

Why does Manitoba Hydro export and import power?

Manitoba Hydro exports surplus electricity that results from normal operation of a hydroelectric system.

Revenue from these export sales helps to keep rates low in Manitoba. In 2012–13, for example, Manitoba Hydro's electricity export sales totalled \$353 million with 88 per cent derived from the U.S. market and 12 per cent from Canadian markets.

U.S. utilities who purchase our electricity want long-term price certainty, stability and renewable hydropower. These utilities see value in purchasing hydroelectricity from Manitoba Hydro through long-term fixed contracts that are not linked to volatile natural gas prices or subject to future changes in regulatory requirements associated with air emissions.

The Manitoba–Minnesota Transmission Project will serve a 250-megawatt (MW) power sale with Minnesota Power and will provide increased access to additional markets in the U.S.

Adding a second 500-kV interconnection will also increase Manitoba Hydro's ability to import electricity, strengthening the reliability of the province's electricity supply. In times of extreme drought or an unforeseen outage, transmission interconnections to other utilities provide access to electricity needed to meet demand in Manitoba.



We would like to hear from you.

Please contact:

Licensing & Environmental Assessment Department
Phone (Toll-free) 1-877-343-1631,
(in Winnipeg) 204-360-7888, or
email: mmtp@hydro.mb.ca

Visit www.hydro.mb.ca/mmtp for up-to-date information on the Manitoba–Minnesota Transmission Project, complete an online survey and to register for Project updates..

For more on Manitoba Hydro's development plan visit www.hydro.mb.ca/development.

Manitoba–Minnesota Transmission Project

Round 2 - Preferred border crossing and refined alternative routes

What is it?

Manitoba Hydro is proposing construction of a 500-kilovolt (kV) alternating current (AC) transmission line from the Dorsey Station to the international border between Manitoba and Minnesota. Known as the Manitoba–Minnesota Transmission Project, this line is needed to export surplus electricity and enhance the reliability of the province's electricity supply in emergency and drought situations.

The project also includes associated upgrades to stations at Dorsey, Riel and Glenboro. The anticipated in-service date for the project is 2020.

Where is it?

The Manitoba–Minnesota transmission line will originate at the Dorsey Converter Station, located near Rosser, northwest of Winnipeg, and travel south around Winnipeg. From southeast Winnipeg, the transmission line will continue south crossing the Manitoba–Minnesota border south of Piney, Manitoba. It will then connect to the Great Northern Transmission Line, which will be constructed by Minnesota Power. The Great Northern Transmission Line will terminate at the Blackberry Station located northwest of Duluth, Minnesota.

What's new?

Preferred border crossing and refined alternative routes

During the first round of public engagement, a number of alternative segments were presented and feedback on these segments was collected from participants and study team specialists. Once the first round of public engagement was completed, routes were evaluated and compared. Complete routes to each border crossing were evaluated on the basis of reliability, community considerations, schedule, cost and the natural and built environments. A preferred border crossing south of Piney, Manitoba was selected in negotiation with Minnesota Power. Following this determination, alternative routes were then refined.

For more information regarding the route selection process, please speak with a Manitoba Hydro representative or visit www.hydro.mb.ca/mmtp and click on "Environmental Assessment and Route Selection".

What will the line look like?

The Manitoba-Minnesota Transmission Project will use steel lattice towers. A self-supporting tower design will be used in cultivated agricultural areas and a guyed structure design (see illustrations) will be used in most other terrain.

The project will include:

- towers typically ranging from approximately 40 to 60 metres (m) (130 to 200 feet (ft.)) in height;
- tower spacing of 400 to 500 m (1,300 to 1,650 ft.) apart (on average);
- a right-of-way width of 80 m (260 ft.) for self-supporting towers and 100 m (330 ft.) for guyed structures.

What are the goals of the public engagement process?

During the route selection and environmental assessment process, Manitoba Hydro seeks input from local landowners, First Nations, the Manitoba Métis Federation (MMF), local municipalities, stakeholder groups, government departments and the general public. Opportunities for participation include open houses, meetings, workshops and Manitoba Hydro's website.

