. However, routine transmission line and pipeline operation and maintenance activities, including vegetation management, may result in project effects on migratory birds and wildlife SAR including direct alteration or removal of habitat, indirect habitat loss due to sensory disturbance (e.g., noise, human activity, and equipment operation) and increased mortality risk.

Increased mortality could occur through nest destruction during the migratory bird breeding season, as well as collisions with maintenance vehicles and equipment.

Transmission tower infrastructure may also provide new habitat and influence wildlife behaviour. Transmission towers can provide additional perching opportunities for raptors, which could increase predation pressure on migratory birds in the surrounding area. In addition, migratory birds may face an increased risk of mortality from collisions with transmission line wires.

Table 5-4 summarizes potential project operation phase effects on migratory birds and wildlife SAR, along with associated effect pathways.

Mitigation measures to reduce potential project effects on migratory birds and wildlife SAR during operation are summarized in Section 5.2.2.2.

Table 5-4: Potential Operation Phase Effects on Migratory Birds and Wildlife Species at Risk

Potential Effect	Effect Pathway	Project Component
Changes to habitat	• Direct loss or alteration of habitat resulting from vegetation management • Indirect loss or alteration of habitat effectiveness resulting from sensory disturbance • New habitat creation (e.g., tower structures)	• Transmission lines • Pipeline
Changes in mortality risk	• Migratory bird collisions with overhead wires • Vehicle-wildlife collisions • Migratory bird nest destruction within the breeding season	• Transmission lines • Pipeline

5.2.2 Mitigation measures

5.2.2.1 Construction

Mitigation measures to address potential effects on migratory birds and wildlife SAR during construction are identified in Table 5-5 and are consistent with measures implemented for similar projects. As project planning progresses, additional mitigation measures, including site-specific measures for sensitive species or habitats, will be developed as required.

Table 5-5: Potential Construction Phase Mitigation Measures for migratory birds and wildlife species at risk

Potential Effect	Effect Pathway	Mitigation Measures
Changes to migratory bird and wildlife SAR habitat	Direct loss or alteration of habitat resulting from vegetation removal and ground disturbance	• Limit construction activities to the <i>project footprint and established roads and trails (e.g., access roads) where possible</i> • Reduce vegetation clearing to the extent possible
	Alteration or impediment of wildlife movement resulting from vegetation removal	
	Indirect loss of habitat effectiveness resulting from sensory disturbance	• Schedule high-noise activities outside sensitive wildlife periods (e.g., breeding, nesting, migration) where possible • Use low-noise vehicles and equipment and maintain machinery to minimize unnecessary sound • Install noise reducing measures (e.g., mufflers, acoustic barriers) on vehicles and equipment • Avoid night-time or continuous lighting
Changes in migratory bird and wildlife SAR mortality risk	Vegetation clearing and ground disturbance resulting in destruction of key habitat (e.g., migratory bird nests, mammal dens)	• Schedule vegetation clearing outside of the migratory bird nesting period of mid-April to late August where possible • If vegetation clearing is planned during the migratory bird nesting period, complete nest searches no more than seven days before undertaking the activity • If a migratory bird nest, wildlife SAR, or sensitive wildlife feature (e.g., raptor nest, pileated woodpecker [<i>dryocopus pileatus</i>] nest cavity) is encountered during construction, consult a qualified wildlife professional or environmental monitor and establish appropriate mitigation measures (e.g., species-specific setback buffers, artificial replacement structure for nesting if unoccupied raptor nests must be removed)

Table 5-5: Potential Construction Phase Mitigation Measures for migratory birds and wildlife species at risk

Potential Effect	Effect Pathway	Mitigation Measures
	Vehicle and equipment movement and ground disturbance resulting in accidental mortality of small, less mobile wildlife (e.g., amphibians, juvenile birds) and destruction of migratory bird nests	• Inspect project infrastructure and stationary equipment regularly (e.g., daily to every five days) for the presence of nesting migratory birds or wildlife SAR (e.g., barn swallow [<i>hirundo rustica</i>]) during construction. Should a nest be found, consult a qualified wildlife professional or environmental monitor and establish appropriate mitigation measures (e.g., species-specific setback buffers)
	Vehicle-wildlife collisions	• Adhere to speed limits and establish construction traffic speed limits on access roads to reduce the risk of vehicle and equipment collisions with wildlife
	Human-wildlife conflict	• Collect waste generated from the work site (e.g., construction garbage, food waste) regularly in appropriate waste containers and dispose of at an approved facility to avoid attracting wildlife • Prohibit feeding or harassing wildlife by construction staff

5.2.2.2 Operation

Mitigation measures to address potential effects on migratory birds and wildlife SAR during operation are identified in Table 5-6 and are consistent with measures implemented for similar projects. As project planning progresses, additional mitigation measures, including site-specific measures for sensitive species or habitats, will be developed as required.

Table 5-6: Potential Operation Phase Mitigation Measures for migratory birds and wildlife species at risk

Potential Effect	Effect Pathway	Mitigation Measures
Changes to migratory bird and wildlife SAR habitat	Direct loss or alteration of habitat resulting from vegetation management Indirect loss or alteration of habitat effectiveness resulting from sensory disturbance	• Schedule vegetation management during operation maintenance on the transmission lines outside of the migratory bird nesting period of mid-April to late August where feasible. • If vegetation management is planned during the migratory bird nesting period, complete nest searches no more than seven days before undertaking the activity • If an active nest is found, implement specific mitigation (e.g., species-specific setback buffers) • Schedule high-noise activities outside sensitive wildlife periods (e.g., breeding, nesting, migration) where possible • Use low-noise vehicles and equipment and maintain machinery to minimize unnecessary sound • Install noise reducing measures (e.g., mufflers, acoustic barriers) on vehicles and equipment • Avoid night-time or continuous lighting
	New habitat creation (e.g., tower structures)	• Not applicable
Changes in migratory bird and wildlife SAR mortality risk	Migratory bird collisions with overhead wires	• Install bird diverters on transmission lines near features likely to attract migratory birds (e.g., the Assiniboine River).
	Migratory nest destruction within the breeding season	• Schedule vegetation management on the transmission lines outside of the migratory bird nesting period of mid-April to late August where feasible

Table 5-6: Potential Operation Phase Mitigation Measures for migratory birds and wildlife species at risk

Potential Effect	Effect Pathway	Mitigation Measures
		• If vegetation management is planned during the migratory bird nesting period, complete nest searches no more than seven days before undertaking the activity • If an active nest is found, implement appropriate mitigation (e.g., species-specific setback buffers)
	Vehicle-Wildlife Collisions	• Adhere to speed limits and establish construction traffic speed limits on access roads to reduce the risk of vehicle and equipment collisions with wildlife

5.3 Federal Lands

The project will not to be carried out on federal land and is not a federal work or undertaking, as defined in subsection 3(1) of the Canadian Environmental Protection Act, 1999 and there are no anticipated effects on federal lands.

As such, no project-related changes to the environment are expected on federal lands or in a province other than Manitoba from the project.

5.4 Indigenous Peoples of Canada

Manitoba Hydro acknowledges that the proposed project's footprint lies within a region where Indigenous groups may practice rights-based activities.

As previously mentioned in Section 1.3.3, Manitoba Hydro has engaged the following 14 Indigenous audiences (i.e., Birdtail Sioux Dakota Nation, Canupawakpa Dakota Nation, Dakota Plains Wahpeton First Nation, Dakota Tipi First Nation, Gambler First Nation, Keeseekoowenin Ojibway First Nation, Long Plain First Nation, Peguis First Nation, Rolling River First Nation, Sandy Bay Ojibway First Nation, Sioux Valley Dakota Nation, Swan Lake First Nation, Waywayseecappo First Nation, and The Manitoba Métis Federation (MMF).

It is anticipated that additional information regarding actual Indigenous land use related to the proposed project footprint will be identified as part of the provincial permitting application process.

As part of the provincial environmental licensing process, Manitoba Hydro generally considers two main aspects: potential effects to heritage resources and potential effects to harvesting and important sites. Each of these is described below.

5.4.1 Heritage Resources

In accordance with Section 12 (2) of *The Heritage Resources Act* (1985) a Heritage Resource Impact Assessment (HRIA) may be required for any development that has the potential to impact heritage resources.

To determine the need for an HRIA, a general inquiry form will be submitted to the Manitoba Historic Resources Branch (HRB) (Manitoba Sport, Culture, Heritage and Tourism) to screen the project for heritage requirements.

If required, a Heritage Resources Impact Assessment (HRIA) will be conducted by a qualified archaeologist in accordance with Manitoba guidelines, to identify and delineate heritage resources which may conflict with the project site.

The HRIA will include desktop review of available data such as provincial records, previous archaeological studies in the area, academic research, aerial photographs, archival documents, and landscape analysis.

HRIA field investigations will focus on the project footprint to identify potential heritage constraints that may affect the project and, where applicable, inform the development of mitigation measures to address or alleviate the concerns.

Should heritage resources be identified within the project footprint, appropriate mitigation measures will be implemented. These may include construction monitoring, avoidance, site protection, or controlled excavation. These methods will be developed in consultation with the HRB in accordance with applicable provincial regulatory requirements.

5.4.2 Harvesting and Important Sites⁴

As part of the environmental assessment that will be filed with the Manitoba Environment and Climate Change's Environmental Approvals Branch, for the project,

⁴ Manitoba Hydro has been adaptive in its characterization of valued components, based on input during engagement on previous projects, and moved from use of the term "traditional land use" to "harvesting and important sites".

Manitoba Hydro has selected harvesting and important sites as a valued component for the assessment.

Harvesting and important sites considers potential effects of the project on interests important to First Nations people and Red River Métis citizens including rights-based activities and features of heritage and cultural value within the project area.

For the assessment, harvesting includes rights-based hunting, fishing, trapping and the gathering of traditional plants, medicines, and other natural materials. These are important traditional practices for many Indigenous people and can be central to providing food and income for one's family, as well as the transfer of culture, traditions, and knowledge in the present and for future generations.

Harvesting includes the practice of harvesting, the resulting knowledge gained from taking part in harvesting, harvesting success, and the harvesting experience integral to distinct First Nation and Métis cultures.

Important sites include heritage resources as defined and protected by Manitoba's *Heritage Resources Act* (1986) as well as a broad range of cultural sites and features understood to be important to First Nations peoples and Red River Métis citizens in the project area. The assessment of important sites is intended to broadly capture the diverse ways by which locations and features of the land provide heritage and/or cultural value. The scope includes:

- Heritage resources: Physical, cultural, and natural elements considered valuable and preserved for their historical, cultural, scientific, or aesthetic significance. Heritage resources include tangible remains of human endeavors that have survived through time and provide evidence of past activity. These are non-renewable resources that may be disturbed or damaged by development activities.
- Cultural sites and features important to First Nations peoples and Red River Métis citizens including both tangible sites and intangible cultural heritage.
- Tangible important sites include sites or objects of cultural, historical, spiritual, or sacred importance. Certain land types and interests such as unoccupied Crown land and land available for Treaty Land Entitlement opportunities are also considered.
- Intangible cultural heritage is defined by the United Nations Educational, Scientific and Cultural Organization (UNESCO) to include traditions and living expressions transmitted from one generation to the next (UNESCO 2023). This assessment, therefore, also considers the practice of ceremony, the places ceremony may occur, as well as the experiences and cultural knowledge transmission that occur through undertaking cultural practices, including rights-based activities.

It is important to note that the ability to discuss cultural sites, features, and experiences is dependent on whether (and how much) information is shared by engaged Indigenous nations through the project engagement process.

The Brandon GS is in an industrial area on occupied and disturbed lands owned by Manitoba Hydro; however, the project is within Treaty 2 territory in the southwestern region of Manitoba (Indigenous Services Canada 2021).

Current use of lands and resources for traditional purposes by Indigenous peoples occur throughout the region.

Rights-based harvesting (i.e., trapping for food) by Indigenous peoples is allowed within Reserve lands, wildlife management areas, unoccupied Crown lands, and other Crown lands where hunting or trapping is permitted.

Red River Métis harvesters also have the right to trap for food and domestic use within Recognized Areas for Natural Resource Harvesting (Manitoba Natural Resources and Indigenous Futures 2025).

As the combustion turbine units will be at the existing Brandon GS, effects of the SCCT installation and use on traditional land use by Indigenous peoples is anticipated to be minimal, and mitigable.

Manitoba Hydro understands that First Nations people and Red River Métis citizens have enduring connections to these lands and may continue to visit the area to practice rights-based activities today, both on private land with landowner permission and on the small amount of Crown land that remains.

While the pipeline will be constructed primarily on private land, it has the potential to affect rights-based activities, primarily during construction, which will occur over several months.

Manitoba Hydro's engagement process with First Nations people and Red River Métis citizens on this project incorporates opportunities for their continued participation and feedback to inform project components, including consideration of potential project effects on traditional land use.

Activities that have informed or will inform understanding of potential effects to traditional land use include project specific multi-nation engagement circles (see Section 1.3), as well as heritage resources-related fieldwork, site-visits and field tours, and meetings with individual nations.

These activities have and will continue to support Manitoba Hydro's knowledge and understanding of traditional land use and rights-based activities in the project area and will inform the development of mitigation measures to minimize potential

impacts. Beyond the on-going planning and regulatory phase of the project, Manitoba Hydro will continue to engage with First Nations and the Manitoba Métis Federation throughout project construction, operations, and decommissioning.

5.4.3 Health, Social, Economic Conditions

The potential environmental effects of the construction and operation of the SCCTs on lands outside the Brandon GS are expected to be limited to air and noise emissions, however these are not new effects and are not anticipated to adversely affect existing use of lands for traditional purposes.

Changes to the environment, including soil, vegetation, wildlife and heritage resources are expected to be limited to the Brandon GS and its immediate vicinity, with some changes along the pipeline ROW. The project is not expected to have effects on surface water and fish and fish habitat.

Incremental effects to air quality, noise and human health are expected to be negligible. Effects on the socio-economic environment are expected to extend beyond the Brandon GS and include positive effects due to the economic benefits of the project.

Although Gambler First Nation and Waywayseecappo First Nation are close to the project (5-6 km; Map 3-5), it is not expected that they would be disproportionately affected by the project, including potential noise or air quality effects.

The project footprint lies within a developed heavy-industry zone near active railway lines and highway corridors. These existing transportation and industrial activities contribute to a relatively high ambient noise environment.

During project construction, noise would generally be localized at the station, tower and access route locations and would occur over a limited duration such that any noise changes caused by the project would have negligible effects for the identified two nearby First Nations. In addition, it is expected that air quality effects will be limited and negligible at the distances noted for these two parcels of land.

Manitoba Hydro is currently working on a noise assessment and conducting air quality modelling. Initial assessments to air quality have indicated that the project will result in minor increases to pollutant concentrations but will remain much less than the Manitoba Ambient Air Quality Criteria. Should these studies show any non-negligible effects, Manitoba Hydro will implement additional mitigation measures.

Effects on Indigenous peoples, including effects to health, social and economic conditions, physical and cultural heritage, any structure, site or thing of historical,

archaeological, paleontological importance, or the current use of land and resources for traditional purposes are expected to be mitigable.

5.5 Greenhouse Gas Emissions

The Project is a component of Manitoba Hydro's Recommended Development Plan (RDP) which provides recommendations to meet Manitoba's energy and capacity needs through 2035. As the Project is intended and planned to work within Manitoba's integrated energy network, modelled operational GHG emissions are presented on an annual and cumulative basis at a system level.

The Project is expected to have GHG emission impacts throughout its full lifecycle, including during the construction, maintenance, operation and decommissioning phases of the project. GHG emissions presented in this project description are temporally constrained to 2035 in alignment with the RDP which provides recommendations to meet Manitoba's energy and capacity needs through 2035.

