

Brandon dispatchable capacity project

Initial project description summary

Prepared by Manitoba Hydro

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Submitted to Impact Assessment Agency of Canada

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1.0 Introduction

Manitoba Hydro is pleased to submit this initial project description summary for the Brandon dispatchable capacity project (the project). This document summarizes the Initial Project Description (IPD) that 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).

The project includes the installation of three new heavy frame simple cycle combustion turbines (SSCT) each with a capacity of approximately 250 MW, that will be fueled by a natural gas pipeline, tied to the existing Trans Canada Energy distribution network.

In addition, two new interconnection transmission lines and transmission upgrades will be developed to deliver the electricity generated by the units into the existing system.

Electricity produced by the project will be fed into Manitoba's provincial grid 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 project will be located at the existing Brandon Generating Station (GS) site, located on the east side of the City of Brandon, Manitoba, on land owned by Manitoba Hydro, in an area zoned for heavy industrial use.

2.0 General 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
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3.0 Summary of Agency 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.

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

Manitoba Hydro initiated engagement with federal and provincial audiences in February 2026, and municipal audiences in November 2025, and will continue to engage throughout the development of the project. Agencies engaged to date include:

- Impact Assessment Agency of Canada
- Manitoba Agriculture
- Manitoba Environment and Climate Change
- Community and Regional Planning
- Manitoba Natural Resources and Indigenous Futures
- Manitoba Business, Mining, Trade and Job Creation
- Manitoba Indigenous Economic Development
- Manitoba Indigenous Reconciliation
- Manitoba Sport, Culture, Heritage and Tourism
- Manitoba Transportation and Infrastructure
- Rural Municipality of Elton
- Rural Municipality of Cornwallis
- City of Brandon

Engagement to date has focused on introducing the project and understanding applicable regulatory approvals and processes, as well as shaping key project decisions including the project components and location and understanding potential project effects and concerns.

4.0 Summary of Engagement with Indigenous Audiences and Interested Parties

4.1.1 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

As of March 2026, Manitoba Hydro has sent project information 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
- Travel Manitoba

Initial interested party engagement activities included letters sent to all engaged audiences in January and February 2026, which notified them of the project and opportunities to participate in engagement activities taking place in February and March 2026. These opportunities included four virtual information sessions (22 participants overall) two in-person open houses located in the project area (~34 participants overall), an online survey (69 responses), and an information session with Technical Advisory Committee (20 participants).

Additional communications to the public included letters and emails to all engaged audiences, 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.

Manitoba 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

4.1.2 Engagement with Indigenous Audiences

This project is situated on Treaty 1 and Treaty 2 lands that overlap with the original territories of the Anishinaabeg, Anishinewak, 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 The Technical Advisory Committee 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. .

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 (see Figure 4-1).

- 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)

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.

Manitoba Hydro has developed an engagement strategy to enable for long term planning and involvement of identified Indigenous audiences in the project.

Pre-engagement letters were distributed to 13 First Nations and the Manitoba Métis Federation in November 2025. 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. A Multi-nation Indigenous engagement circle was held on March 20th, 2026, and saw fourteen participants in attendance.

4.2 Results of Engagement and Key Feedback

As of May 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 and water quality
- 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
- Feedback on specific route segments and expressed interest in learning more about the project as it proceeds
- 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.

4.2.1 Plans for Future Engagement

Manitoba Hydro began Round 2 engagement on May 12th, 2026.

Current planned and future 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.

5.0 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.

6.0 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.

7.0 Project Purpose, Need and Benefits

Manitoba Hydro is responsible for providing safe, reliable energy to all Manitobans. Manitoba Hydro's 2025 Integrated Resource Plan (IRP) 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.

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.

Natural gas was determined a suitable choice for the SCCT's, as Manitoba's natural gas system provides 1.4 times the capacity of the electrical system on the coldest days—at 1/40th of the cost—and accounts for only five percent of total provincial greenhouse gas (GHG) emissions.

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 provide reliable access to energy to support the increasing need for power, especially at critical times.

The Brandon GS offers a suitable area for the project as the station has existing assets useful to the development of the SCCT's, including available land transmission, water supply, road and rail access, and an existing skilled workforce to support construction and operational needs.