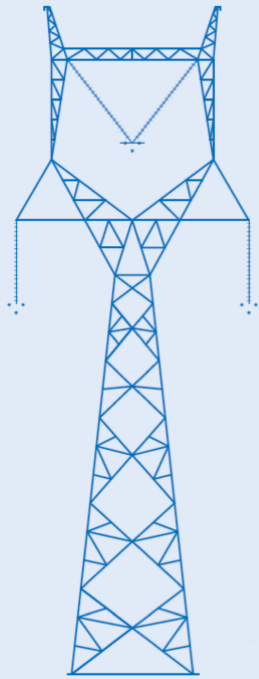
The public engagement goals for the Manitoba–Minnesota Transmission Project are to:

- share project information;
- obtain feedback for use in the route selection and environmental assessment process;
- gather and understand local interests and concerns;
- integrate interests and concerns into the routing and assessment processes;
- review potential mitigation measures.

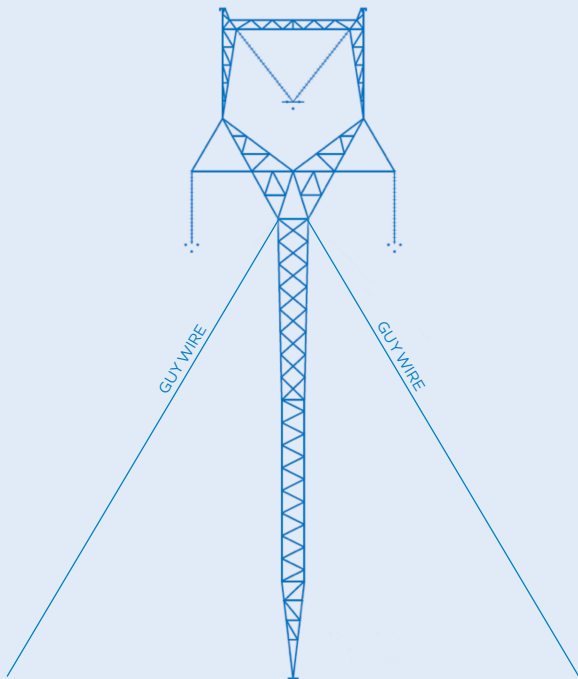
Manitoba Hydro will meet these goals by:

- involving the public throughout the route selection and environmental assessment processes;
- providing clear, timely and relevant information and responses;
- delivering a public engagement process that is adaptive and inclusive;
- informing the public of how their feedback influenced the project;
- documenting and reporting on feedback received.

Preliminary tower design



500-kV Self-Supporting Lattice Steel Tower



500-kV Guyed Suspension Steel Tower

(Towers are not drawn to scale — conceptual only.)

The environmental assessment processes

The Manitoba-Minnesota Transmission Project will require a Class 3 Licence under *The Environment Act* (Manitoba) and National Energy Board authorization. The environmental impact statement for the project will include:

- documentation of public engagement activities;
- characterization of the environment;
- identification and analysis of potential effects on people and the environment;
- determination of ways to avoid or reduce potential adverse effects.

As we approach a preferred route for the project, the environmental assessment will become more focused. Manitoba Hydro will continue to collect information and conduct site visits to understand and reduce impacts on the local environment.

It is anticipated that the environmental impact statement will be submitted to regulatory authorities in spring 2015.

What's next?

Information gathered during this round of public engagement will assist in the identification of a preferred route. In the fall of this year, the preferred route will be presented to the public for review and comment. There will also be an opportunity to discuss mitigation measures that will reduce potential effects of the project. Manitoba Hydro will continue to meet and discuss the project with the public, stakeholder groups, municipalities, First Nations, the MMF and interest groups.

We will continue to:

- inform the public regarding the project, timelines and route selection process;
- utilize a variety of mechanisms to receive and share information with interested individuals;
- conduct field surveys and assessment on the local environment to assist in the determination of a preferred route;
- discuss the refined alternative routes;
- provide the public with opportunity to have their questions answered and concerns addressed by Manitoba Hydro representatives.

Engagement and project timelines

Round 1

- Alternative routes and proposed border crossings: October to February 2014.

