

Transmission line routing process



Transmission lines are sets of wires, called conductors that carry electric power from station to station. Distribution lines then ultimately deliver power to customers.

How do we select a preferred route for these lines?

Manitoba Hydro uses a process based on an internationally recognized methodology. The process has been used on over 200 transmission projects in North America. Manitoba Hydro first applied this methodology in 2013 on the St. Vital Transmission Complex.

This process:

- Incorporates routing preferences from human, environmental and engineering perspectives; and
- Uses these perspectives to help minimize overall impact of the Project.

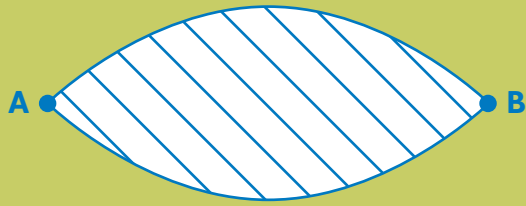
What are common timelines for route selection?

Route selection timelines are dependent on the project. They are closely associated with public and Indigenous engagement and environmental assessment activities.

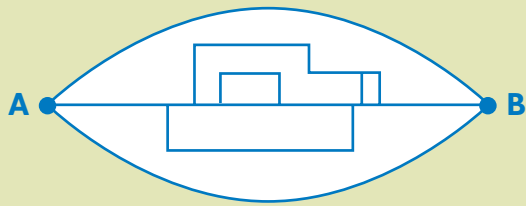
How can you help?

Feedback received from the public, Indigenous communities and organizations and from specialists in various disciplines helps us select routes that aims to balance various perspectives on the landscape.

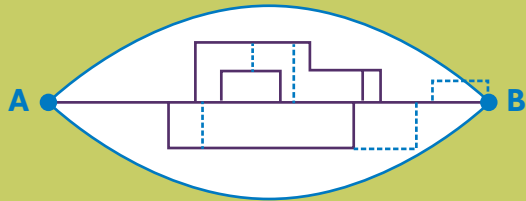
1. Route Planning Area



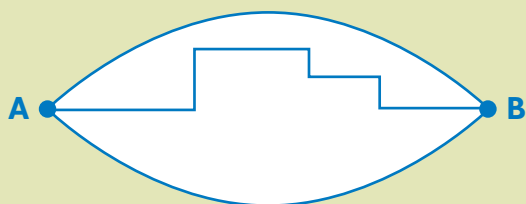
2. Alternatives



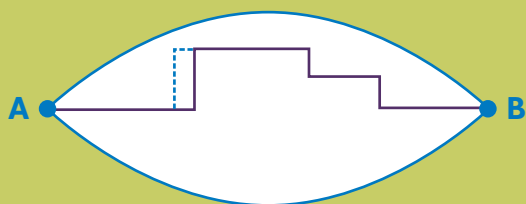
3. Mitigative



4. Preferred



5. Final Preferred



What are the steps in selecting a route?

Manitoba Hydro undertakes various stages in the transmission line routing process. The following five stages outline how a route study area with multiple possible routes will lead to a final preferred route.

1. Determining a route planning area

- We determine start and end points and develop a broad route-planning area based on opportunities and constraints on the landscape.

2. Planning alternative routes

- We draw segments connecting the start and end points within the route-planning area. These segments form alternative route options which we present to the public and to a team of specialists (biologists, agricultural, engineers, heritage, etc.) for feedback.

3. Developing mitigative segments

- We add or modify route segments based on feedback from the public and from our team of specialists. (For more information, see the section of this brochure titled "What are mitigative segments?")

4. Determining a preferred route

- A comparative evaluation of alternative routes is undertaken to determine a preferred route that will be presented to the public and Indigenous communities and organizations. Our team of specialists focus their evaluations on this area to better understand potential effects of the preferred route on people and the environment.