The project will generate local benefits as well by employing approximately 300 workers at the peak of construction. 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. The anticipated increase in demand for regional goods and services, along with the resulting benefits to employment, is expected to

be greatest during construction, when the workforce and project spending are at their peak, and to occur to a lesser extent during operations and decommissioning.

8.0 Physical Activities Regulation

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 meets the requirements to be a designated physical activity, potentially subject to assessment under Section 31 of the Physical Activities Regulation.

9.0 Project Information

Manitoba Hydro owns and operates the Brandon Combustion Turbine Plant, which consists of two, natural gas fired, SCCT units constructed at the Brandon GS site in 2002.

The project includes the addition of three new SCCT's at the Brandon GS for an added capacity of approximately 750 MW, as well as two new interconnection transmission lines, and a natural gas pipeline to power the SCCT's.

The electricity produced from this project will feed into the Manitoba provincial grid to enhance the supply of reliable, back up generation to meet demand, especially during periods of drought, extreme weather, or other critical circumstances. Pending regulatory approvals, construction is scheduled to begin in 2028, With a target in-service date of fall / winter 2030. The operational life of the project is expected to be approximately 35 years, however, is likely to be extended with regular maintenance and upgrades. Additional information on physical works and activities is provided below.

9.1 Project Infrastructure

SCCT's combust natural gas to produce power in a gas turbine which can be converted to electrical power. Other components of the SCCT's include an emergency diesel generator and backup diesel fuel storage.

A water treatment plant, water supply, cooling tower and switchyard will also be required, and are already existing at the Brandon GS.

The SCCT's also include a water treatment system, transmission and natural gas supply lines to facilitate the operations.

The project will also include several buildings or enclosures of varying sizes, including a winterized powerhouse, and administration building, a water treatment building, an electrical building, exhaust stacks, and diesel fuel tanks.

The proposed layout is shown in Figure 9-1.