Post-2035 uncertainty regarding Manitoba's electric energy and capacity needs makes 2035 an appropriate endpoint for the Project's GHG analysis. As a result, decommissioning-related GHG emissions are not included since the Project is expected to continue operating beyond 2035. While GHG emissions information is only presented to 2035 in this document, a foundational component of the 2025 IRP was planning to support a net zero economy in Manitoba by 2050. As these projects are intended to operate after 2050, net GHG emissions from decommissioning activities are zero. In addition, decommissioning GHG emissions for the Dispatchable Capacity Project are expected to be negligible relative to the cumulative lifecycle GHG emissions perspective as it reaches end of life.

Beyond 2035, a regulated net-zero grid requirement is expected to apply in Manitoba which results in net-zero operational GHG emissions in 2035. The federal Clean Electricity Regulations are also expected to apply. In addition, all scenarios assumed the Output-Based Pricing System costs on fossil fuel fired electricity generation.

As Manitoba Hydro is legislatively required to meet the energy and capacity needs of Manitoba, there is no "do nothing" scenario identified. As such, for the purposes of incremental analysis, Manitoba Hydro has identified Scenario 2C from the [2025 Integrated Resource Plan \(2025 IRP\)](#) as being the appropriate baseline for this

analysis. In addition to the baseline Scenario 2C⁵, the RDP will be compared against an alternative baseline Scenario 2B⁶ for a more fulsome analysis of the impacts of the RDP.

While the RDP will be compared to Scenario 2B, Scenario 2B shall not be taken as a realistic baseline scenario as the 600 MW of majority Indigenous owned wind generation projects in Manitoba is a policy item from Manitoba's Affordable Energy Plan. Scenario 2B is included as a sensitivity case to illustrate how operational GHG outcomes change under a different approach, despite not being considered a realistic planning baseline

In addition to cumulative operational GHG emissions presented on an incremental basis, absolute GHG emissions based on modelling results under the 2-Medium load projection used in the 2025 IRP are presented for additional information.

5.5.1 Cumulative Operational GHG Impacts

The following figures and tables show the cumulative operational GHG impacts of the RDP and baseline scenarios in concert with the existing system and are not disaggregated by generation resource type. The operational GHG impacts of the RDP are directly related to the Project as the Project is the only operationally emitting component of the RDP. Estimates of GHG emissions from electricity generation are based on the average of all hydraulic flow conditions used in the cost optimized capacity expansion modelling.

The following GHG emissions sources are included in the analysis, if applicable:

- Direct GHG emission from fossil fuel production
- Upstream GHG emissions from fossil and non-fossil fuel production

The following sources or perspectives are not included in the following charts, if applicable:

1. Biogenic GHG emissions from biofuels
2. Displaced or avoided GHG emissions in interconnected jurisdictions.
3. Construction related GHG emissions to any infrastructure upgrades required to support the Project

⁵ Scenario 2C achieves a net-zero grid by 2035 and support a net-zero economy in 2050 and advances 600 MW of Indigenous majority owned wind generation projects.

⁶ Scenario 2B is similar to Scenario 2C but takes a full technology neutral approach and does not advance 600 MW of Indigenous majority owned wind generation projects.

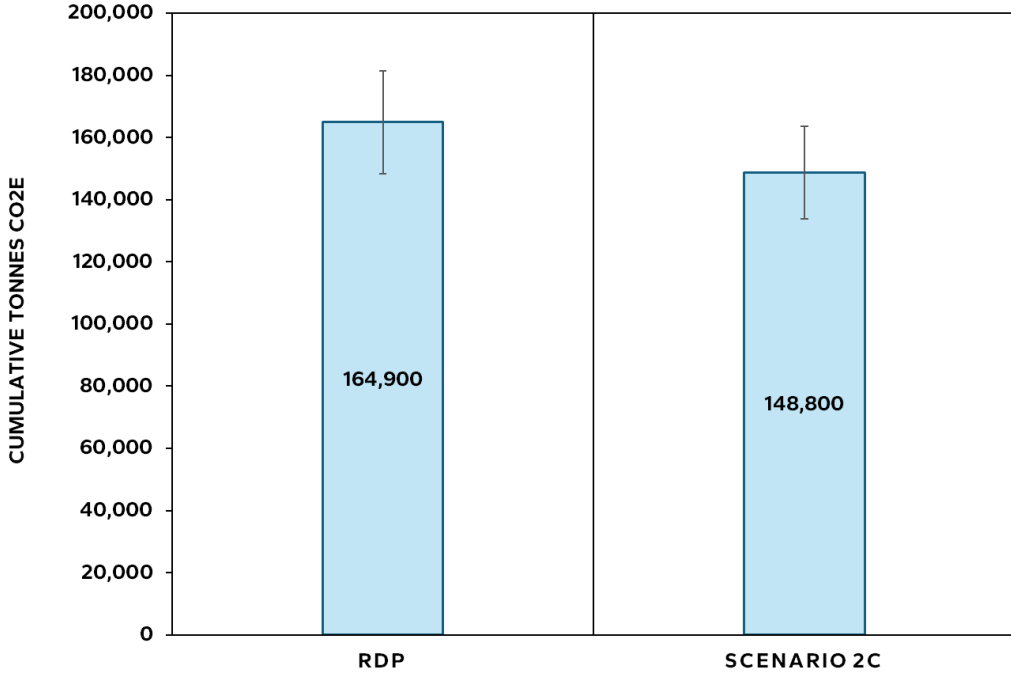


Figure 5-1: Cumulative Operational GHG Emissions of the RDP and Scenario 2C to 2035

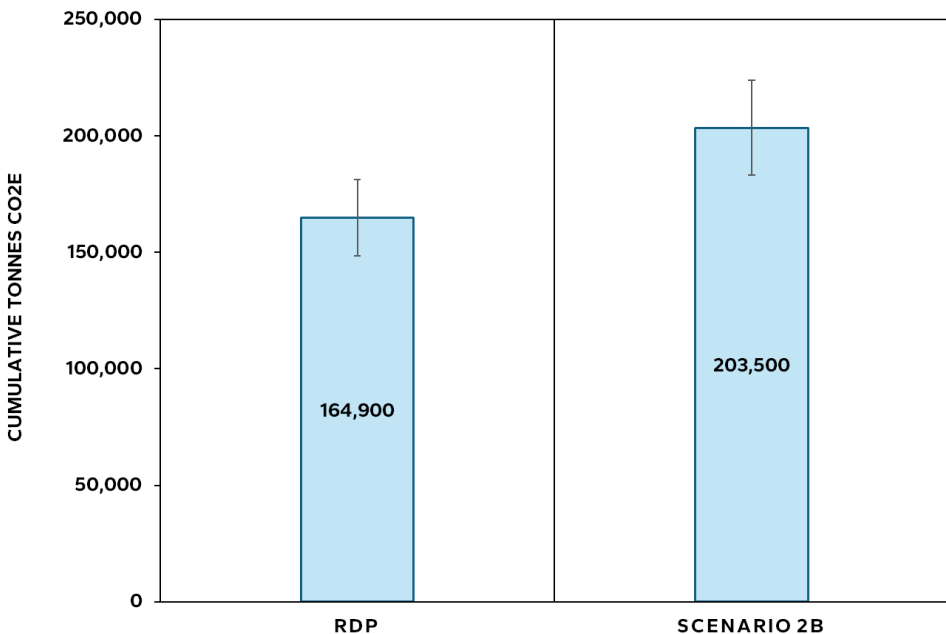


Figure 5-2: Cumulative Operational GHG Emissions of the RDP and Scenario 2B to 2035

Figure 5-1 demonstrates that between Scenario 2C and the RDP, there are no meaningful differences in the cumulative operational GHG impacts to 2035 within the boundaries of the analysis as discussed above.

Figure 5-2 demonstrates that Scenario 2B may have higher operational GHG impacts cumulative to 2035 than the RDP, within the boundaries of the analysis as discussed above.

5.5.2 Annual Scope 1 GHG Emissions

While the Project is a key component of the RDP and is expected to play an important role in ensuring grid reliability, within the specified time bounds, it is not expected to operate very often. The following chart shows the utilization factor of the Project under the average of all hydraulic conditions modelled in the 2025 IRP. It is possible that for a variety of reasons the Project could operate more than what was modelled, but it is still expected to be a low utilization factor capacity resource on average.

While the figures and tables below include data for 2035, due to the net-zero grid requirement in 2035, Project operation in 2035 does not necessarily result in net GHG emissions to the atmosphere. Net-zero strategies in the form of offsets or other environmental commodities may be employed to satisfy the net-zero grid requirement.

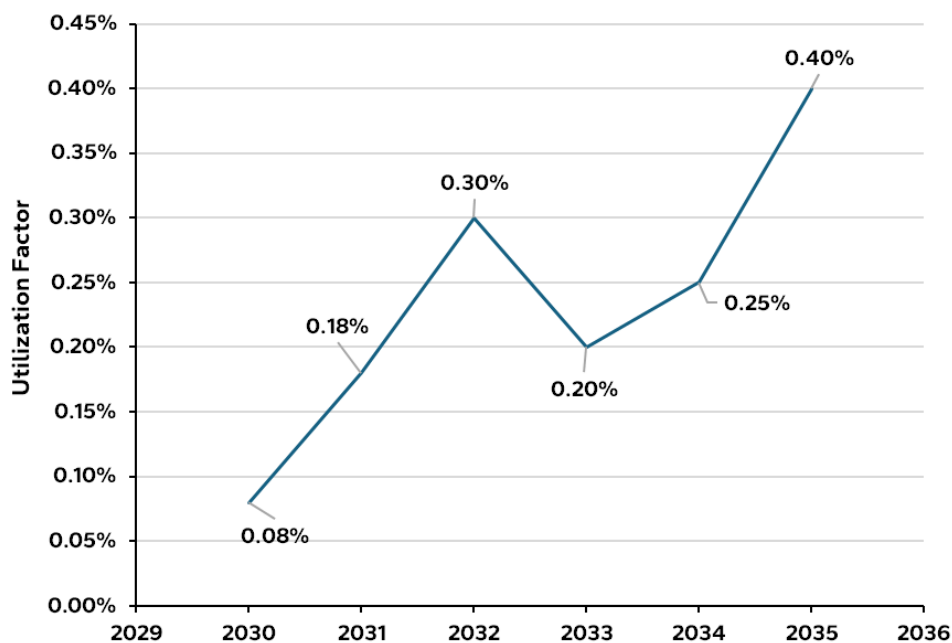


Figure 5-3: Utilization factor of the Project under the average of all hydraulic cases

Figure 5-4 is intended to represent the potential utilization factor in any given year coincident with the lowest hydraulic low on record. This represents the extreme bookend of operation for the Project in a given year. It is not statistically likely that hydraulic inflows similar to the lowest inflows on record would occur for 5 consecutive years, so the figured below shall not be taken to represent expected operation within the considered time period.

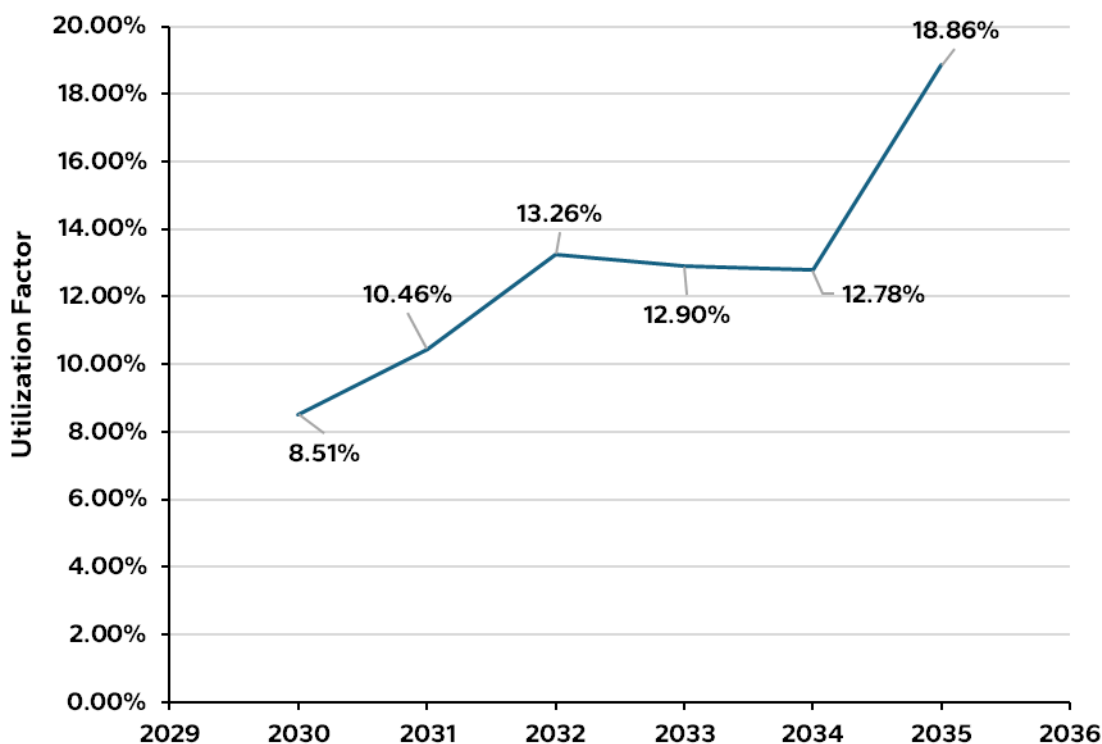


Figure 5-4: Utilization factor of the Project under lowest flow hydraulic conditions

Additional circumstances that may affect operation include but are not limited to extended periods of extreme weather, system outages, and other special circumstances or emergencies.

In a given year, under typical hydraulic inflow conditions, it is expected that the Project will operate between a 0.5% and 5% utilization factor.

The following chart and table break down modelled operation and GHG emissions under the average of all flow conditions considered, disaggregating GHG emissions into those resulting from the existing system and those resulting from the Project’s operation. Only direct scope 1 GHG emissions are considered in the following charts.

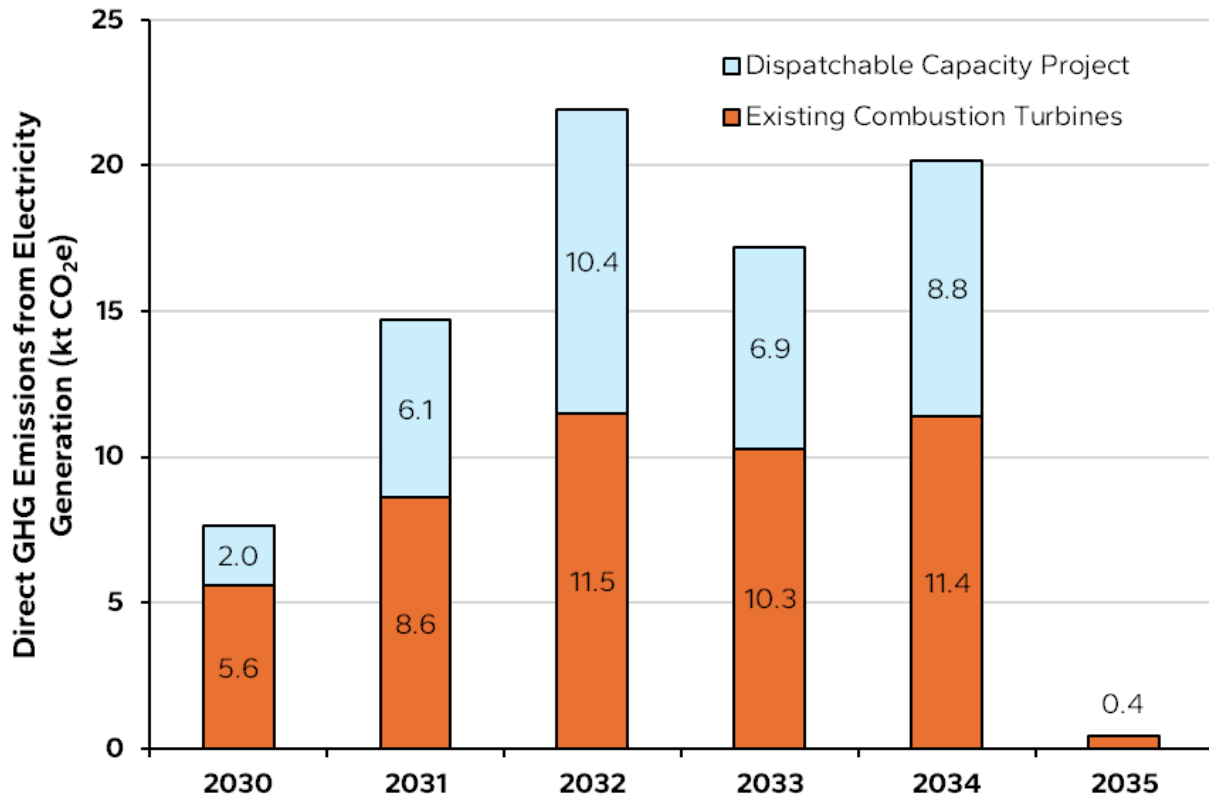


Figure 5-5: Annual net GHG emissions from natural gas combustion turbines (CTs) in Manitoba disaggregated by existing system and the Project

Table 5-7: Tabular format of Figure 5-5 showing scope 1 operational GHG emissions from the Project and Existing Natural Gas Combustion Turbines in Manitoba.