Round 2

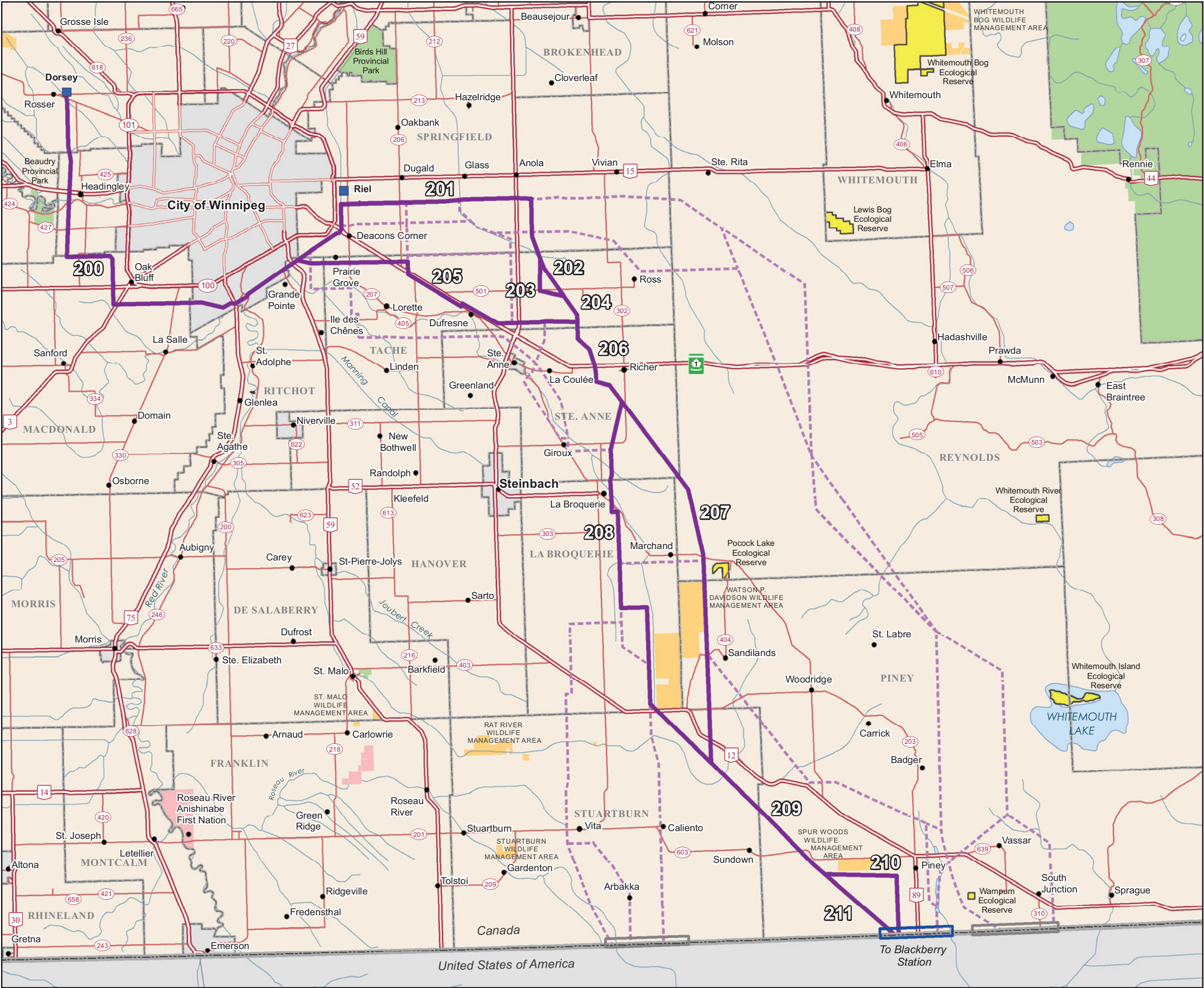
- Refined alternative routes and preferred border crossing – March 2014 to July 2014.

Round 3

- Preferred route: October 2014 to December 2014.

Anticipated next steps

- Environmental Impact Statement (EIS) Filing: spring 2015.
- Regulatory review process: early 2015 to 2016.
- Licence decision: 2016.
- Construction: 2016 to 2020.
- In-service date: 2020.