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

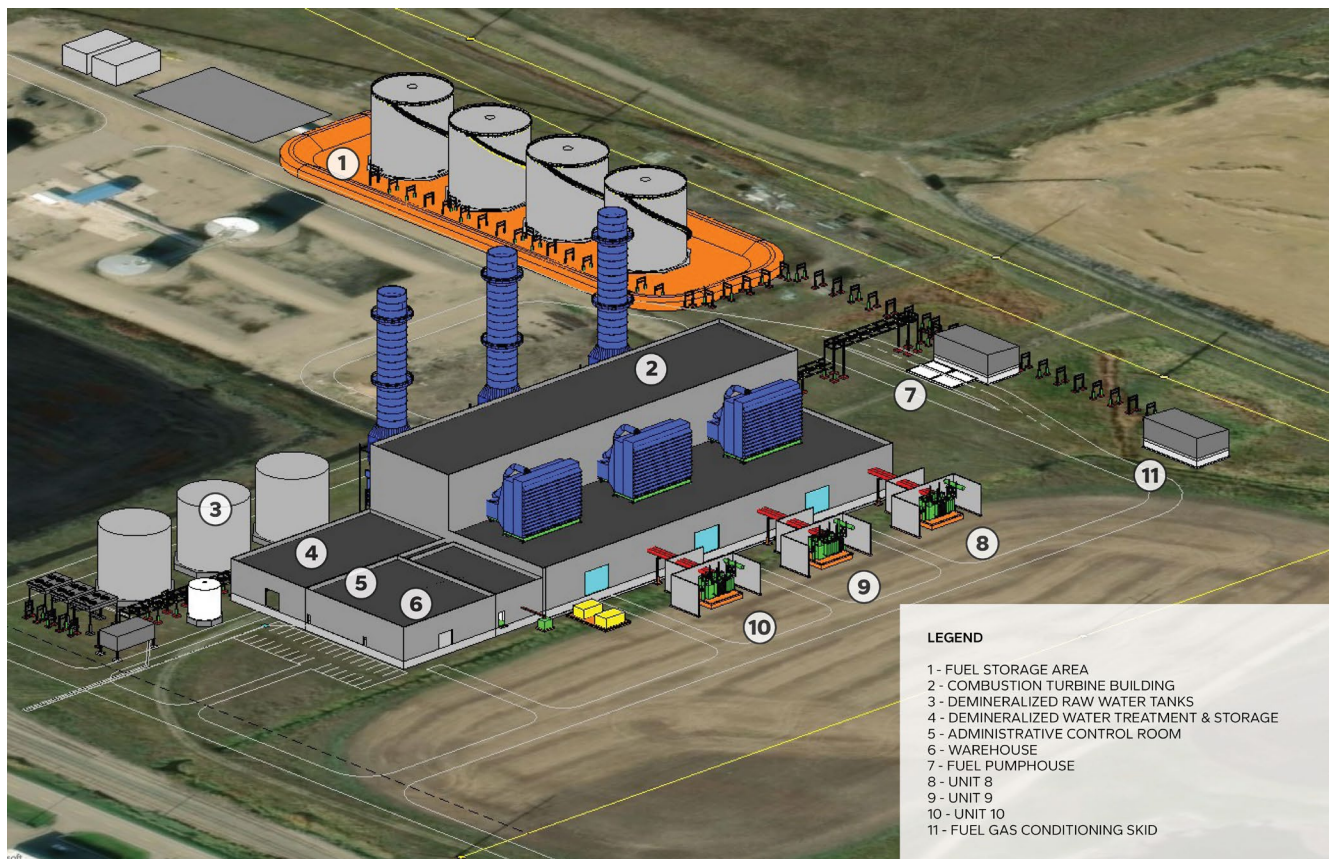


Figure 9-1: Layout for proposed additional combustion turbine plant

9.2 Ancillary Infrastructure

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 Cornwallis station.
- Electrical terminations at Cornwallis station.
- New natural gas pipeline, approximately 30 kilometres 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 components will support operation of the SCCTs, they do not fall under the scope of this federal review and are being assessed under separate provincial processes pursuant to *The Environment Act (Manitoba)*. The information about these ancillary components in this document is intended to provide further context and understanding of the project.

9.3 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.

9.3.1 Construction

Construction activities are anticipated to take place over a 3 year period, and will begin with mobilization of staff and contractors, machinery operation and material hauling, site preparation activities, including surveying and flagging; installing erosion and sediment controls; installing temporary stormwater management system; clearing of vegetation; stripping of topsoil, grading to subgrade elevation; preparing and developing any new access roads; resurfacing of the parking lot and laydown areas; installing buried conduits, ducts, pipes and cables.

This will be followed by foundation installation and construction for the transmission lines, SCCT's and Cornwallis station.

Once the site is ready to receive the equipment, placement and installation activities will take place, and may include concrete finishing, cable placement and grouting; use of cranes; erection of scaffolding; installing aboveground piping and ducts; pulling, inspecting and terminating various cables; installing acoustic walls, fencing and lighting; Tower assembly and conductor stringing, and pipeline installation and stringing will also occur on-site.

Machinery operation and transport and use of hazardous materials is anticipated to occur throughout all of construction. Management procedures for specific hazardous materials will follow procedures laid out in the project specific construction and operational environmental protection plans. Clean-up and waste disposal will be ongoing throughout construction.

Wastes will be managed, collected and disposed of in accordance with current provincial and/or federal regulations. As soon as possible after completion of construction, the sites will be cleaned up and left in standard operating condition. All

clean-up and rehabilitation activity will be subject to the requirements of the project specific environmental protection program.

Demobilization will occur, which includes the movement of Manitoba Hydro and contractor staff and equipment from the job site, as well as clean-up 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 will be undertaken as required.

9.3.2 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)

9.3.3 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.

10.0 Production Capacity

The project is an expansion of a fossil fuel-fired power generating facility with the addition of three SCCT'S providing 250 MW per unit. The three new units are anticipated to increase production capacity by approximately 750 MW to the existing capacity of 280 MW at the Brandon GS, bringing the total production to approximately 1,030 MW.

11.0 Schedule

The anticipated project schedule is presented in Table 11-1.

Table 11-1: 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)

12.0 Project Alternatives

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

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

Manitoba Hydro evaluated several potential locations to develop the project but determined that the Brandon GS was the most feasible option due to the existing transmission and generation infrastructure on site, availability of land for expansion and facilitation of project components at an existing site, as well as proximity to a gas supply, water supply, and existing operational expertise.