Year	Existing Natural Gas CTs (kilotonnes CO ₂ e)	Dispatchable Capacity Project (kilotonnes CO ₂ e)	Total (kilotonnes CO ₂ e)
2030	5.6	2.0	7.6
2031	8.6	6.1	14.7
2032	11.5	10.4	21.9
2033	10.3	6.9	17.2
2034	11.4	8.8	20.1
2035	0.4	0.0	0.4

5.5.3 Lifecycle Impacts

5.5.3.1 By Plan or Scenario

The following charts show the cumulative lifecycle GHG impacts of the RDP and baseline scenarios and are not disaggregated by generation resource type. The following GHG emissions sources are included in the analysis, if applicable:

1. Direct GHG emission from fossil fuel combustion
2. Upstream GHG emissions from fossil and non-fossil fuel production
3. High level estimate of construction and embodied GHG emissions of each generation resource included.

The following sources or perspectives are not included in the following charts, if applicable:

1. Biogenic GHG emissions from biofuel combustion
2. Displaced or avoided GHG emissions in interconnected jurisdictions.
3. GHG emissions for project decommissioning

Construction related GHG emissions have been estimated based on review of publicly available literature and are intended to present a high-level estimate of the lifecycle GHG impact of a particular generation resource. These estimates are not project specific. The Project's notice of alteration and Environment Act Proposal applications that will be filed with Manitoba Environment and Climate Change's Environmental Approvals Branch by Fall 2026, in pursuit of approval for the Project's construction and operation, will include detailed construction and supply chain related lifecycle GHG emissions based on available data and project specific information.

For the purposes of this high-level assessment, GHG emissions estimates from construction of natural gas CTs in the literature reviewed ranged from 24 - 211 tonnes per installed MW, with the average and median values being 68 and 43 tonnes per installed MW, respectively. While the 211 tonne per installed MW was an outlier within the reviewed literature, it was still considered in the analysis. If the outlier is removed, the average and median become 44 and 42 tonnes per installed megawatt respectively. As the outlier was still considered in the analysis, the constructed GHG emissions included may be conservatively high based on current industry estimates.

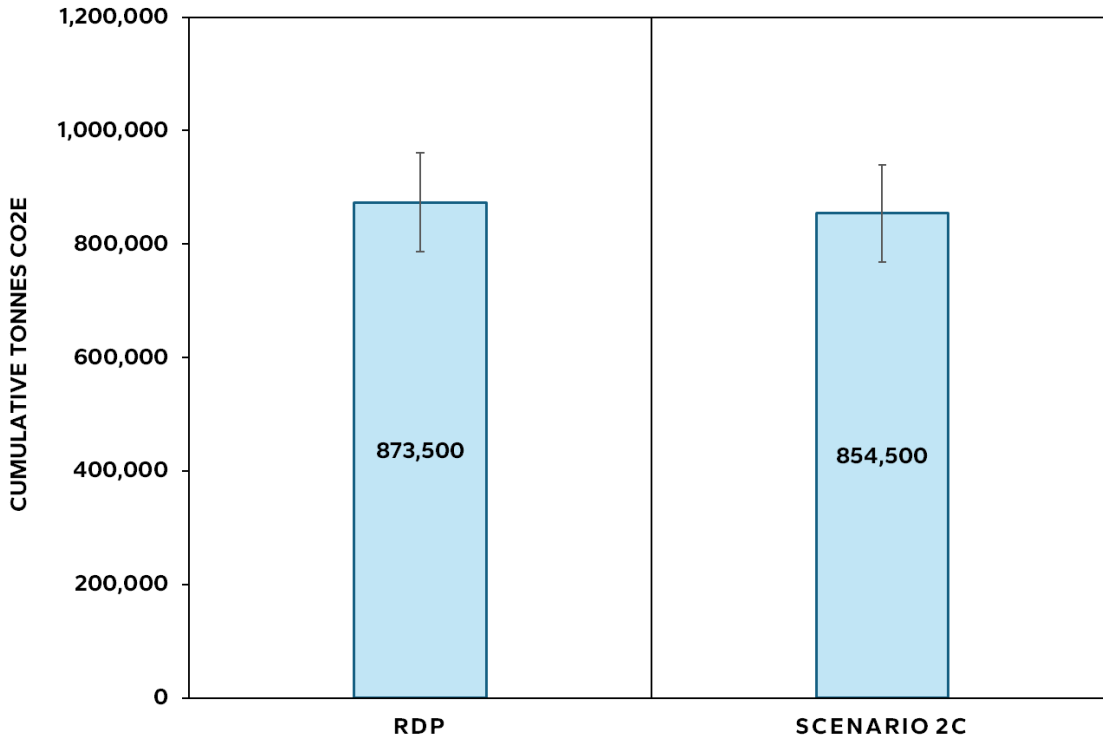


Figure 5-6: Cumulative Lifecycle GHG Emissions of the RDP and Scenario 2C to 2035

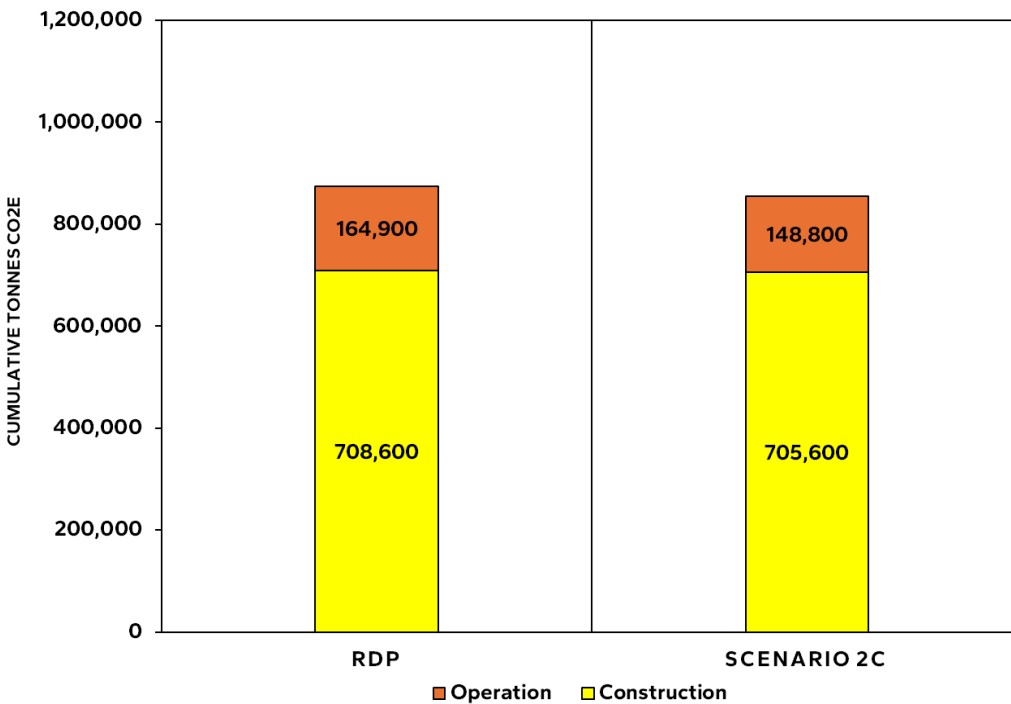


Figure 5-7: Figure 5-6 Disaggregated by New and Existing System Operation, and Construction of New Resources

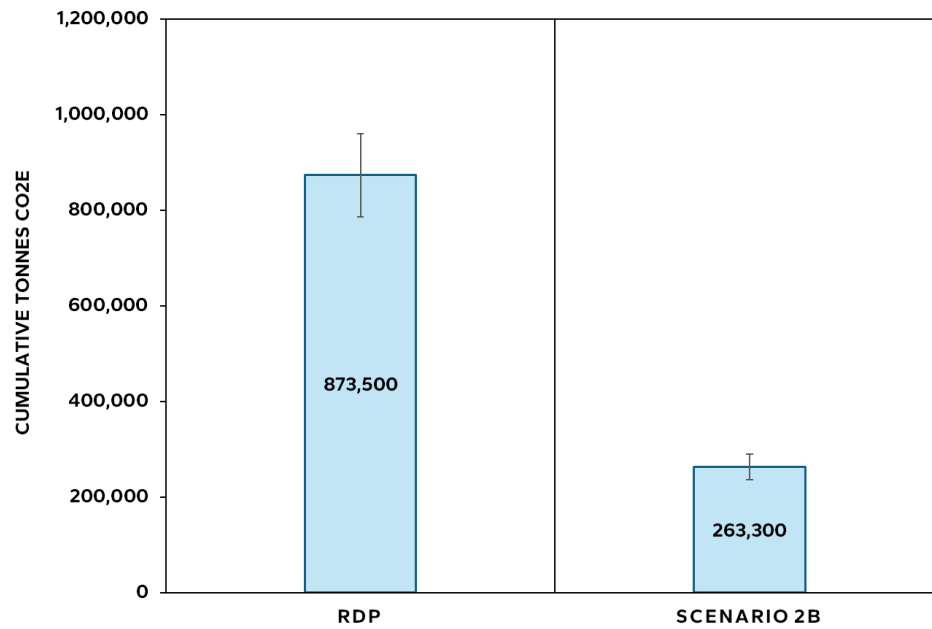


Figure 5-8: Cumulative Lifecycle GHG Emissions of the RDP and Scenario 2B to 2035

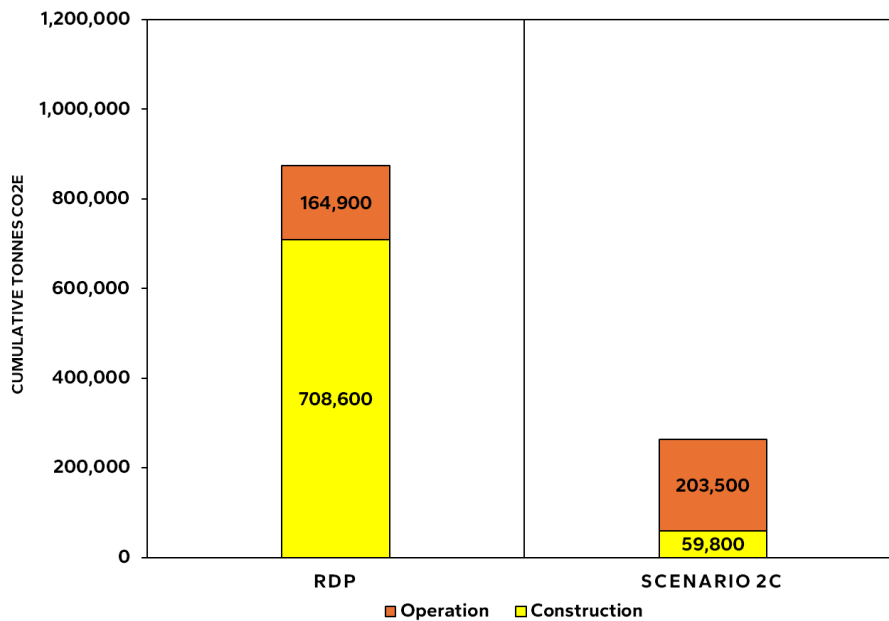


Figure 5-9: Figure 5-8 Disaggregated by New and Existing System Operation, and Construction of New Resources

Figure 5-6 demonstrates that between Scenario 2C and the RDP, there are not meaningful differences in the cumulative lifecycle GHG impacts to 2035 within the boundaries of the analysis as discussed above.

Figure 5-8 demonstrates that Scenario 2B has lower lifecycle GHG impacts cumulative to 2035 than the RDP within the boundaries of the analysis as discussed above.

5.5.3.2 By Generation Resource

Similar to the figures in the previous section, the following charts visually represent the lifecycle GHG estimates on a gross basis and are disaggregated by the various generation resources included in the RDP and the reference scenarios. The following GHG emission sources are included in the analysis if applicable:

Direct GHG emission from fossil fuel combustion

- Upstream GHG emissions from fossil and non-fossil fuel production
- High level estimate of construction and embodied GHG emissions of each generation resource included

The following sources or perspectives are not included in the following charts, if applicable:

- Biogenic GHG emissions from biofuel combustion
- Displaced or avoided GHG emissions in interconnected jurisdictions.
- GHG emissions for project decommissioning

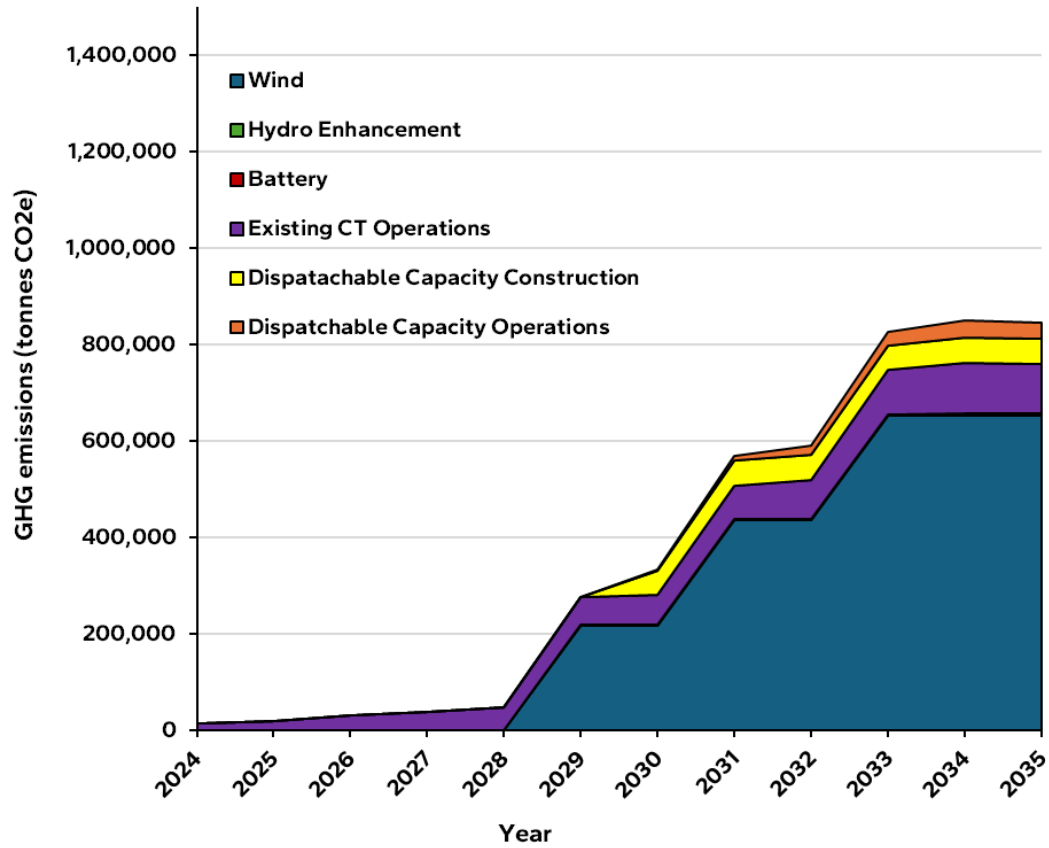


Figure 5-10: Cumulative Lifecycle GHG Emissions Disaggregated by Generation Resource - RDP