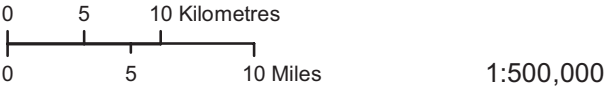
Manitoba-Minnesota
Transmission Project

- Project Infrastructure
- Refined Alternative Route (Segment Number)
 - Alternative Route (Round 1)
 - Preferred Border Crossing
 - Former Border Crossing Option

- Infrastructure
- Converter Station

- Landbase
- Community
 - Trans Canada Highway
 - Provincial Highway
 - Provincial Road
 - City / Town
 - First Nation
 - Rural Municipality
 - Ecological Reserve
 - Wildlife Management Area
 - Provincial Park
 - Watercourse
 - Waterbody

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: March 27, 2014



Refined Alternative
Routes and Preferred
Border Crossing

What we heard - Round 1

Manitoba Hydro held public open houses, meetings and workshops to gather information on routing criteria as well as feedback on route segments.

The following table presents some of the most frequent comments or concerns heard throughout Round 1 (including phone and email).

Comment/Concern	How the comments/concerns were addressed
Proximity to cities, towns, villages and rural residential development	Locations of urban centres and rural residential areas are a major consideration in refining routes.
Proximity to individual residences and farmsteads	This is a major consideration in transmission line routing. Transmission line corridors avoid residences to the greatest extent possible.
Perceived health effects due to electric and magnetic fields (EMF)	These concerns will be addressed in the environmental assessment process. Information from Health Canada, the World Health Organization and other international health entities is provided in the public engagement process. These sources state that no scientific evidence suggests that exposure to EMF will cause any negative health effects on humans, vegetation and wild or domestic animals. For more information on EMFs go to www.hydro.mb.ca/safety/emf/index.shtml .
Loss of high-quality farm land	While routing considers the value of these lands based on crop production and soil classification, avoidance is not always possible. To reduce the potential effects on agriculture, the preference is to align the route on the half-mile line or parallel to other linear features. Self-supporting towers with a smaller footprint are used in agricultural areas to lessen the effect on crop production.
Avoid aerial applicator airstrips.	Locations of airstrips were identified in the early planning phases and will be avoided where possible in route selection.
Compensation for private landowners	Manitoba Hydro provides a one-time compensation payment for transmission line easements as well as a one-time tower payment related to loss of annual production. Manitoba Hydro also compensates landowners for any damages related to construction and operation.
Avoid sacred, historical and heritage sites, including Centennial Farms.	Heritage resources, including archaeological resources, are identified as part of the route planning process and are avoided where possible. This information will continue to be collected and considered as project planning proceeds.
Potential impacts on land available for future Treaty Land Entitlement (TLE) selections	Manitoba Hydro encourages communities to share information about potential future TLE selection. This information will be considered in the site selection and environmental assessment processes.

Comment/Concern	How the comments/concerns were addressed
Parallel existing transmission lines	Paralleling of transmission lines was considered as part of route selection. The refined alternative routes utilize paralleling options where possible.
Locate transmission line infrastructure adjacent to linear infrastructure such as provincial and municipal highways and roads and drains to reduce land requirements.	Existing linear features were identified in the route selection process and used as routing opportunities where possible. With 500-kV transmission lines, towers cannot be placed immediately adjacent to the edge of road allowances. Alignment with roads may not always be possible when infield placement of towers is necessary for reliability reasons. Routing does consider drains as possible alignments.
Concerns about use of herbicides	Manitoba Hydro does not use herbicides for right-of-way clearing. For right-of-way maintenance, an integrated vegetation management program reduces the amount of herbicide required.
Stream crossings can impact riparian habitat	Riparian zones of streams and rivers are important habitat and are considered in route selection. As a result, vegetation buffer zones are protected at watercourse crossing areas.
Potential impact on wildlife habitat for bears, deer, birds, including vegetation, riparian areas and wetlands	The environmental assessment process identifies potential sensitivities and prescribes appropriate mitigation measures. Statistics describing potential environmental impacts were evaluated to assist in refining alternative routes.
Environmental degradation and reduced opportunities for hunting, trapping, gathering of berries and medicinal plants	The environmental assessment process identifies potential sensitivities. Manitoba Hydro will work with communities to identify sensitive sites important to the community and will consider specific mitigation or construction scheduling to reduce effects
ATV access and hunting in wilderness areas	Manitoba Hydro will work with local authorities to manage access along rights-of-way once a final route is selected. Increased access in natural areas is a consideration in route selection.