SCCT'S were also selected due to their ability to provide on demand power outputs as needed. Synchronous condensing capability of the potential new units will facilitate the retirement of the existing Unit 5, eliminate ongoing operation and maintenance costs and avoid occasionally operating Units 6 and 7 at low power output (4 MW) to provide reactive power, reducing greenhouse gas emissions.

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.

Alternatives to the project are outlined in Manitoba Hydro's [integrated resource plan](#) that includes the outcomes of comprehensive research, modelling and analysis.

Other resources considered included new hydropower, nuclear small modular reactors, long-term battery storage and simple cycle combustion turbines fueled by alternative fuels.

13.0 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).

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 2020). 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).

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, < 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.

The project site is in the Treaty 2 Area of southern Manitoba. There are no reserve lands within the project area. There is no First Nations reserve land, non-treaty land entitlement, or treaty land entitlement acquisition within the project area.

The closest First Nation Reserve lands near the project site include Gambler First Nation Reserve land and Waywayseecappo Highway 10 Reserve land (northwest of the project site, in the City of Brandon) (see Figure 4-1). The next closest First Nation Reserve is the Swan Lake Indian Reserve adjacent to Spruce Woods Provincial Park, approximately 39 km east of the project site. Metis population centres proximate to the project site include Brandon, and Carberry, Glenboro, Oak Lake, Rivers, and Rapid City in the surrounding region.

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.

14.0 Biophysical Environment

The project is in the Aspen Parkland Ecoregion of the Prairies Ecozone. The parkland is a transitional zone between the northern boreal forests and southern grasslands. The region is known to have short and warm summers and long, cold winters. The primary land-use in the region is agricultural, and the area is known to be home to some of the most productive agricultural land in the Prairies. The area and its favorable climate is home to a variety of plant and animal species (Ecological Framework of Canada, n.d.)

14.1 Air Quality

The project is in the East Brandon Industrial Area within the City of Brandon, Manitoba on land zoned as “IH - Industrial Heavy”, with multiple industrial facilities on neighboring properties. 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.

To assess existing air quality conditions, data from the monitoring station in Brandon and two stations in Winnipeg (approximately 200km away from the site) were analyzed utilizing the Manitoba Ambient Air Quality Criteria (MAAQC). The analysis indicated that baseline levels of key air pollutants in the project area are typically much less than the MAAQC, indicating that the area typically experiences clean air.

Modelling was completed to evaluate potential impacts on air quality associated with emissions from the three proposed SCCT'S. The primary pollutants are nitrogen oxides (NO_x), carbon monoxide (CO) and fine particulate matter (PM_{2.5}). Results from modelling indicate that the project will result in small increases in pollutant concentrations but remain much less than the MAAQC.

14.2 Acoustic Environment

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 were below 55 decibels 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 decibels with the energized transformers and traffic noise contributing to the ambient noise levels (SENES Consultants 2006).

14.3 Geology and Hydrogeology

The Brandon GS property is located on an extensive deltaic deposit on the Assiniboine River known as the Upper Assiniboine Delta. The area has been subjected to numerous erosion and deposition events over time, resulting in a regional overburden thickness consisting of clay, interlayered sands, gravels, and glacial tills to the bedrock surface. Surficial geology of the area is made up of fine sand, minor gravel, thin silt and clay interbeds ranging from 1-75 m thick (Manitoba Department of Energy and Mines 1979).

Groundwater originates from aquifers 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 approximately 0.7-7.0 m below ground surface (Manitoba Hydro 2006). Results have also shown that the direction of water flow varies locally on the project site, primarily 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, with three wells listed as active for source. An active production well and an active observation well are situated on the project.

14.4 Soils and Terrain

The Brandon GS property is primarily underlain by a combination of imperfectly drained soils with generally slow permeability (Manitoba Hydro 2006).

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).

14.5 Hydrology

The Brandon GS property is along the south bank of the Assiniboine River in the City of Brandon in the Central Assiniboine River Watershed District.

