

Commitment to Environmental Protection

FACT SHEET



ENBRIDGE
NORTHERN
GATEWAY PIPELINES



OUR COMMITMENT TO THE ENVIRONMENT

At Northern Gateway, we understand that protecting the environment is fundamental to the long-term success of the project and the communities affected. For this reason, we have taken significant steps to ensure that our environmental impact is minimized during every stage of the project, from construction through to operations.

There are a number of measures we are committed to following, including:

- Ensuring environmental protection through continued, careful planning, strict construction standards and ongoing careful monitoring of company activities
- Ensuring that rules and procedures for environmental protection meet or exceed government regulations and standards
- Providing training to ensure employees and contractors understand their responsibility to protect the environment and follow environmental rules and procedures
- Providing the public and government with relevant information regarding planned activities and actively respond to their concerns
- Ensuring that any environmental damage resulting from our actions or the actions of our contractors will be remediated as quickly as possible
- Ensuring that environmental research will be encouraged, supported and undertaken to continually improve our company's environmental protection and restoration procedures

Protecting the Right-of-Way

The permanent right-of-way (ROW) is a strip of land approximately 25 metres wide containing the two pipelines.

Additional temporary construction work space will be required along the pipeline right-of-way during construction.

Enbridge has strict environmental standards to ensure maximum protection when we build and operate our pipelines. Because the land is rebuilt to exacting standards, right-of-ways can typically be used as they were prior to construction.

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Route Selection

Stakeholder feedback received through consultation is considered when evaluating route options. Other aspects of Northern Gateway's criteria for route selection include:

- Limiting impact on environmentally sensitive areas such as parks, wildlife habitat, protected areas, Aboriginal traditional territory, and areas of community land use
- Limiting number of river, stream, highway, road, rail and utility crossings
- Paralleling existing pipelines or other linear infrastructure, where possible

ENVIRONMENTAL PROTECTION

Monitoring and Inspecting the Pipelines

Enbridge is an industry leader in the area of pipeline monitoring, a vital component of our commitment to protecting the environment.

A variety of tools and techniques will be used to monitor and inspect the pipelines:

- The Supervisory Control and Data Acquisition (SCADA) computer system will be used to electronically monitor the pipelines 24/7 from Enbridge's hi-tech operations control centre in Edmonton
- In-line inspection tools will be regularly inserted into the pipelines and travel the length of the system to clean the lines and provide real-time information about their condition
- Safety inspections will be conducted before putting the pipelines into service and at regular intervals while operational

Protecting the Marine Environment

Enbridge will ensure that vessels calling on the Northern Gateway Kitimat Terminal will be operated to the highest internationally recognized safety and environmental standards.

The marine strategy will include the following standards:

- Only double-hulled modern vessels will be permitted at our terminal
- Radar will be installed along vessel routes to monitor all marine traffic and provide additional guidance to pilots and other vessels in the area
- First response stations and personnel will be located at the terminal and in communities along the marine route
- While docked at the terminal, vessels being loaded with petroleum will be surrounded with booms



ENVIRONMENTAL AND SOCIO-ECONOMIC ASSESSMENT PROCESS

How it Works

An Environmental and Socio-Economic Assessment (ESA) identifies the significant environmental (biological and physical) and socio-economic effects of a project through ongoing environmental studies and Aboriginal and stakeholder consultation.

The goals of the ESA process include:

- Minimizing or avoiding adverse environmental effects before they occur
- Incorporating environmental factors into decision-making

The ESA process includes effects assessment and the identification of mitigation and monitoring programs.

The steps in the ESA process include:

- Baseline studies (field surveys, data analyses, traditional knowledge)
- Scoping of issues and indicators
- Identifying effect mechanisms
- Human environment routine effects assessment
- Pipeline and tank terminal routine effects assessment
- Marine terminal routine effects assessment
- Cumulative effects assessment
- Risk analysis
- Accidents and prevention assessment
- Mitigation tactics
- Environmental protection and monitoring

Environmental Protection and Management Plan

To help ensure the safety of the environment during construction and operations, Northern Gateway is in the process of developing an environmental protection and management plan (EPMP). It details the steps Northern Gateway will take to protect the environment during the construction of the pipelines and associated facilities, including the marine terminal, the right-of-way, facilities, construction camps, stockpile areas, access roads and utility corridors.

Once detailed engineering and final route selection have been completed, the plan will be updated and a detailed EPMP will be produced to guide construction and project personnel.

Monitoring and Follow-up Programs

Monitoring and follow-up programs will begin prior to construction and continue throughout operations. Monitoring programs are used to confirm the effectiveness of approved mitigation methods and determine if adjustments are needed. Follow-up programs verify the accuracy of the environmental assessment and determine if changes are necessary.

Community Advisory Boards

As forums for dialogue, Community Advisory Boards (CAB) have been formed by Northern Gateway. The CABs will meet regularly to exchange information, consider diverse perspectives, solve problems, and identify suitable project legacies. Participants will represent landbased, marine, social and economic interests and their collective input will feed back into the ESA process.



ABOUT ENBRIDGE

Enbridge operates the world's longest petroleum and liquids pipeline system. Its pipeline systems have operated for more than 60 years and now comprise approximately 13,500 kilometres of pipeline, delivering more than two million barrels per day of petroleum products.

In addition, Enbridge is committed to fostering the development of renewable and alternative energy sources, like our wind power projects in Alberta, Saskatchewan and Ontario. Some of the power from these projects is used to power pump stations along our Liquids Pipelines System.



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