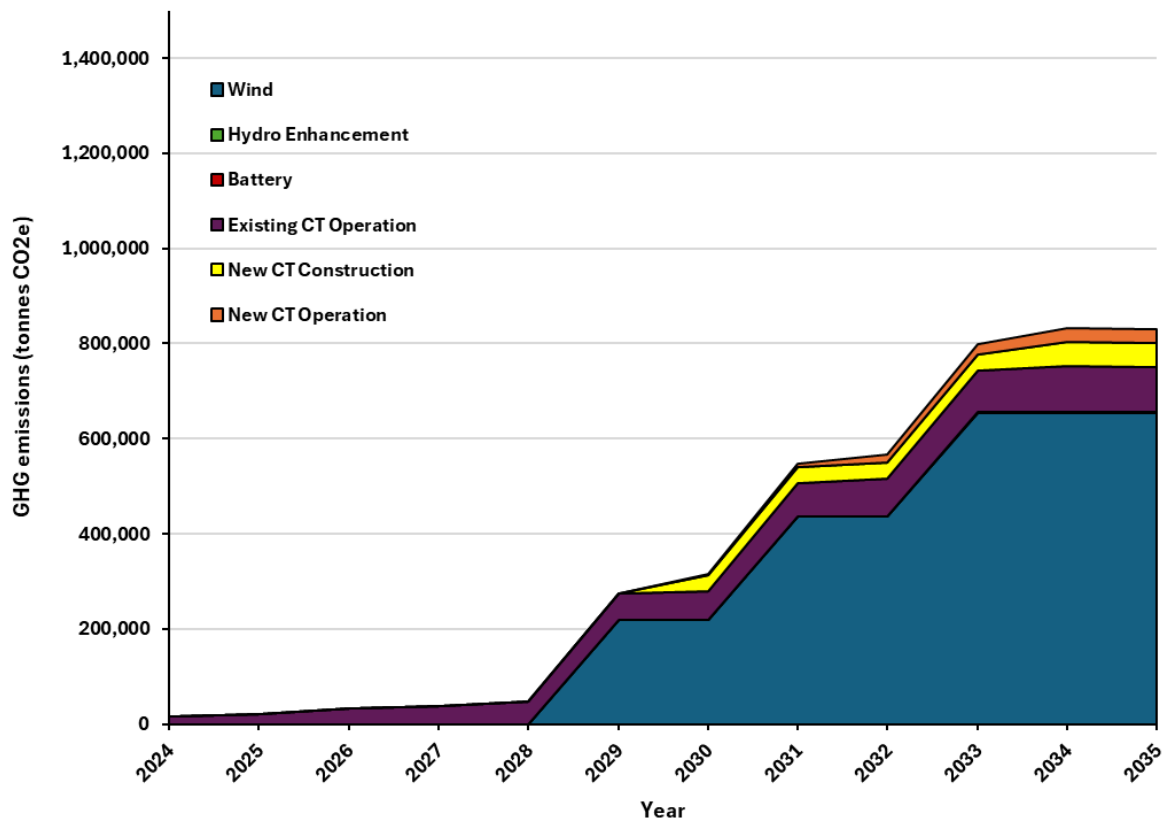


Figure 5-11: Cumulative Lifecycle GHG Emissions Disaggregated by Generation Resource – Scenario 2C

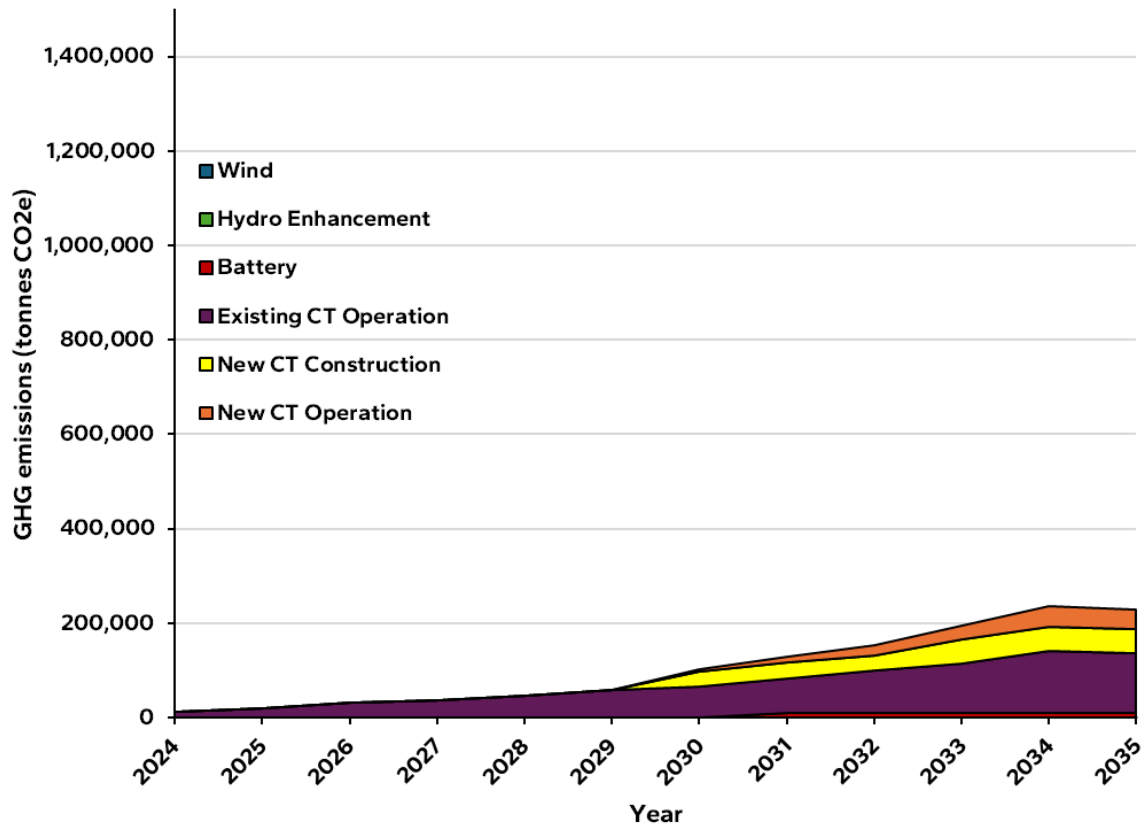


Figure 5-12: Cumulative Lifecycle GHG Emissions Disaggregated by Generation Resource – Scenario 2B

Natural gas combustion turbines are represented by the orange area in the stacked area charts above. While Scenario 2C and Scenario 2B may contain similar installed capacities of natural gas combustion turbines by the end of 2035, the timing may be different and therefore the Dispatchable Capacity project is specifically called out in Figure 5-8 but not in Figure 5-9 or Figure 5-10. For the purposes of assessing incremental lifecycle GHG emissions from natural gas combustion turbines between the RDP and the reference Scenarios in the above 3 figures, Natural Gas CTs operations and construction may be compared to Dispatchable Capacity operations and construction. Operation and construction of new CTs are indicated in orange and yellow respectively.

5.6 Waste and Emissions

The project will result in air emissions, noise emissions, surface runoff discharges, industrial wastewater disposal, and general operation-related waste generation.

5.6.1 Air

Air emissions associated with the construction and operation of the power generation facility will arise from multiple sources and activities.

As outlined in Section 2.4, the proposed facility's three SCCTs will normally operate on natural gas at full output, during which the primary emissions will consist of nitrogen oxides (NO_x), carbon monoxide (CO), and carbon dioxide (CO₂). Operation on natural gas will produce no detectable sulfur dioxide (SO₂) or metals, and only minimal quantities of particulate matter (PM) and volatile organic compounds (VOCs). Use of diesel fuel will occur only infrequently and for short durations as a backup fuel; during these periods, emissions of SO₂, metals, and PM will be higher than during natural-gas firing.

Greenhouse gas emissions will also be generated during both construction and operation, as summarized in Section 5.5.

A detailed characterization of project-related air emissions, along with proposed mitigation measures, will be completed as part of the provincial assessment process.

5.6.2 Noise

Noise emissions during construction will be generated primarily by the operation of heavy equipment. Additional noise may occur during the splicing of transmission lines, which involves the use of implosion sleeves; further detail on this activity is provided in Section 2.5.1.10.

During operations, noise will originate from multiple facility components, including the generator units, combustion air inlet, gas turbine exhaust, ventilation openings, coolers, compressors, transformers, and other ancillary equipment.

A detailed characterization of project-related noise emissions, along with proposed mitigation measures, will be completed as part of the provincial assessment process.

5.6.3 Liquid

Sanitary wastewater from the expanded Brandon GS will be directed to the City of Brandon municipal wastewater collection system, where it will be treated and disposed of through existing municipal infrastructure.

Wastewater generated within the two SCCT buildings and associated areas is expected to fall into two categories: oily water and chemically contaminated water. Separate systems will be used to collect and manage these streams, with final design details to be confirmed as the project planning progresses.

Oily water will consist of wastewater that may contain hydrocarbons but is not expected to include other chemicals. This wastewater will be collected through a dedicated drainage system and directed to an appropriate storage. Disposal will occur in accordance with provincial regulations, either through on-site treatment or off-site removal by a licensed contractor. Anticipated sources of oily water include floor washings in turbine and fuel handling areas, turbine and compressor drains, lube oil and diesel fuel system drains and vents, instrument air compressor and dryer drain, minor leaks or spills associated with turbine lube oil systems, and other building drains that do not have the potential to contain other chemicals.,

Chemically contaminated wastewater will come from a few sources which include compressor off-line wash; cooling water bleed off drains, lube oil cooler and generator drains and any other spills from wash water and cooling water. The two primary chemicals are the detergents for compressor washing and glycol used for cooling. This wastewater will be collected separately from oily water. A dedicated collection system will be provided, with the final design of tanks, piping, and disposal methods still being determined. Chemically contaminated wastewater will be transported off site for disposal by a licensed contractor in accordance with provincial requirements.

Additional wastewater may be generated from auxiliary buildings and equipment, including diesel fuel systems and storage tanks. These areas will incorporate appropriate containment and drainage features, with wastewater managed or disposed of according to regulatory requirements. Stormwater from containment areas will be released only when confirmed to be uncontaminated, while any contaminated water will be collected and disposed of appropriately.

5.6.4 Other Waste

Two categories of solid waste will be generated at the SCCT plant. Ordinary office waste materials (paper) will be disposed (after recyclable materials are removed) at the City of Brandon landfill in combination with similar waste from the existing Brandon GS operations.

Other solid waste materials will include filter elements and packaging materials. These will be disposed of in accordance with regulatory requirements. Recycling opportunities will be examined by Manitoba Hydro.

6.0 Acronyms

Acronyms and abbreviations

AAFC	Agriculture and Agri-Food Canada
AREM	Alternative Route Evaluation Model
CAAQS	Canadian Ambient Air Quality Standards
CCS	Carbon Capture and Storage
CEMS	Continuous Emissions Monitoring System
CH ₄	Methane
CO	Carbon Monoxide
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
CT	Combustion Turbine
CWI	Canadian Wetland Inventory
DFO	Fisheries and Oceans Canada
ECCC	Environment and Climate Change Canada
EPRI-GTC	Electric Power Research Institute - Georgia Transmission Project
ESEA	<i>Endangered Species and Ecosystems Act</i>
GHG	Greenhouse Gas
GS	Generating Station
HADD	Harmful alteration, disruption, or destruction

Acronyms and abbreviations

HRB	Historic Resources Branch
HRIA	Heritage Resource Impact Assessment
IA	Impact Assessment
IAAC	Impact Assessment Agency of Canada
IH	Industrial Heavy
IPCC	Intergovernmental Panel on Climate Change
IRP	Integrated Resources Plan
kV	Kilovolts
KM	Kilometre
LD	Limited Development Area
MBCA	<i>Migratory Birds Convention Act</i>
MBCDC	Manitoba Conservation Data Centre
MISO	Midwest Independent System Operator
Mt	Megatonnes
MW	Megawatt
NO _x	Nitrous Oxide
SCCT	Simple-cycle combustion turbine
SMR	Small Modular Reactors
OHWM	Ordinary high-water mark
OIC	Order in Council

Acronyms and abbreviations

PMH	Prairie Mountain Health
RATW	Restricted Activity Timing Windows
RDP	Recommended Development Plan
SAR	Species at Risk
SARA	<i>Species at Risk Act</i>
SOCC	Species of Conservation Concern
30	Sulphur Dioxide
WSC	Water Survey of Canada

7.0 Glossary

Term	Definition
Decommissioning	Planned shutdown, dismantling and removal of a building, equipment, plant and/or other facilities from operation or usage and may include site clean-up and restoration.
Developed	Land that has been altered for residential, commercial or industrial use. Includes buildings, regularly managed green space and associated roads, parking lots, and trails.
Ecoregion	Characterized by distinctive regional ecological factors, including climate, physiography, vegetation, soil, water, and fauna
Ecozone	An area of the earth's surface representative of large and very generalized ecological units characterized by interactive and adjusting abiotic and biotic factors
Environmental Protection Plan	Within the framework of an environmental protection program, an environmental protection plan prescribes measures and practices to avoid and minimize potential environmental effects of a proposed project.
Heritage sites / objects	Any site, object, work, or assembly of works of nature or human endeavor that is of value for its archaeological, paleontological, pre-historic, historic, cultural, natural, scientific, or aesthetic features.
Interested party	An interested party is someone or a group that would potentially have feedback to provide, may be affected by the decisions made regarding route selection, have a specific interest or mandate in the area, data to share, ability to disseminate information to membership or a general interest in the project's route selection area.

Marshalling yard	An open area used to stockpile, store and assemble construction materials.
Mitigation	Means measures to eliminate, reduce, control or offset the adverse effects of a project, and includes restitution for any damage caused by those effects through replacement, restoration, compensation or any other means (Impact Assessment Act, 2019).
Public engagement process	The process of identifying interested individuals, including interested parties and the public, sharing information about the project and providing opportunities for them to design how they want to participate and share their feedback and experiences.
Simple-cycle combustion turbine	a type of gas turbine differing from a combined cycle operation in that it has only one power cycle (i.e. no provision for waste heat recovery).
Species of Conservation Concern	Species that are rare, disjunct, or at risk throughout their range or in Manitoba and in need of further research. The term also encompasses species that are listed under (Manitoba) <i>The Endangered Species and Ecosystems Act of Manitoba</i> , (federal) <i>Species at Risk Act</i> , or that have a special designation by the Committee on the Status of Endangered Wildlife In Canada.
Species at Risk (SAR)	Is an extirpated, endangered or threatened species or a species of special concern, as defined by the Species at Risk Act.
Synchronous condenser	A synchronous motor that provides reactive power to balance or correct power factors and maintain required voltage.
Wildlife management area	Lands that exist for the benefit of wildlife and for the enjoyment of people including biodiversity

	conservation, wildlife-related forms of recreation, hunting and trapping.
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Appendix A

Engagement Materials

Pre-engagement letter for interested parties, First Nations and
the Manitoba Métis Federation

November 2025

2025 11 17

Subject: Brandon dispatchable capacity project

Dear (contact/organization name),

I am reaching out to share information about a proposed Manitoba Hydro project in the Brandon area, referred to as the Brandon Dispatchable Capacity project. This work is part of our broader efforts to ensure reliable electricity supply for Manitobans as we look ahead to increasing demand for electricity.