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

The headwaters of the Assiniboine River are near Greenwater Lake in Saskatchewan. The meanders in a 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, and upstream of the Brandon GS property, the Little Saskatchewan River. Willow Creek is a small tributary to the Assiniboine which enters approximately 3 km downstream of the Brandon GS property.

14.6 Fish and Fish Habitat

The Assiniboine River provides 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. 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 and historical catch information available through the federal inventory of streams in Manitoba to compile an inventory of species occurrences in the Assiniboine River. The species list for the Assiniboine River was refined to include only 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. Only one fish species currently listed on Schedule 1 of the federal *Species at Risk Act* (SARA), and two fish species have a status of endangered and special concern and are therefore considered species of conservation concern.

In addition, a freshwater mussel, was identified as an aquatic SAR with potential to occur in the Assiniboine River (DFO 2025).

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 relevant RATW at the Site is April 1 to June 30 and in-water works (if applicable) should be avoided during this period.

14.7 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).

Land cover mapping for the vegetation study area was completed to identify current land use and habitat types present. Eleven land cover classes and five wetland classes were identified in the project area

The project area covers approximately 8.23 hectares (ha) and primarily consists of urban/developed land and pasture/forages with smaller amounts of agricultural cropland, broadleaf forest, exposed/barren land, open water, coniferous forest, and wetlands.

The vegetation and wetlands, and wildlife and wildlife habitat study areas cover 679.4 ha and primarily consist of pasture/forages,, urban/developed land, and agricultural cropland. Wetlands occupy approximately 3.3% of the study areas.

Data provided by the Manitoba Conservation Data Centre 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). These eight species were last observed between 1922 and 1982 and lack recent verification.

14.8 Wildlife and Wildlife Habitat

The wildlife study area includes the Brandon GS and surrounding 1 km buffer. The project site is in a highly disturbed area 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. There are no Important Bird Areas Special Conservation Areas, or Wildlife Management Areas in the wildlife study area or within 5 km of the Brandon GS and Cornwallis station. The project site has a regional nesting period from mid-April to late August (ECCC 2025).

Based on habitat availability it is unlikely that most wildlife SAR with ranges overlapping the wildlife study area would occur within immediate vicinity of the Brandon GS.

15.0 Socioeconomic Environment

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). 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 2024).

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%) (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.

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. PMH residents reported similar perceived levels of health in 2021/2022 to the rest of Manitoba, with 56% of people perceiving their health as very good or excellent, and 86% having a regular healthcare provider (Statistics Canada 2026).

It has been noted that there is a high potential for historic resources to be present in the project area due to its proximity to the Assiniboine River. An inquiry was submitted to the Manitoba Historic Resources Branch (Manitoba Sport, Culture, and Heritage) in early 2026 to review the project area for potential effects on heritage resources.

Sites that may be affected by the project have not yet been identified. 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.

16.0 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.

17.0 Use of Federal Lands for Project

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

18.0 Regulatory Requirements

18.1 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*
- *Aeronautics Act*
- *Fisheries Act*
- *Migratory Birds Convention Act, 1994*
- *Species at Risk Act*

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

18.2 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*
- *The Endangered Species and Ecosystems Act*

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

- The Dangerous Goods Handling and Transportation Act
- Water Resources Administration Act

- The Mines and Minerals Act
- The Noxious Weeds Act
- The Planning Act
- The Water Rights Act
- The Transportation Infrastructure Act
- The Ozone Depleting Substances Act
- The Pesticides and fertilizers Control Act
- The Highway Traffic Act
- The Climate and Green Plan Act
- The Waste Reduction and Prevention Act
- The Water Resources Conservation Act
- The 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

19.0 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
- Non-negligible adverse changes to aquatic species, as defined in subsection 2(1) of the Species at Risk Act

For the purposes of assessing affects, a project footprint 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.

The potential effects of the project on the biophysical environment and proposed mitigation measures are summarized below in Table 19-1

Table 19-1: Potential effects on the biophysical environment and proposed mitigation measures

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.

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.

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.

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

Potential Construction Phase Mitigation Measures for migratory birds and wildlife species at risk

Potential Effect	Effect Pathway	Mitigation Measures
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)
	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

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	• 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
	Indirect loss or alteration of habitat effectiveness resulting from sensory disturbance	
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 • 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

20.0 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.