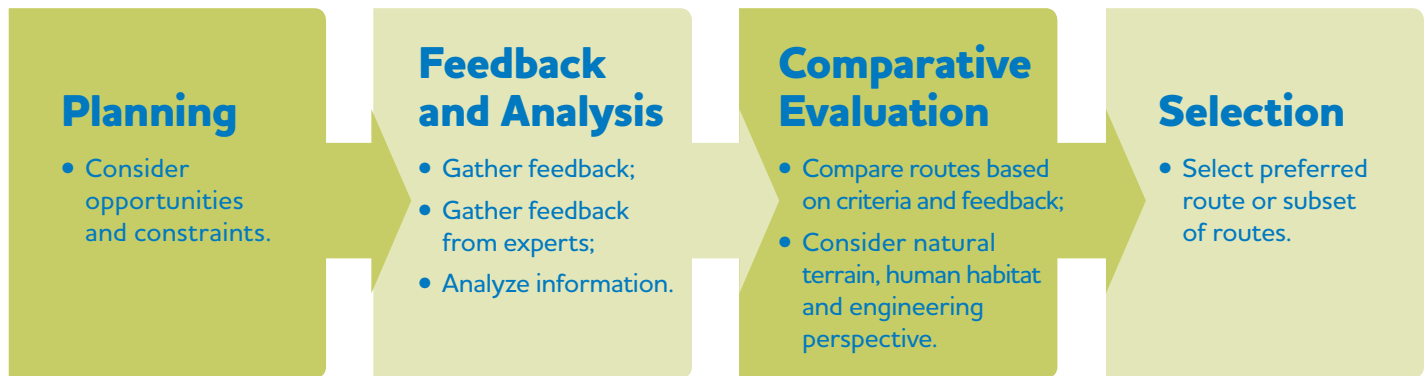
5. Finalizing preferred route and submission of an environmental assessment report

- Following our presentation of the preferred route, we consider potential changes based on feedback from the public, Indigenous communities and organizations and project specialists. After incorporating feedback, we determine a final preferred route and present it to regulators for review.
- During the regulatory review process with Manitoba Sustainable Development, we provide details regarding transmission line routing and the environmental impact statement available for review and comment.

These are general steps in transmission line routing. Some projects, based on their complexity, may require more or fewer steps to determine a final preferred route.

How do we move between each stage?

Manitoba Hydro undertakes planning, collection of feedback, analysis and evaluation throughout each stage of transmission line routing. The diagram below outlines the decision-making process. This cycle can be repeated until a final preferred route is determined.



What criteria do we use for comparative evaluation?

Feedback from stakeholders assists in the development of criteria used to evaluate strengths and weaknesses of route options. The criteria are developed to represent the natural, the human and engineering perspectives.

Examples of criteria include:

- Natural environment: acres of natural forest, acres of wetland area, stream and river crossings;
- Engineering: project cost, existing transmission line crossings, length;
- Human environment: proximity to residences, land use and capability, historic resources, public use areas.

We undertake further comparison on a subset of routes to select a preferred route. We compare:

- Cost;
- Community considerations;
- Reliability;
- Risk to schedule;
- Built environment and the natural environment.

What are mitigative segments?

A mitigative segment is a part of the route we have added to the transmission line routing process based on feedback from the public or from our project specialists. These segments are added to mitigate concerns or a potential effect on the landscape.

We evaluate these segments for technical feasibility and cost. We also consider whether the segment results in a “net-minimization of effect”, which means we evaluate whether or not the segment will shift effect from one landowner to another. If our evaluations deem the new segments are reasonable, they are then incorporated in the comparative evaluation of routes to determine a preferred route.



Who decides the final preferred route?

We work with a range of environmental, socio-economic and technical specialists, while striving to balance concerns and feedback from the public, project specialists, stakeholder groups, and indigenous communities and organizations in order to achieve consensus amongst a project team with a range of specialties on the final preferred route of a transmission project.

The route is considered final once approved by the regulator.

How do we incorporate public and Indigenous perspectives on route selection?

We collect input from interested parties throughout the route selection process.

- During the decision-making process, Manitoba Hydro documents site-specific issues and feedback from those potentially affected by a possible route. We pass this compiled information to our specialists to help them enhance their assessments of a preferred route.
- Local feedback and knowledge of the environment help us design the route and plan tower placement.
- Feedback received may require the development of mitigative segments which will be considered by the project team.
- Information we collect helps us determine ways to mitigate potential impact on people, wildlife and the environment.

Where can I get more information on Manitoba Hydro's transmission line projects?

Visit hydro.mb.ca/projects or speak with a Manitoba Hydro representative by phoning **1-877-343-1631** (toll-free) or by emailing **LEAprojects@hydro.mb.ca**.