Manitoba Hydro is committed to engaging with First Nations, the Manitoba Métis Federation, rural municipalities, landowners, and other interested parties in a way that fosters positive relationships built on mutual trust, respect, and understanding. We want to engage in ways that consider your perspectives and interests throughout the project.

Why this planning is underway

Through the work on Manitoba Hydro's Integrated Resource Plan (IRP), we have identified that peak demand for electricity by 2029-30 will exceed Manitoba Hydro's capacity, and we will need approximately 600 megawatts of new capacity resources. Manitoba Hydro is currently in the process of completing the 2025 IRP, which will result in a 10-year recommended development plan for meeting this province's electricity needs.

Although the 2025 IRP development plan has not yet been approved, IRP modeling has identified that dispatchable capacity resources will be an essential part of meeting demand in the next decade. Meeting peak demand, especially during Manitoba's coldest winter days, is essential. Our mission is to ensure we can reliably meet the energy needs of our customers.

Considering combustion turbines

To address this need, Manitoba Hydro is exploring the development of additional combustion turbine units at the Brandon generating station. These turbines, initially fueled by natural gas, offer a dependable, dispatchable capacity resource that can be developed relatively quickly. Based on current system planning and modeling, we expect any combustion turbine will operate infrequently - primarily to serve peak

demand and as a backstop resource during periods of drought, extreme weather, or during other system contingencies.

We are seeking turbines with dual-fuel capability or adaptability to alternative fuels to support long-term flexibility. While no final decision has been made, IRP modeling consistently identified combustion turbines as a feasible option.

Protecting the option to develop

Combustion turbines are in high demand globally. To protect the option of developing this resource, Manitoba Hydro has issued a request for proposal (RFP) to reserve manufacturing slots. Without this step, we risk losing the opportunity to acquire turbines in time to meet the anticipated capacity shortfall.

Additional RFPs for environmental consulting and preliminary engineering design services have also been issued. These planning activities do not represent a final decision to proceed with the project.

Project scope

The current scope of the Brandon Dispatchable Capacity project includes:

1. Planning and design for new combustion turbine units on Manitoba Hydro property at the Brandon generating station site; and
2. Planning and routing for an approximately 30 km long trench that will include a natural gas pipeline to deliver non-odourized natural gas from the TransCanada Pipeline to the station, and an additional natural gas pipeline that will supply odourized natural gas to the Brandon and southwest Manitoba gas distribution system to enhance reliability and capacity in the area.

Engagement process

We are initiating engagement activities to build a shared understanding of your interests and preferences related to this project. As we move forward, we would appreciate the opportunity to connect and learn how you/your organization would like to be engaged throughout this process, including specific needs or activities your nation may require in order to fully participate.

We welcome the opportunity to meet with you to provide more information about the project, and collaborate on shaping the purpose, scope, and outcomes of our engagement. We would appreciate your feedback on whether your organization is interested in participating, and how we can support your involvement.



If you have any questions or would like to schedule a meeting, please contact me directly at (insert phone) or email me at (insert email).

Sincerely,

Manitoba Hydro contact

Round 1 Interested Party Email

January 2026

Subject line: Proposed Brandon Dispatchable Capacity project – Round 1 engagement underway

Good afternoon,

I am reaching out to [Interested Party] to inform you about a new proposed project in the Brandon area, referred to as the Brandon Dispatchable Capacity project. The purpose of the Brandon Dispatchable Capacity project is to generate electricity on demand for Manitoba Hydro's overall system, when needed and to increase natural gas reliability and capacity for the southwest Manitoba gas distribution system.

As part of the project, Manitoba Hydro is proposing to construct two natural gas pipelines in a common right-of-way. We are planning to select a preferred route for the right-of-way that will travel from TC Energy's Canadian Mainline at Moore Park to the Brandon generating station and the Brandon and southwest Manitoba gas distribution system (see attached map). We are undertaking an engagement process to share project information, address concerns, and gather feedback to assist in determining a preferred route for the right-of-way.

We want to hear from you

We encourage you to review the enclosed materials that include a map of the alternative route options being proposed and share your thoughts on the project with us. We also encourage you to attend one of the upcoming open houses or virtual information sessions to share your comments about this project. Staff will be available to provide project information and answer questions. Your feedback will help us to understand concerns about the project and inform the preferred route.

Open houses

We will be hosting two open houses in February. Drop in anytime to learn more about the project and share your feedback.

- Tuesday, February 17 from 5:30-8:30pm at the Brandon Legion
 - o 560 13 St E, Brandon, MB

- Saturday, February 28 from 12-2:30pm at the Riverdale Community Centre
 - Rivers Curling Club
 - o 101 Main St, Rivers, MB

Virtual information sessions

We will be holding virtual information sessions on Microsoft Teams on the following dates:

- Thursday, February 19 at 7:00 p.m.
- Tuesday, February 24 at 12:00 p.m.
- Wednesday, February 25 at 7:00 p.m.
- Wednesday, March 4 at 12:00 p.m.

To register for a session, visit the project webpage at www.hydro.mb.ca/community/engagement/brandon-dispatchable-capacity. If you have any difficulties or need assistance registering, please email us at projects@hydro.mb.ca or call 1-877-343-1631.

Online survey and feedback portal

On the project webpage, we also have an online survey and interactive feedback portal for you to share your feedback about the project. These will both be available on our webpage until March 31, 2026 at www.hydro.mb.ca/community/engagement/brandon-dispatchable-capacity.

If you are unable to attend these engagement events or would like more information, please visit the project webpage or contact me at [email address] or [phone number].

I look forward to discussing the project with you.

Round 1 Landowner Letter

January 2026

January XX, 2026

[Name]

[Address]

[Town], [Prov] [Postal code]

Dear [Name],

Proposed Brandon Dispatchable Capacity project: Alternative route options for natural gas pipeline right-of-way

Manitoba Hydro is proposing to construct two natural gas pipelines in a common right-of-way as part of the Brandon Dispatchable Capacity project. The purpose of the Brandon Dispatchable Capacity project is to generate electricity on demand for Manitoba Hydro's overall system when needed and to increase natural gas reliability and capacity for the southwest Manitoba gas distribution system.

We are reaching out to you because an alternative route segment that Manitoba Hydro has proposed for the natural gas pipeline right-of-way crosses a property you own. We are planning to select a preferred route that will travel from TC Energy's Canadian Mainline at Moore Park to the Brandon generating station and the Brandon and southwest Manitoba gas distribution system.

To help select a preferred route for the right-of-way, which limits the overall effect of the project on people and the environment, we want to hear from you. We are undertaking an engagement process to share project information, address concerns, and gather feedback to assist in determining a preferred route. The first round of our engagement process is to present alternative route options for comment and feedback.

We want to hear from you

We encourage you to review the enclosed materials that include a map of the alternative route options being proposed, and share your thoughts on the project with us:

Open houses



We will be hosting two open houses in February. Drop in any time to learn more about the project and share your feedback:

- Tuesday, February 17 from 5:30-8:30pm at the Brandon Legion
 - 560 13 St E, Brandon, MB
- Saturday, February 28 from 12-2:30pm at the Riverdale Community Centre – Rivers Curling Club
 - 101 Main St, Rivers, MB

Virtual information sessions

We will be holding virtual information sessions on Microsoft Teams on the following dates:

- Thursday, February 19 at 7:00 p.m.
- Tuesday, February 24 at 12:00 p.m.
- Wednesday, February 25 at 7:00 p.m.
- Wednesday, March 4 at 12:00 p.m.

To register for a session, visit the project webpage at www.hydro.mb.ca/community/engagement/brandon-dispatchable-capacity. If you have any difficulties or need assistance registering, please email us at projects@hydro.mb.ca or call 1-877-343-1631.

Online survey and feedback portal

On the project webpage, we also have an online survey and interactive feedback portal for you to share your feedback about the project. These will both be available on our webpage until March 31, 2026 at www.hydro.mb.ca/community/engagement/brandon-dispatchable-capacity.

If you are unable to attend these engagement events or would like more information, please visit the project webpage), call our toll-free information line (1-877-343-1631) or email us (projects@hydro.mb.ca).

We look forward to discussing the project with you.

Sincerely,

Geneva Cloutis
Environmental Specialist

Round 1 letter to First Nations and the
Manitoba Métis Federation

January 2026

January 26, 2026

Dear [Chief/Leader name],

Proposed Brandon Dispatchable Capacity project: Alternative route options for natural gas pipeline right-of-way

I am reaching out to [Insert Nation] to follow up on the letter sent in November 2025 regarding the Brandon Dispatchable Capacity project. As part of this, we are sharing additional project information and upcoming participation opportunities. We also remain interested in better understanding how we can support your involvement in the engagement process for the project.

As previously shared, the purpose of the Brandon Dispatchable Capacity project is to generate electricity on demand for Manitoba Hydro's overall system, when needed and to increase natural gas reliability and capacity for the southwest Manitoba gas distribution system. As part of the project, Manitoba Hydro is proposing to construct two natural gas pipelines in a common right-of-way.

We are planning to select a preferred route that will travel from TC Energy's Canadian Mainline at Moore Park to the Brandon generating station and the Brandon and southwest Manitoba gas distribution system. We have developed alternative route options and are seeking feedback (see enclosed map).

Feedback on the alternative route options is part of the project engagement process we are undertaking to share project information, address concerns, and gather feedback to assist in determining a preferred route for the project. As we move forward, we would appreciate the opportunity to connect to provide more information about the project, including potential economic opportunities, and learn how [Nation] would like to be engaged throughout this process. We also welcome the opportunity to meet with your Nation, either virtually or in person, to begin/continue discussions about the project. Your feedback will help us to understand concerns about the project and inform the preferred route.

We encourage you to review the enclosed materials that include a map of the alternative route options being proposed and share your thoughts on the project with us. You are also encouraged to participate through the engagement events that are listed below:

Open houses

Drop in anytime to learn more about the project and share your feedback.

- Tuesday, February 17 from 5:30-8:30pm at the Brandon Legion
 - 560 13 St E, Brandon, MB
- Saturday, February 28 from 12-2:30pm at the Riverdale Community Centre – Rivers Curling Club
 - 101 Main St, Rivers, MB

Virtual information sessions

We will be holding virtual information sessions on Microsoft Teams on the following dates:

- Thursday, February 19 at 7:00 p.m.
- Tuesday, February 24 at 12:00 p.m.
- Wednesday, February 25 at 7:00 p.m.
- Wednesday, March 4 at 12:00 p.m.

To register for a session, visit the project webpage at www.hydro.mb.ca/community/engagement/brandon-dispatchable-capacity. If you have any difficulties or need assistance registering, please email us at projects@hydro.mb.ca or call 1-877-343-1631.

Online survey and feedback portal

On the project webpage, we also have an online survey and interactive feedback portal for you to share your feedback about the project. These will both be available on our webpage until March 31, 2026 at www.hydro.mb.ca/community/engagement/brandon-dispatchable-capacity.



If you have any questions or would like to schedule a meeting, please feel free to reach me by email at email@hydro.mb.ca or by phone at (insert phone number here).

I look forward to discussing the project with you.

Sincerely,

Manitoba Hydro contact

Round 1 Virtual Information Session Presentation

February 2026

Brandon dispatchable capacity project

Geneva Cloutis
Environmental specialist
projects@hydro.mb.ca
March 2026

To request accessible
formats visit
hydro.mb.ca/accessibility



Land acknowledgement

The proposed Brandon Dispatchable Capacity project is located near the boundary of Treaty 1 and Treaty 2. These treaties cover the original territories of the Anishinaabeg, Anishininewak, and Ininew. The Dakota Nations also have their home territories in the lands of Treaties 1 and 2 although they are not signatories of any treaty with Canada. This area is also on the National Homeland of the Red River Métis.

We acknowledge that each Nation has longstanding spiritual and cultural connections to these lands and waters, and that our projects impact these territories. Manitoba Hydro commits to working collaboratively with the First Nations and Red River Métis, respecting their insights and perspectives, and that there is much to learn as we move forward in the spirit of reconciliation towards mutually beneficial relationships.



2

Purpose of the meeting



Share project
information



Understand routing
preferences



Answer questions



Discuss next steps
and engagement



3 |

Agenda

1. Project background
2. Routing
3. Engagement
4. Potential project effects
5. Project schedule and next steps



4 |

Project background



5 |

Need for the project

- Manitoba Hydro's recommended development plan, developed as part of the 2025 Integrated Resource Plan (IRP), calls for approximately 750 megawatts of capacity from combustion turbines.
- This project will enhance Manitoba Hydro's ability to meet peak electricity demand and provide system reliability during droughts and contingency conditions.



6 |

Integrated Resource Plan (IRP)



What is Manitoba Hydro's IRP?

- A repeatable planning process that looks ahead to Manitoba's future energy needs and outlines actions to prepare for them.

Key goals:

- Balance reliability, cost, environmental, and socio-economic impacts.
- Provide flexibility to adapt to changing conditions.
- Align with Manitoba's Affordable Energy Plan and federal clean energy regulations.

More information at: www.hydro.mb.ca/future

IRP insights

- Resources that are part of the recommended development plan that can be feasibly added in the next 10 years include:

Resources in the plan (accredited capacity)



What is Dispatchable Capacity?

- Dispatchable** energy sources can be controlled or provided on demand. They can be turned on when needed, and off when not required.
- Capacity** refers to the amount of energy that can be made available from a given source. The amount provided can be changed based upon the need.
- Combustion turbines will provide **dispatchable capacity** to the system, which will be critical for reliable service during peak periods, like on cold winter days, and for providing energy during drought conditions when hydroelectric production is low.

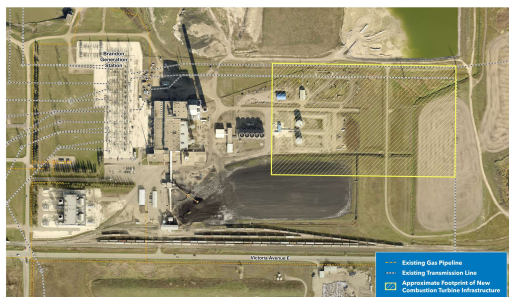
Project scope

The Brandon dispatchable capacity project involves three main elements:



Planning and design for 3 new combustion turbine units at the Brandon generating station site

Brandon generating station



Project scope

The Brandon dispatchable capacity project involves three main elements:

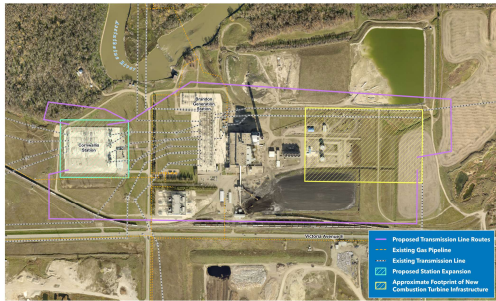


Planning and design for 3 new combustion turbine units at the Brandon generating station site



Planning and design for 2 transmission lines and upgrades to the existing electrical station

New electrical transmission lines



Project scope

The Brandon dispatchable capacity project involves three main elements:



Planning and design for 3 new combustion turbine units at the Brandon generating station site



Planning and design for 2 transmission lines and upgrades to the existing electrical station



Planning and routing for a ~30 km right-of-way for natural gas pipelines

14 |



Regulatory classification

Manitoba Environment Act:

- Class 2 Environment Act Licence required for the natural gas pipeline right-of-way
- Notice of Alteration required for the combustion turbines under Manitoba Hydro's existing Environment Act Licence 2497 R

Public Utilities Board:

- Major New Facilities Review

Impact Assessment Agency of Canada

- Initial Project Description

Other provincial permits and approvals also required

15 |



Do you have any questions about dispatchable capacity, or the scope of the project?