21.0 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, Manitoba Hydro has engaged 14 Indigenous audiences on the project. 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. 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 well as the ongoing engagement 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.

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. 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. Should heritage resources be identified within the project footprint, appropriate mitigation measures will be implemented and developed in consultation with the Historic Resources Branch in accordance with applicable provincial regulatory requirements.

As part of the environmental assessment that will be filed with the Manitoba Environment and Climate Change's Environmental Approvals Branch, 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. 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, cultural sites and features important to First Nations peoples and Red River Métis citizens, tangible important sites, and intangible cultural heritage.

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 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.

22.0 Potential Effects on Health, Social, and 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.

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.

23.0 Waste and Emissions

The project will result in air emissions, noise emissions, surface runoff discharges, industrial wastewater disposal, and general operation-related waste generation. These may include the following:

- Atmospheric emissions associated with the construction and operation of the power generation facility may include the following:
 - Operation of SCCT's utilizing natural gas will consist of nitrogen oxides (NO_x), carbon monoxide (CO), and carbon dioxide (CO₂) emissions, and minimal quantities of particulate matter (PM) and volatile organic compounds (VOCs).
 - Use of diesel fuel for SCCT's may occur infrequently as a backup fuel. Emissions include sulphur dioxide (SO₂), metals, and PM
 - Greenhouse gas emissions during both construction and operation
- Noise emissions during construction will be generated primarily by operation of heavy equipment, and during the splicing of transmission lines, which involves the use of implosion sleeves. 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.
- Sanitary wastewater 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 will be collected through dedicated drainage systems and directed to an appropriate storage and disposal/treatment in accordance with provincial regulations. Wastewater generated from auxiliary buildings and equipment will incorporate appropriate containment and drainage features, with wastewater managed or disposed according to regulatory requirements. Stormwater from containment areas will be released only when confirmed to be uncontaminated.
- Ordinary office waste materials will be disposed at the City of Brandon landfill or recycled accordingly.

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

24.0 Greenhouse Gas Emissions

The project is expected to have greenhouse gas (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 recommended development plan which provides recommendations to meet Manitoba's energy and capacity needs only through 2035.

Post-2035 uncertainty 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.

The project is a key component of the IRP and expected to play an important role in ensuring grid reliability. However, it is not expected to operate very often. Under typical conditions it is expected that the project will operate between a 0.5% and 5% of the time. Additional circumstances that may affect operation include extended periods of extreme weather, system outages, and other special circumstances or emergencies.

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.