16 |



Routing

17 |



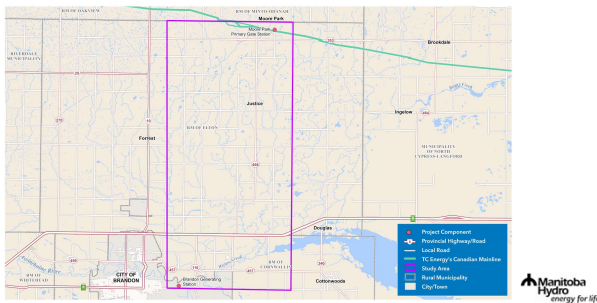
Manitoba Hydro's routing process

1. Develop route planning area
2. Develop route options
3. Develop preferred route
4. Identify final preferred route
5. Licensing decision and final route

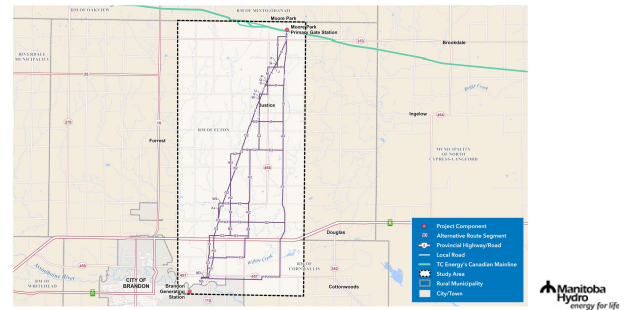
18 |



Proposed project area



Route options



1. Do you have any concerns about the proposed route options? What are those concerns?
2. How could the route options be adjusted to address those concerns?

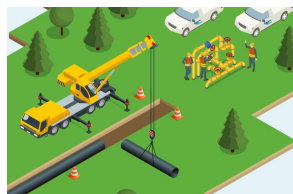
21 |

Engagement

22 |

Why are we engaging?

Manitoba Hydro wants to understand interests, concerns and priorities from engaged audiences as early on as possible in the planning phase to be able to use feedback to help inform project decisions.



23 |

Who are we engaging with?

First Nations and
the Manitoba
Métis Federation

Rural
Municipalities of
Elton and
Cornwallis

The City of
Brandon

Landowners

Associations &
special interest
groups

General public

24 |

How we are engaging

- Virtual and in-person information sessions
- Meetings, phone calls, letters and e-mails to First Nations and the Manitoba Métis Federation, the City of Brandon, RMs and landowners
- Project specific webpage
- Online survey and feedback portal
- Multi-nation engagement circles

Attend an Information Session:

- **In person:** Tuesday, February 17 from 5:30-8:30 p.m.
- **In person:** Saturday, February 28 from 12-2:30 p.m.
 - Rivers Curling Club, Riverdale Community Centre at 101 Main St, Rivers, MB
- **In person:** Tuesday, March 3 from 5:30-8:30 p.m.
 - Brandon Legion, 560 13 St E, Brandon, MB
- **Virtual:** Thursday, February 19 at 7:00 p.m.
- **Virtual:** Tuesday, February 24 at 12:00 p.m.
- **Virtual:** Wednesday, February 25 at 7:00 p.m.
- **Virtual:** Wednesday, March 4 at 12:00 p.m.

Engagement on combustion turbine units

January – June 2026

-  Introduce the project
-  Identify and document concerns
-  Discuss potential environmental effects
-  Gather feedback on mitigation measures

Engagement on natural gas pipeline right-of-way

Round 1 engagement January – March 2026

- Introduce the project
- Seek feedback on route options for natural gas pipeline right-of-way
- Understand routing preferences and concerns to inform route selection
- Identify and document concerns to inform environmental assessment

Round 2 engagement May – July 2026

- Present the preferred route for the right-of-way and seek feedback on any site-specific concerns
- Discuss potential effects and mitigation measures associated with natural gas pipeline right-of-way
- Discuss potential project benefits and opportunities

Do you have any preference or suggestions for how to best share project updates?

Potential project effects

Assessing project impacts Biophysical

An **environmental assessment** is a multi-disciplinary evaluation of a project that examines what potential effects the project might have on the human and natural environment and how to minimize potential effects. Some of the biophysical elements that we assess include:



Surface water



Vegetation



Greenhouse gases and climate change



Wildlife



Commercial agriculture



Air quality

Assessing project impacts

Socio-economic

Socio-economic elements involve the interaction of social and economic factors. Some of the socio-economic elements that we assess include:



Infrastructure and community services



Land and resource use



Important sites including heritage resources, cultural sites and features



Human health and well-being



Economic opportunities



31 |

1. What do you consider most important to you, your family, or your community?
2. Are there concerns or questions you have about potential project effects?



32 |

Project schedule and next steps



33 |

Anticipated schedule

Combustion turbine units & electrical transmission infrastructure



January - June 2026

Engagement



Summer 2026

File notice of alteration



Late 2027

Licence decision anticipated



Early 2028

Construction start, if licence approved*

*Other regulatory approvals also required through the Public Utilities Board



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Anticipated schedule

Natural gas pipeline right-of-way



January - March 2026

Round 1 engagement



May - July 2026

Round 2 engagement



Fall 2026

File environmental assessment



2028

Licence decision anticipated



Summer 2028

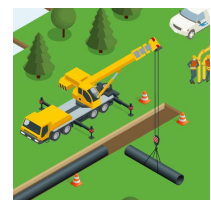
Construction start, if licence approved



35 |

Next steps

- Gather feedback and further understand potential project impacts, concerns, and develop appropriate mitigations
- Determine the preferred route for the natural gas pipeline right-of-way
- Develop and submit the required licencing documents for the project



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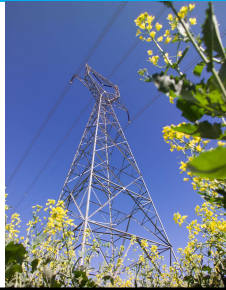
Thank you!

Questions, concerns, feedback?

- Key contact at Manitoba Hydro:

Geneva Cloutis

Environmental Specialist
Phone: (204) 583-2352
Email: gcloutis@hydro.mb.ca



Engagement Circle #1 Event Summary

March 2026

Brandon Dispatchable Capacity Project

Engagement Circle #1 summary

Overview

Engaged Indigenous audiences, including First Nations and the Manitoba Métis Federation, were invited to attend an engagement circle for the potential Brandon Dispatchable Capacity Project at the Riverbank Discovery Centre in Brandon, MB. The engagement circles are a series of collaborative discussions between and among nations and Manitoba Hydro to gather feedback to contribute to route selection, the environmental assessment, mitigation measures, and the environmental protection plan for the potential project. The engagement circles are also intended to provide an opportunity to promote learning and strengthening connection as a group, hear consistent project information, and hear each other's values, interests and concerns.

During the morning session, Manitoba Hydro representatives provided an overview of the potential Brandon Dispatchable Capacity Project using storyboards. Participants asked questions and shared feedback related to the need for the project, the scope of the project, and the licensing and engagement process. Manitoba Hydro representatives also gave an overview of the environmental assessment (EA) process and the topics likely to be considered in the environmental assessment reports.

Summary of activities

The afternoon session consisted of three themed stations:

Station 1: Timeline of events – participants were asked to review a draft timeline prepared by Manitoba Hydro of events contributing to changes to the landscape and to the relationships that First Nations peoples and Red River Métis citizens have with land in the project area.

Station 2: Mapping areas of interest –

participants reviewed maps of the project area and the route options currently being proposed for the natural gas pipeline right-of-way to identify any important features on the landscape that Manitoba Hydro should consider during the routing and environmental assessment processes.

Station 3: Engagement feedback – participants were asked how Manitoba Hydro can make the engagement process more meaningful, including what information, resources or support Manitoba Hydro could provide to support Nations' participation.

There were several questions raised during Engagement Circle #1 that Manitoba Hydro staff committed to following up on and providing responses. Participants also provided feedback on Engagement Circle #1 in support of improving future engagement events.

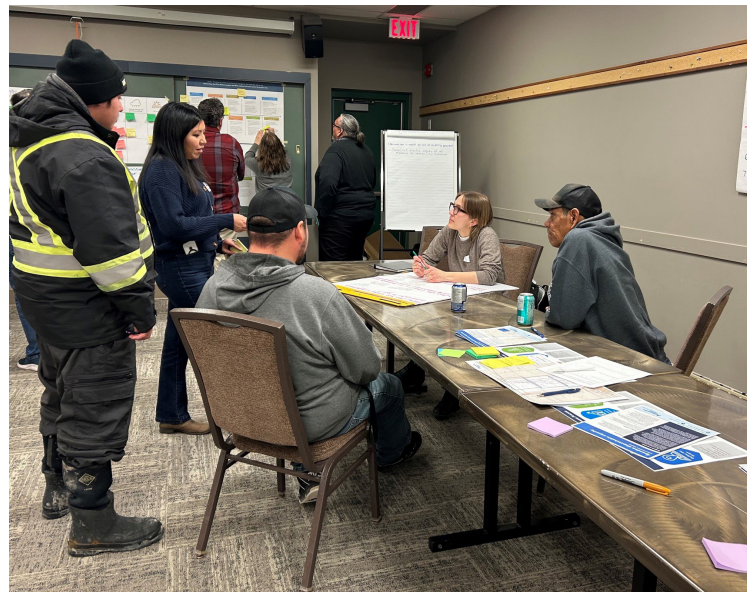


Image 1. Participants at the engagement circle.

Contact us for related inquiries



projects@hydro.mb.ca



1-877-343-1631

To request accessible formats visit hydro.mb.ca/accessibility

 **Manitoba
Hydro**
energy for life

Brandon Dispatchable Capacity Project

Engagement Circle #1 summary

Key feedback

Environmental assessment topics of interest

Participants provided feedback on what Manitoba Hydro should consider related to land and resource use, water resources, climate change and greenhouse gases, air quality, important sites, human health and well-being, infrastructure and community services, and economic opportunities. Key feedback included considering water quality and quantity for both surface water and groundwater, economic benefits to nations as a result of the project, and the importance of assessing the impacts of the project on culturally important species.

Station 1: Timeline of events

Participants were asked if there were any important events or changes missing from the timeline, and if there were any stories of changes over time to be shared. Participants shared feedback about events that should be added to the timeline, including the Selkirk Treaty, the creation of the province of Manitoba, Scrip in Manitoba, the Northwest Resistance, Manitoba Hydro's reconciliation commitment statement, and the apology to the Dakota Nations by Canada.

Station 2: Mapping areas of interest

Participants discussed the project area and the potential route options being proposed for the natural gas pipeline right-of-way. Feedback included interest in natural gas service to First Nations, concern about potential downstream impacts to the Assiniboine River, impacts to the movement of moose and elk, and a general routing preference to parallel the proposed gas pipeline along highways and existing infrastructure to reduce impacts to grasslands and wildlife habitat. Participants also highlighted features that should be included and labeled on future maps, including First Nations, aquifers, and wildlife and nesting data.

Manitoba Hydro reviewed a range of geospatial datasets from government and non-government sources, including Ducks Unlimited and the Manitoba Habitat Conservancy, to identify important wildlife habitat such as wetlands. Information reviewed included land cover, species at risk habitat, waterfowl capability, hotspots, breeding pair density, and wetland productivity.

Project modelling indicates that the proposed routes have limited overlap with important wildlife habitat. Major waterfowl areas, such as the Prairie Pothole Region and Douglas Marsh Important Bird Area, are located well outside the project planning area. Wetlands within the planning area are generally of marginal value to waterfowl and are not known to support rare or endangered species. Mitigation measures, including horizontal drilling at environmentally sensitive locations, will further minimize potential effects on wetlands, hydrology, and wildlife habitat.

Table 3: Engagement needs

Participants shared ways that the engagement process could be made more meaningful, including: more Elder, youth, and leadership participation in engagement activities, sharing the agenda and project information materials more in advance, providing capacity funding to nations to support participation, and more inclusion of First Nation and Métis perspectives in the development and review of the environmental assessment process. Participants also emphasized the importance of Manitoba Hydro sharing not only what was heard during engagement, but how feedback shared influenced project decisions.

Contact us for related inquiries



projects@hydro.mb.ca



1-877-343-1631



Brandon Dispatchable Capacity Project

Engagement Circle #1 summary

How feedback will be used

Table 1 below summarizes what participants shared and how Manitoba Hydro has considered these inputs in project planning and decision-making.

Table 1. Summary of engagement circle feedback and associated project outcomes.

Feedback	Outcomes
Participants shared concerns about potential groundwater impacts, not just surface water, as it relates to water resources.	Manitoba Hydro will be assessing water resources broadly to include both the potential effects of the project on groundwater and surface water.
Request to have future engagement circles at Indigenous-owned spaces and use Indigenous catering companies.	Manitoba Hydro will investigate Indigenous-owned meeting spaces in the area as well as Indigenous catering for future engagement circles. Manitoba Hydro welcomes suggestions from Nations on specific meeting spaces and catering companies.
Request to have Nations bring Traditional Land Use and/or Oral History information to a future engagement circle.	Manitoba Hydro will include an invitation for nations if there is interest in sharing information about the project area that has been collected through oral history and/or traditional land use reports.
Request to have Elders participate in a future engagement circle	Manitoba Hydro will include a note for nations to invite an Elder to attend Engagement Circle #2

Contact us for related inquiries



projects@hydro.mb.ca



1-877-343-1631



Open House Storyboards

February 2026

Community Open House

Brandon Dispatchable Capacity Project

What is the project?



The Brandon Dispatchable Capacity Project includes three main parts:

1. Planning for three new combustion turbine units at the Brandon generating station
2. Electrical transmission and distribution equipment upgrades
3. Planning and routing an approximately 32-kilometre natural gas pipeline right-of-way in the area

Why is this project needed?



Our 2025 Integrated Resource Plan (IRP) road map identified that peak demand for electricity will exceed our capacity by 2029/2030, and we will need approximately 1760 megawatts (MW) of added capacity by 2035. Included in the recommended development plan is 750 MW of capacity from combustion turbines.

The 2025 IRP road map identified that dispatchable capacity resources, such as combustion turbines, will be an essential part of meeting demand in the next decade, especially during Manitoba's coldest winter days.

What is dispatchable capacity?



Dispatchable energy sources are those that can be controlled or provided on demand. They can be turned on when needed, and off when not required.

Capacity refers to the amount of energy that can be made available from a given source. The amount provided can be changed based upon the need.

Combustion turbines will provide dispatchable capacity to the system, which will be critical for reliable service during periods of high demand, like on cold winter days.

Integrated Resource Plan



An Integrated Resource Plan (IRP) is a repeatable process used to understand and prepare for our province's future energy needs. Our 2025 IRP includes a development plan to ensure a safe, reliable, supply of electricity and natural gas, and leverage the opportunities presented by the energy transition. We are responsible for supplying Manitobans with safe and reliable energy. The energy transition, and particularly decarbonization, is increasing demand for electricity — and Manitoba Hydro's supply is limited.



To learn more about the IRP, visit hydro.mb.ca/future or scan the QR code.

Project Engagement Process

Natural gas combustion turbines

January – June 2026

- Introduce the project
- Identify and document concerns
- Discuss potential effects
- Discuss possible mitigation measures to minimize effects

Natural gas pipeline right-of-way

○ Round 1

January - March 2026

- Introduce the project
- Present alternative route options for the natural gas pipeline right-of-way
- Identify and document concerns
- Use input to inform selection of a preferred route for the natural gas pipeline right-of-way

○ Round 2

May - July 2026

- Present what we heard in Round 1
- Present the preferred route for the natural gas pipeline right-of-way
- Discuss potential effects
- Discuss possible mitigation measures to minimize effects
- Use input to assist in determining final preferred route

Anticipated Timelines

Timeline for the new combustion turbine units

The schedule is subject to change, and is dependent on several factors, including regulatory approvals, procurement processes, and land acquisition.

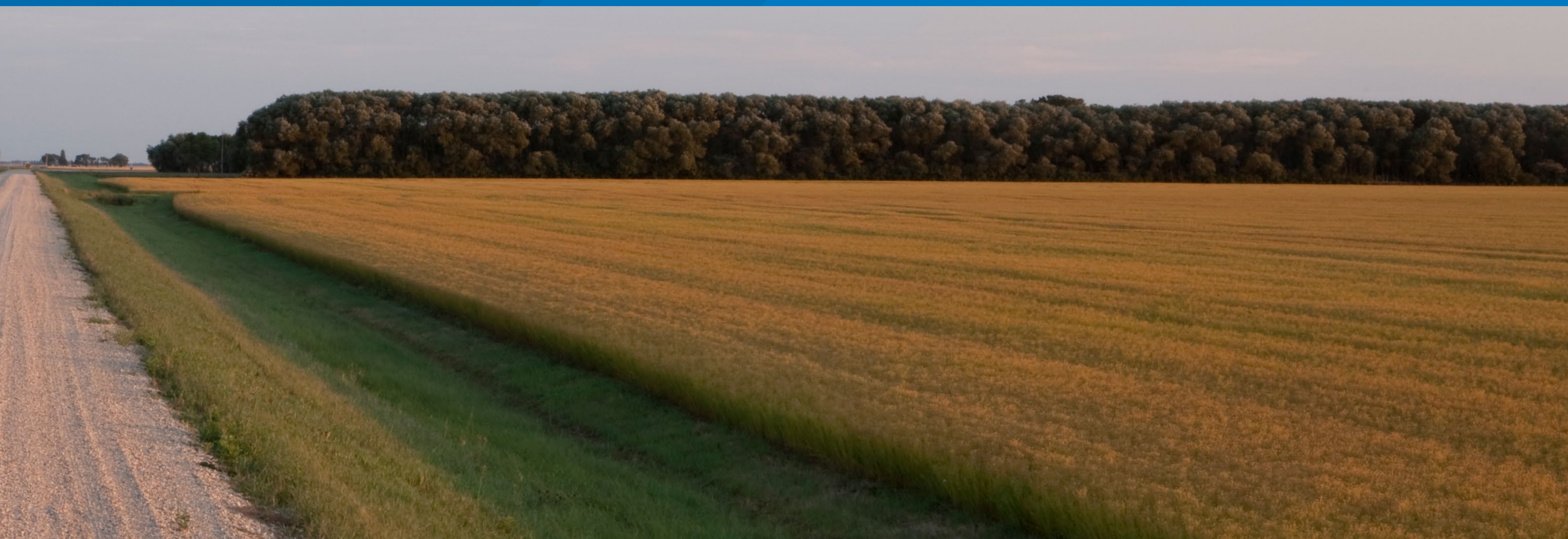
- Major New Facility Review with the Public Utilities Board: early 2026
- Engagement: January 2026 - June 2026
- File notice of alteration for regulatory review: summer 2026
- Licensing decision: late 2027
- Combustion turbine unit construction start if notice of alteration approved: early 2028
- Target in-service date: summer 2030

Natural gas pipeline right-of-way timelines

- Round 1 engagement: January 2026 - March 2026
- Round 2 engagement: May 2026 - July 2026
- File Environment Act Proposal for regulatory review: fall 2026
- Licensing decision: estimated spring 2028
- Gas pipelines construction start, if licence approved: summer 2028
- Target in-service date: summer 2030

Compensation

For this project, Manitoba Hydro will be looking to secure easements along the preferred route. Easements allow landowners to maintain ownership and continue farming practices. Compensation for easements is based on the current market value of the land.



Affected property owners are compensated for aspects including:

- Easement for below-ground gas infrastructure
- Easement for above-ground gas infrastructure, if applicable
- Crop damages during construction
- Ancillary damage during construction, if applicable

Our goal is to make every reasonable effort to develop a mutually acceptable agreement for compensation on privately owned land.

Environmental Assessment

An **environmental assessment** is a multi-disciplinary evaluation of a project that examines the potential effects the project might have on the human and natural environment and identifies mitigation measures to address those potential effects, in pursuit of minimizing potential adverse effects.

Anticipated topics for the environmental assessment include:

-  Air quality
-  Surface water
-  Vegetation
-  Wildlife
-  Land and resource use
-  Agriculture
-  Infrastructure and community services
-  Human health and well-being
-  Economic opportunities
-  Greenhouse gases and climate change
-  Important sites (includes heritage resources, cultural sites and features)

Environmental Licensing

The project is subject to licensing under Manitoba's Environment Act.



Manitoba Hydro's existing Brandon combustion turbine plant is operated per Environment Act License #2497R. We will submit a notice of alteration for the license to the provincial Environmental Approvals Branch for the additional three combustion turbines and electrical transmission infrastructure. The proposed combustion turbines would be located on Manitoba Hydro's property at the existing site.

Manitoba Hydro will submit an Environment Act Proposal for a Class 2 development under The Environment Act for the proposed natural gas pipeline component of the project to the provincial Environmental Approvals Branch. Portions of the project may also be licensable under the federal Impact Assessment Act.

Natural Gas Pipelines

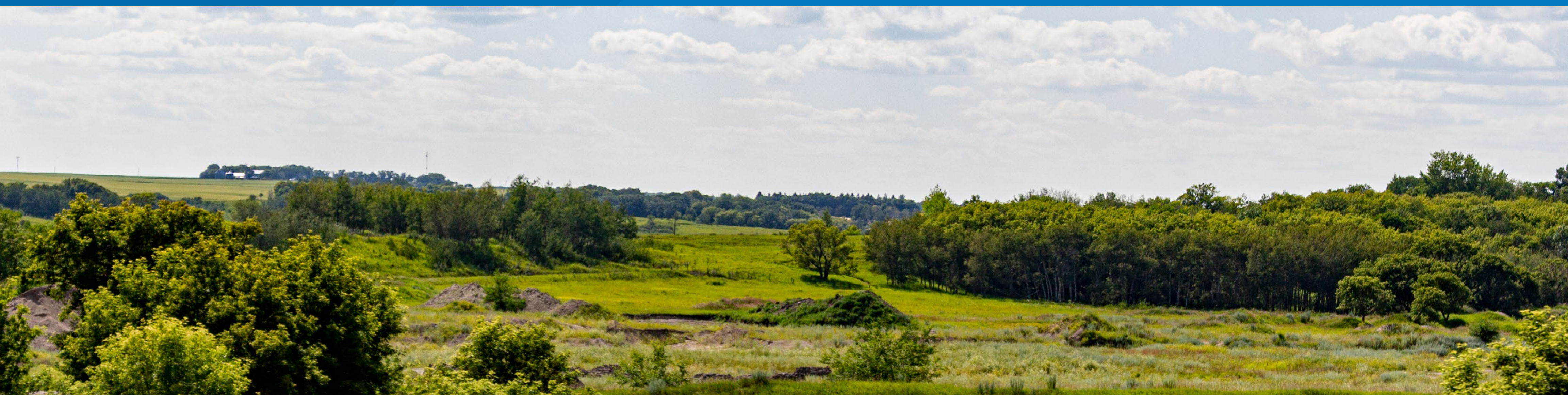


We are planning to install two natural gas pipelines in a common right-of-way running between Moore Park station and the Brandon generating station. These two pipelines serve different purposes:

1. A 24-inch pipeline will bring non-odourized natural gas to fuel the new combustion turbine units at the Brandon generating station.
2. A 12-inch pipeline will bring odourized natural gas to the City of Brandon and the southwest region of Manitoba. This pipeline will enhance system reliability, increase natural gas capacity for Brandon, and support growing demand in the southwestern area of the province.

Routing

On this project, we are adapting our electrical transmission line routing process for natural gas pipelines. The routing process is based on a methodology that we have been using since 2013 on the St. Vital Transmission Complex. We consider impacts to the natural and built environments, technical considerations, and feedback from engagement to identify a route that limits the overall effect of the project on the environment.



There are generally five steps in the routing process:

1. Develop route planning area
2. Develop alternative route options
3. Identify preferred route
4. Identify final preferred route
5. Licensing decision

Keep in touch

- If you have any questions or concerns, please send them to **projects@hydro.mb.ca** or call **1-877-343-1631**
- Learn more about the project, find out how to get involved, and sign up for updates: **hydro.mb.ca/brandonturbines**



Scan this QR code to visit the project webpage.

To request accessible formats visit: **hydro.mb.ca/accessibility**.

Appendix B

Baseline Air Quality Concentrations

Appendix B: Baseline Air Quality Concentrations

Substance	Averaging Period	Ambient Baseline Concentration ^a (µg/m ³)	Ambient Air Quality Monitoring Station	Comparison of Baseline to MAAQC (%)	MAAQC ^b (µg/m ³)
NO ₂ ^c	1-hour	17.9	Brandon	4%	400
	24-hour	15.5		8%	200
	Annual	5.11		9%	60
SO ₂ ^d	1-hour	1.18	Brandon	0.3%	450
	24-hour	1.18		1%	150
	Annual	0.55		2%	30
CO ^e	1-hour	696	Winnipeg Ellen Street	5%	15,000
	8-hour	696		12%	6,000
PM _{2.5} ^f	24-hour	18.1	Winnipeg Scotia Street	67%	27
	Annual	7.0		79%	8.8

NOTES:

^a Baseline concentration based on the 90th percentile of hourly measurements. Baseline concentrations for averaging periods greater than one hour (8-hour, 24-hour, annual) are calculated from the hourly measurements after removing values greater than the 90th percentile.

^b Manitoba Ambient Air Quality Criteria (MAAQC; MECC 2005) and Canadian Ambient Air Quality Standards (CAAQS; CCME 2017) for PM_{2.5}.

^c Baseline NO₂ concentrations are calculated as the maximum of the 90th percentile concentrations from 2023 and 2025. The datasets from 2021, 2022 and 2024 are less than 75% complete.

^d Baseline SO₂ concentrations are the 90th percentile concentrations from 2025. The datasets from 2021-2024 are less than 75% complete.

^e Baseline CO concentrations are calculated as the maximum of the 90th percentile concentrations from 2016 and 2018. The datasets from 2017, 2019, 2020 are less than 75% complete.

^f Baseline PM_{2.5} concentrations are the 90th percentile concentrations from 2024. The datasets from 2021-2023 are missing or less than 75% complete. The measured PM_{2.5} concentrations in 2025 are very high due to wildfires and are excluded from the calculation.

Appendix C

Fish Species

Appendix C: Fish Species with a Known Distribution Overlapping the Assiniboine River with Potential to Occur Near the Project Site in Brandon, Manitoba

Species Information ¹			Legislated Protection		Scientific Review or Recommendation	
Family	Common Name	Scientific Name	SARA ³	ESEA ⁴	COSEWIC ⁵	MBCDC ⁶
Acipenseridae	lake sturgeon	<i>Acipenser fulvescens</i>	Not Listed	Not Listed	Endangered ²	S2
Catostomidae	bigmouth buffalo	<i>Ictiobus cyprinellus</i>	Special Concern	Not Listed	Special Concern	S5
	quillback	<i>Carpionodes cyprinus</i>	Not Listed	Not Listed	No Status	S5
	shorthead redhorse	<i>Moxostoma macrolepidotum</i>	Not Listed	Not Listed	No Status	S5
	silver redhorse	<i>Moxostoma anisurum</i>	Not Listed	Not Listed	No Status	S5
	white sucker	<i>Catostomus commersonii</i>	Not Listed	Not Listed	No Status	S5
Centrarchidae	black crappie	<i>Poxomis nigromaculata</i>	Not Listed	Not Listed	No Status	S5
	rock bass	<i>Ambloplites rupestris</i>	Not Listed	Not Listed	No Status	S5
Cyprinidae	common carp	<i>Cyprinus carpio</i>	Not Listed	Not Listed	No Status	SNA
	goldfish	<i>Carassius auratus</i>	Not Listed	Not Listed	No Status	SNA
Leuciscidae	bigmouth shiner	<i>Ericymba dorsalis</i>	Not Listed	Not Listed	No Status	S4
	blackchin shiner	<i>Miniellus heterodon</i>	Not Listed	Not Listed	No Status	S4
	blacknose shiner	<i>Notropis heterolepis</i>	Not Listed	Not Listed	No Status	S5
	brassy minnow	<i>Hybognathus hankinsoni</i>	Not Listed	Not Listed	No Status	S5

Species Information ¹			Legislated Protection		Scientific Review or Recommendation	
Family	Common Name	Scientific Name	SARA ³	ESEA ⁴	COSEWIC ⁵	MBCDC ⁶
	creek chub	<i>Semotilus atromaculatus</i>	Not Listed	Not Listed	No Status	S5
	common shiner	<i>Luxilus cornutus</i>	Not Listed	Not Listed	No Status	S5
	emerald shiner	<i>Notropis atherinoides</i>	Not Listed	Not Listed	No Status	S5
	fathead minnow	<i>Pimephales promelas</i>	Not Listed	Not Listed	No Status	S5
	finescape dace	<i>Chrosomus neogaeus</i>	Not Listed	Not Listed	No Status	S5
	flathead chub	<i>Platygobio gracilis</i>	Not Listed	Not Listed	No Status	S5
	golden shiner	<i>Notemigonus crysoleucus</i>	Not Listed	Not Listed	No Status	S5
	longnose dace	<i>Rhinichthys cataractae</i>	Not Listed	Not Listed	No Status	S5
	northern redbelly dace	<i>Chrosomus eos</i>	Not Listed	Not Listed	No Status	S5
	northern pearl dace	<i>Margariscus nachtriebi</i>	Not Listed	Not Listed	No Status	S5
	river shiner	<i>Alburnops blennius</i>	Not Listed	Not Listed	No Status	S5
	sand shiner	<i>Miniellus stramineus</i>	Not Listed	Not Listed	No Status	S5
	silver chub	<i>Macrhybopsis storeriana</i>	Not Listed	Not Listed	No Status	S5
	spotfin shiner	<i>Cyprinella spiloptera</i>	Not Listed	Not Listed	No Status	S4
	spottail shiner	<i>Hudsonius hudsonius</i>	Not Listed	Not Listed	No Status	S5
	western blacknose dace	<i>Rhinichthys obtusus</i>	Not Listed	Not Listed	No Status	S5

Species Information ¹			Legislated Protection		Scientific Review or Recommendation	
Family	Common Name	Scientific Name	SARA ³	ESEA ⁴	COSEWIC ⁵	MBCDC ⁶
Esocidae	northern pike	<i>Esox lucius</i>	Not Listed	Not Listed	No Status	S5
Gadidae	burbot	<i>Lota lota</i>	Not Listed	Not Listed	No Status	S5
Gasterosteidae	brook stickleback	<i>Culaea inconstans</i>	Not Listed	Not Listed	No Status	S5
	ninespine stickleback	<i>Pungitius pungitius</i>	Not Listed	Not Listed	No Status	S5
Hiodontidae	goldeye	<i>Hiodon alosoides</i>	Not Listed	Not Listed	No Status	S5
	mooneye	<i>Hiodon tergisus</i>	Not Listed	Not Listed	No Status	S5
Ictaluridae	black bullhead	<i>Ameiurus melas</i>	Not Listed	Not Listed	No Status	S5
	brown bullhead	<i>Ameiurus nebulosus</i>	Not Listed	Not Listed	No Status	S5
	channel catfish	<i>Ictalurus punctatus</i>	Not Listed	Not Listed	No Status	S5
	stonecat	<i>Noturus flavus</i>	Not Listed	Not Listed	No Status	S5
	tadpole madtom	<i>Noturus gyrinus</i>	Not Listed	Not Listed	No Status	S5
Percidae	blackside darter	<i>Percina maculata</i>	Not Listed	Not Listed	No Status	S5
	Jowa darter	<i>Etheostoma exile</i>	Not Listed	Not Listed	No Status	S5
	Johnny darter	<i>Etheostoma nigrum</i>	Not Listed	Not Listed	No Status	S5
	river darter	<i>Percina shumardi</i>	Not Listed	Not Listed	No Status	S5
	sauger	<i>Sander canadensis</i>	Not Listed	Not Listed	No Status	S5