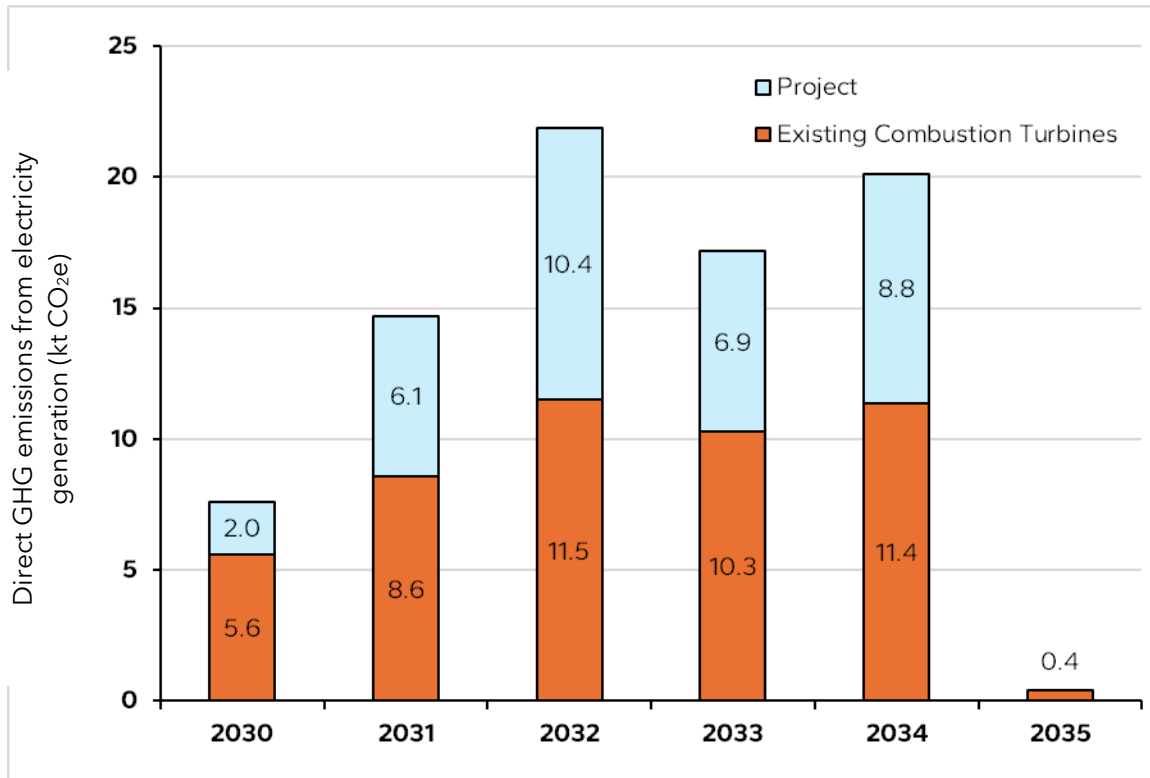


Figure 24-1: Annual net GHG emissions from natural gas combustion turbines (CTs) in Manitoba disaggregated by existing system and the Project

Table 24-1: Tabular format of Figure 24-1 showing scope 1 operational GHG emissions from the Project and Existing Natural Gas Combustion Turbines (CTs) in Manitoba

Year	Existing Natural Gas CTs (kilotonnes CO ₂ e)	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

25.0 Acronyms

Acronyms and abbreviations

CO	Carbon Monoxide
CO ₂	Carbon Dioxide
CT	Combustion Turbine
DFO	Fisheries and Oceans Canada
ECCC	Environment and Climate Change Canada
GHG	Greenhouse Gas
GS	Generating Station
HRIA	Heritage Resource Impact Assessment
IA	Impact Assessment
IAAC	Impact Assessment Agency of Canada
IH	Industrial Heavy
IRP	Integrated Resources Plan
kV	Kilovolts
KM	Kilometre
LD	Limited Development Area
MAAQC	Manitoba Ambient Air Quality Criteria
MBCDC	Manitoba Conservation Data Centre
MISO	Midwest Independent System Operator

Acronyms and abbreviations

MW	Megawatt
NO _x	Nitrous Oxide
SCCT	Simple-cycle combustion turbine
OHWM	Ordinary high-water mark
PDA	Project Development Area
PM	Particulate matter
PM _{2.5}	Fine particulate matter
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
SO ₂	Sulphur Dioxide
VOC	Volatile Organic Compound

26.0 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.

27.0 References

- BRouter Web. 2026. Version 0.18.1. Available at: <https://brouter.de/brouter-web/#map=9/50.0686/-100.4453/standard&lonlats=-101.694946,49.915862&profile=river>. Accessed March 2026.
- City of Brandon. 2020. City of Brandon Zoning By-law No. 7274.
- Canadian Wildlife Federation (CWF). 2026. Canadian Aquatic Barriers Database. Available at: <https://aquaticbarriers.ca/en>. Accessed March 2026.
- DFO. 2013. Manitoba Restricted Activity Timing Windows for the Protection of Fish and Fish Habitat. Date modified: 2013-12-27. Available at: <https://www.dfo-mpo.gc.ca/pnw-ppe/timing-periodes/mb-eng.html>. Accessed March 2026.
- DFO. 2025. Aquatic Species at Risk Map. Date modified: 2025-02-03. Available at: <https://www.dfo-mpo.gc.ca/species-especes/sara-lep/map-carte/index-eng.html>. Accessed March 2026.
- Ecological Framework of Canada. (n.d.). Aspen Parkland. <http://www.ecozones.ca/english/region/156.html>
- ECCC 2026. Real-Time Hydrometric Data Graph for ASSINIBOINE RIVER AT BRANDON (05MH001) [MB]. Date modified: 2026-02-19. Available at: https://wateroffice.ec.gc.ca/report/real_time_e.html?stn=05MH001.
- ECCC. 2025. General Nesting Periods of Migratory Birds. Available at: <https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/general-nesting-periods/nesting-periods.html>. Accessed February 2026.
- GOC (Government of Canada). 2020. The Strategic Assessment of Climate Change. <https://www.canada.ca/en/services/environment/conservation/assessments/strategic-assessments/climate-change.html>
- Henderson, D.C. 2011. Activity Set-back Distances for Prairie Plant Species at Risk. Environment Canada, Canadian Wildlife Service, Prairie and Northern Region, Saskatoon, SK. Available at <https://publications.gc.ca/site/eng/9.694837/publication.html>.
- IAAC (Impact Assessment Agency of Canada). 2025. Guide to Preparing an Initial Project Description and a Detailed Project Description. Available at: <https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/practitioners-guide-impact-assessment-act/guide-preparing-project-description-detailed-project-description.html>