Species Information ¹			Legislated Protection		Scientific Review or Recommendation	
Family	Common Name	Scientific Name	SARA ³	ESEA ⁴	COSEWIC ⁵	MBCDC ⁶
	walleye	<i>Sander vitreus</i>	Not Listed	Not Listed	No Status	S5
	yellow perch	<i>Perca flavescens</i>	Not Listed	Not Listed	No Status	S5
Percopsidae	troutperch	<i>Percopsis omiscomaycus</i>	Not Listed	Not Listed	No Status	S5
Petromyzontidae	chestnut lamprey	<i>Ichthyomyzon castaneus</i>	Not Listed	Not Listed	No Status	SU
	silver lamprey	<i>Ichthyomyzon unicuspis</i>	Not Listed	Not Listed	Special Concern	SU
Salmonidae	brook trout	<i>Salvelinus fontinalis</i>	Not Listed	Not Listed	No Status	S5
	brown trout	<i>Salmo trutta</i>	Not Listed	Not Listed	No Status	SNA
	rainbow trout	<i>Oncorhynchus mykiss</i>	Not Listed	Not Listed	No Status	SNA
Scienidae	freshwater drum	<i>Aplodinotus grunniens</i>	Not Listed	Not Listed	No Status	S5
Umbridae	central mudminnow	<i>Umbra limi</i>	Not Listed	Not Listed	No Status	S5

NOTES:

¹ Species information (i.e., family, common name, scientific name) from Page et al. (2023)

² Based on the Saskatchewan – Nelson River populations (includes Red – Assiniboine River populations)

³ *Species at Risk Act* (GOC 2025)

⁴ *Endangered Species and Ecosystems Act* C.C.S.M. c. E111

⁵ Committee on the Status of Endangered Wildlife in Canada (GOC 2025); considered a species of management concern if assessed as threatened

⁶ Manitoba Conservation Data Centre; Provincial Rankings: S1 – critically imperiled, S2 – imperiled, S3 – vulnerable, S4 – apparently secure, S5 – secure, S#S# – range rank (used to indicate any range of uncertainty about species status) SU – unrankable due to lack of information or due to substantially conflicting information about status or trends, SNA – a conservation status rank is not applicable because the species or ecosystem is not a suitable target for conservation activities (NatureServe Explorer 2026)

Appendix D

Plant Species of Conservation Concern

Appendix D: Plant Species of Conservation Concern with Historical Occurrences in the Vegetation Study Area

Scientific Name	Common Name	SARA Status	COSEWIC Status	ESEA Status	Provincial Rank ¹	Habitat Association ²	Detected within the Project Site (Y/N)
<i>Alisma gramineum</i>	grass-leaved water-plantain	-	-	-	S1	shallow waters and muddy shores of marshes, lakes, and riparian areas	Y
<i>Calamagrostis montanensis</i>	plains reedgrass	-	-	-	S3	open sandy pine (<i>Pinus</i> spp.) forests, dry sandy prairies and riparian areas	Y
<i>Carex echinodes</i>	quill sedge	-	-	-	S3	moist forests	Y
<i>Carex hallii</i>	Hall's sedge	-	-	-	S1S2	moist alkaline meadows	Y
<i>Clematis ligusticifolia</i>	western virgin's-bower	-	-	-	S1	forest margins, riparian deciduous woodlands, moist wooded draws, clearings and pastures (usually near streams or on moist slopes)	Y
<i>Festuca hallii</i>	plains rough fescue	-	-	-	S3	dry to moist prairies	Y
<i>Hypoxis hirsuta</i>	yellow stargrass	-	-	-	S3S4	open deciduous forests, wet to dry prairies	Y
<i>Poa fendleriana</i> ssp. <i>fendleriana</i>	muttongrass	-	-	-	S2	dry open deciduous forests, gravelly or rocky prairies	Y

NOTES:

¹ Provincial Rankings: S1 – critically imperiled, S2 – imperiled, S3 – vulnerable, S4 – apparently secure, S#S# – range rank (used to indicate any range of uncertainty about species status) (NatureServe Explorer 2026)

² Bizecki Robson (2025); MBCDC (2026); Pringle (2020)

Appendix E

Wildlife Species at Risk

Appendix E: Wildlife Species at Risk with Ranges Overlapping the Wildlife Study Area

Scientific Name	Common Name	SARA Status ⁶	COSEWIC Status ⁷	ESEA Status ⁸	Provincial Rank ⁹	Habitat Association	Detected at the Site (Y/N) ⁸	Detected within 1 km of the Site (Y/N) ⁸	Detected within 5 km of the Site (Y/N) ^{8,9}
Amphibian^{1,2}									
<i>Ambystoma tigrinum</i>	Eastern tiger salamander	SC	SC	NL	S3?	Breed in permanent or semi-permanent lakes, ponds, or wetlands that are fish-free. Terrestrial habitats near these sites.	N	N	N
<i>Lithobates pipiens</i>	Northern leopard frog	SC	SC	NL	S4	Breed in permanent or semi-permanent wetlands, streams, and shallow sections of lakes and rivers that are typically fish-free. Forage in terrestrial habitats in summer, often far from aquatic habitats. Overwinter in lakes and large ponds.	Y	Y	Y
Reptile^{1,2}									
<i>Chelydra serpentina</i>	Snapping turtle	SC	SC	NL	S3	Occupy low-moving, shallow waterways with soft mud or sand bottom. Occasionally found on edges of deep lakes. Open-canopy nesting habitat near a wetland or waterbody.	N	N	Y
<i>Heterodon nasicus</i>	Plains hog-nosed snake	SC	SC	T	S1S2	Found in grassland, savannah, and scrubland, also woodlands, desert, and river valleys. Overwinter in burrows underground below frost line. Eggs deposited in loose sand.	N	N	N
Bird^{1,3,4}									
<i>Aechmophorus occidentalis</i>	Western grebe	SC	SC	NL	S3S4B	Nest colonially on marshes and lakes with reeds and rushes along edges.	N	N	N

Scientific Name	Common Name	SARA Status ⁶	COSEWIC Status ⁷	ESEA Status ⁸	Provincial Rank ⁹	Habitat Association	Detected at the Site (Y/N) ⁸	Detected within 1 km of the Site (Y/N) ⁸	Detected within 5 km of the Site (Y/N) ^{8,9}
<i>Anthus spragueii</i>	Sprague's pipit	T	T	T	S2B	Breed in mixed-grass prairie up to 12 inches tall, with scattered shrubs and little bare ground. Uncommon in non-native grassland, do not nest in cropland.	N	N	Y
<i>Asio flammeus</i>	Short-eared owl	SC	T	T	S2S3B	Breed in large open areas with low vegetation including grasslands, meadows, marshes, and agricultural areas.	N	N	N
<i>Athene cunicularia</i>	Burrowing owl	E	E	E	S1B	Found in grasslands, pastures, and agricultural fields. Nest in underground burrows.	N	N	Y
<i>Buteo regalis</i>	Ferruginous hawk	T	SC	E	S1B	Breed in grassland and shrubland with features such as tree groves and outcrops for nesting.	N	N	N
<i>Calcarius ornatus</i>	Chestnut-collared longspur	E	E	E	S1S2B	Breed in short-grass and mixed-grass prairie. Occupies recently grazed, mowed, or burned areas.	N	N	Y
<i>Calidris subruficollis</i>	Buff-breasted sandpiper	SC	SC	NL	S1S2M	Non-breeding in Study Area. Occupy flat, dry habitats including agricultural fields during migration.	N	N	N
<i>Cardellina canadensis</i>	Canada warbler	T	SC	T	S3B	Non-breeding in Study Area. Rest in shrubby areas in woodlots, parks, and forest edges during migration.	N	N	N
<i>Centronyx bairdii</i>	Baird's sparrow	SC	SC	E	S1B	Breed in undisturbed prairie. Can be found in hayfields or pastures with some native grasses, which are less suitable for breeding.	N	N	Y
<i>Chaetura pelagica</i>	Chimney swift	T	T	T	S2B	Occupy urban and suburban areas with chimneys for nest sites and roosts; may nest in	N	N	Y

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						hollow trees or tree cavities. Forage over open terrain and over forest, ponds, and residential areas.			
<i>Chordeiles minor</i>	Common nighthawk	SC	SC	T	S2S3B	Nest in burned forest, logged forest, woodland clearings, open forest, and grassland.	N	N	N
<i>Coccothraustes vespertinus</i>	Evening grosbeak	SC	SC	NL	S2S3	Non-breeding in Study Area, migrate through to breed further north.	N	N	N
<i>Contopus virens</i>	Eastern wood-pewee	SC	SC	NL	S3B	Found in forest edges and clearings, breed in most types of wooded habitat. Prefer deciduous habitat but also occupy mixed forest.	N	N	N
<i>Coturnicops noveboracensis</i>	Yellow rail	SC	SC	NL	S3B	Breed in shallow marshes with short vegetation. Taller emergent vegetation is avoided.	N	N	N
<i>Dolichonyx oryzivorus</i>	Bobolink	T	SC	NL	S3S4B	Breed in open areas, fields with grasses and broad-leaved plants. Nest in prairie, also in hayfields and meadows.	N	N	Y
<i>Euphagus carolinus</i>	Rusty blackbird	SC	SC	NL	S3S4B, S2N	Non-breeding in Study Area, migrate through to breed further north.	N	N	N
<i>Grus americana</i>	Whooping crane	E	E	E	SXB, S1M	Non-breeding in Study Area. Feed in croplands and roost in shallow wetlands during migration.	N	N	N
<i>Hirundo rustica</i>	Barn swallow	T	SC	NL	S4B	Breed in open areas for foraging with a source of mud as nest material. Nest on structures or cliffs.	N	N	Y

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<i>Lanius ludovicianus excubitorides</i>	Prairie loggerhead shrike	T	T	E	S1B	Nest in trees or shrubs in pastureland, also in farm shelterbelts, roadsides, and open mowed sites with scattered trees.	N	N	N
<i>Melanerpes erythrocephalus</i>	Red-headed woodpecker	E	E	T	S3B	Breed in deciduous forest, grasslands with scattered trees, recent clearings, roadsides, and forest edges. Require dead or partially dead trees for nest cavities.	N	N	Y
<i>Podiceps auritus</i>	Horned grebe (western population)	SC	Non-active	NL	S3B	Breed on small, shallow ponds and artificial ponds with emergent vegetation.	N	N	N
<i>Riparia riparia</i>	Bank swallow	T	T	NL	S4B	Nest in colonies in vertical banks along rivers and reservoirs and in sand and gravel quarries. Forage in open areas.	N	N	N
<i>Zonotrichia querula</i>	Harris's sparrow	SC	SC	NL	S3B	Non-breeding in Study Area, migrate through to breed further north.	N	N	N
Mammal^{1,5}									
<i>Myotis lucifugus</i>	Little brown myotis	E	E	E	S2N, S5B	Overwinter in hibernacula. Females establish summer maternity colonies in buildings or large trees. Forage over water and along forest edges, gaps in forest, and waterways.	N	N	N
<i>Myotis septentrionalis</i>	Northern myotis	E	E	E	S3S4N, S4B	Overwinter in hibernacula. Females establish summer maternity colonies in large trees. Forage along forest edges, gaps in forest, and waterways.	N	N	N

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<i>Taxidea taxus taxus</i>	American badger	SC	Non-active	NL	S4	Found in non-forested shrubland and grassland, also agricultural areas with hedgerows, field edges, and fencerows. Avoid cultivated fields.	N	N	N
Insect⁵									
<i>Aflexia rubranura</i>	Red-tailed prairie leafhopper	SC	SC	NL	S2S3	Found in patches of bur oak (<i>Quercus macrocarpa</i>) savanna within tall-grass prairies, also in savanna and open grassland.	N	N	N
<i>Anisota manitobensis</i>	Manitoba oakworm moth	SC	SC	NL	S2	Occur only in habitats where bur oak is found, including oak savannas and woodlands along river valleys.	N	Y	Y
<i>Bombus bohemicus</i>	Ashton cuckoo bumble bee	E	E	NL	S1	Occur in mixed farmlands, urban areas, boreal forest, and open meadows. Occupy host nests in underground burrows and rotten logs.	N	Y	Y
<i>Bombus terricola</i>	Yellow-banded bumble bee	SC	SC	NL	S3S5	Found in farmlands, urban areas, mixed woodlands, and prairie grasslands. Nests underground in pre-existing cavities.	Y	Y	Y
<i>Coccinella novemnotata</i>	Nine-spotted lady beetle	E	E	NL	S2S4	Habitat generalists, inhabit riparian areas, prairie grasslands, meadows, agricultural areas, parks, suburban gardens, and coniferous and deciduous forest.	N	N	N
<i>Coccinella transversoguttata</i>	Transverse lady beetle	SC	SC	NL	S3S5	Habitat generalists, occur in suburban gardens, agricultural areas, parks, coniferous and deciduous forest, prairie	N	N	N

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						grassland, meadows, and riparian areas.			
<i>Copablepharon grandis</i>	Pale yellow dune moth	SC	SC	E	S1	Found in sparsely vegetated, sandy habitats associated with dune fields.	N	N	N
<i>Copablepharon longipenne</i>	Dusky dune moth	E	T	E	S1	Inhabit active sand dunes or sand blowout habitats, also open sandy areas associated with human activity (e.g., sand roads).	N	N	N
<i>Danaus plexippus</i>	Monarch	SC	E	NL	S3S4B	Occupy areas where milkweed grows in occasionally disturbed and open habitats such as fields, prairies, roadsides, wetlands, and open forests.	N	N	Y
<i>Epeoloides pilosulus</i>	Macropis cuckoo bee	E	Data deficient	NL	S1	Occur in temporarily wet habitats. Occupy host bee nest sites in or near patches of host's food plants, in sandy soil with undergrowth.	N	N	N
<i>Hesperia dacotae</i>	Dakota skipper	E	E	T	S2	Occur only in native tall-grass and dry mixed prairie.	Y	Y	Y
<i>Hesperia ottoe</i>	Ottoe skipper	E	E	T	S1	Found only in native prairie habitats. Prefers medium-height mixed-grass and sand prairies, not found in tall grass.	N	N	N
<i>Schinia avemensis</i>	Gold-edged gem	E	E	E	S1	Found only in active sand dunes and sand blowouts.	N	N	N
<i>Schinia bimatris</i>	White flower moth	E	E	E	S1	Occur only in active sand dunes in the aspen prairie-parkland region.	N	N	N

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SOURCE/NOTES: E = Endangered T = Threatened SC = Special Concern 1 International Union for Conservation of Nature and Natural Resources 2026 2 Canadian Herpetological Society 2026 3 Cornell Lab of Ornithology 2026 4 Bird Studies Canada 2018 5 GOC 2026a 6 <i>Species at Risk Act</i> (GOC 2025) 7 Committee on the Status of Endangered Wildlife in Canada (GOC 2025); considered a species of management concern if assessed as threatened 8 <i>Endangered Species and Ecosystems Act</i> C.C.S.M. c. E111 9 Manitoba Conservation Data Centre; Provincial Rankings: S1 – critically imperiled, S2 – imperiled, S3 – vulnerable, S4 – apparently secure, S5 – secure, S#S# – range rank (used to indicate any range of uncertainty about species status) B – breeding population, M – migrant population, N – non-breeding population (NatureServe Explorer 2026)									