Indigenous Services Canada. 2021. First Nations and Treaty Areas in Manitoba. Available at: [First Nations and Treaty Areas in Manitoba](#). Accessed March 2026.

Keystone Planning District. 2024. Keystone Planning District Development Plan By-Law No. 02/24 (Schedule A). Prepared by Urban Systems Ltd. Brandon, MB.

Manitoba Department of Energy and Mines. (1979). Report of field activities 1979. Government of Manitoba. <https://www.manitoba.ca/iem/geo/field/rfa1979.pdf>

MBCDC. 2026. Data request March 12, 2026. Colin Murray, Manitoba Natural Resources and Indigenous Futures, Winnipeg, MB.

Manitoba Hydro. 2000. Environmental impact statement. Brandon Generating Station, combustion turbine plant. Prepared by UMA Engineering and Jacques Whitford Environment Limited.

Manitoba Hydro. 2006. Brandon Generating Station – Unit 5, Environmental Impact Statement. Prepare by UMA Engineering.
https://www.gov.mb.ca/sd/eal/registries/3252mbhydro/vol_1_2_3/vol1_eis_1_74.pdf

Manitoba Hydro. 2026. 2025 integrated resource plan.
<https://www.hydro.mb.ca/docs/corporate/irp/2025-irp-report-final.pdf>

PMH (Prairie Mountain Health). 2024. Annual Report 2024-2025. Available at: <https://prairiemountainhealth.ca/wp-content/uploads/ANNUAL-REPORT-2024-2025.pdf>. Accessed March 2026.

SENES Consultants Limited. (2006). Appendix L: Noise assessment study, Brandon Generating Station. Manitoba Hydro.
https://www.gov.mb.ca/sd/eal/registries/3252brandon_gs_5/vol_1_2_3/vol3_appendix_L_1_34.pdf

Smith, R.E., H. Veldhuis, G.F. Mills, R.G. Eilers, W.R. Fraser, and G.W. Lelyk. 1998. Terrestrial Ecozones, Ecoregions, and Ecodistricts of Manitoba, An Ecological Stratification of Manitoba's Natural Landscapes. Technical Bulletin 1998-8E. Land Resource Unit, Brandon Research Centre, Research Branch, Agriculture and Agri-food Canada, Winnipeg, MB. Available at: https://publications.gc.ca/collections/collection_2017/aac-aafc/A54-8-1998-9-eng.pdf.

Statistics Canada. 2024. Census Profile, 2021 Census of Population. Available at: [Select from a list of geographies - Manitoba](#). Accessed March 2026.

Statistics Canada. 2026. Health Characteristics, Two-Year Period Estimates. Available at: <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1310011301&pickMembers%5B0%5D=1.76&pickMembers%5B1%5D=2.1&pickMembers%5B2%5D=3.1&pickMe>

[mbers%5B3%5D=5.4&cubeTimeFrame.startYear=2021+%2F+2022&cubeTimeFrame.endYear=2021+%2F+2022&referencePeriods=20210101%2C20210101](#).

Stewart, K.W. Watkinson, D.A. 2004. The Freshwater Fishes of Manitoba. 278p.
University of Manitoba Press. Winnipeg, Manitoba, CAN. ISBN 978-0-88755-678-4.