

Preliminary Information Package

ENBRIDGE GATEWAY PROJECT

**Prepared by:
Gateway Pipeline Inc.
3000, 425 – 1st Street SW
Calgary, Alberta T2P 3L8**

**On behalf of:
Gateway Pipeline Limited Partnership**

October 2005

Preface

This document's purpose is to initiate and facilitate an efficient regulatory review of the Enbridge Gateway Project (the Project). Specifically, this document's goals are to:

- describe the Project (as of October 2005)
- provide federal authorities with enough information about the Project to enable them to determine their role in the environmental and socio-economic assessment process pursuant to the Canadian Environmental Assessment Act
- communicate Gateway's recommendations for an efficient regulatory review process
- provide sufficient information to stakeholders to allow them to determine their level of interest in the Project

Ongoing stakeholder consultation, results of the environmental and socio-economic assessment and regulatory review will influence engineering design. Therefore, specific project details (e.g., size, volume, pressure, throughput, routes, sites and construction and inspection methods) may change from those described in this document. There may also be changes to the overall Project based on the outcome of ongoing commercial negotiations.

The information in this document reflects preliminary Project design.

Table of Contents

1	General Information.....	1-1
1.1	Project Overview	1-1
1.1.1	Project Proponent.....	1-1
1.1.2	Project Development	1-2
1.1.3	Project Benefits	1-2
1.1.4	Project Facilities and Location	1-5
1.2	Regulatory Setting.....	1-6
1.2.1	Federal Regulatory Framework	1-6
1.2.2	Provincial Regulatory Framework.....	1-8
1.2.2.1	Provincial Environmental Assessment Requirements	1-8
1.2.2.2	Provincial Permitting Requirements	1-8
1.2.3	Review Process.....	1-8
1.2.4	Integration with the TERMPOL Review Process	1-9
1.3	Preliminary Information Package	1-11
1.3.1	Purpose	1-11
1.3.2	Distribution	1-11
1.3.3	Contact Information	1-14
2	Project Setting.....	2-1
2.1	Environmental Setting	2-1
2.1.1	Alberta	2-1
2.1.1.1	Natural Subregions and Vegetation.....	2-1
2.1.1.2	Wildlife.....	2-2
2.1.1.3	Fisheries.....	2-5
2.1.2	British Columbia	2-5
2.1.2.1	Biogeoclimatic Zones and Vegetation	2-5
2.1.2.2	Wildlife.....	2-6
2.1.2.3	Fisheries.....	2-9
2.1.2.4	Gateway Marine Terminal	2-9
2.1.3	Species of Special Conservation Status.....	2-12
2.2	Human Environment Setting	2-12
2.2.1	Socio-economic Characteristics of Project Area Communities.....	2-13
2.2.1.1	Alberta.....	2-13
2.2.1.2	British Columbia	2-21
2.2.2	Land and Water Use.....	2-27
2.2.2.1	Land Ownership	2-27
2.2.2.2	Land Use	2-27
2.2.2.3	Watercourse Use.....	2-27
2.2.2.4	Indian Reserves and Lands.....	2-28
2.2.2.5	Proximity to Parks and Protected Areas	2-28
2.2.2.6	Proximity to Urban Areas.....	2-29
2.2.3	Heritage Resources.....	2-29
2.2.3.1	Cultural Resources.....	2-29
2.2.3.2	Palaeontological Resources.....	2-30

3	Project Description, Engineering and Economics	3-1
3.1	General Information	3-1
3.2	Terminalling Operations	3-3
3.2.1	Location and Configuration	3-3
3.3	Pipelines	3-3
3.3.1	Routing	3-3
3.3.2	Facility Details	3-4
3.3.2.1	Pipeline Specifications	3-4
3.3.2.2	Pump Stations and Mainline Valves	3-5
3.3.3	Construction	3-7
3.3.3.1	Mainline Construction	3-7
3.3.3.2	Pipeline Water Crossings	3-11
3.3.3.3	Highway, Railroad and Third Party Pipeline Crossings	3-12
3.3.4	Operations	3-12
3.4	Gateway Marine Terminal and Marine Infrastructure	3-13
3.4.1	Location	3-13
3.4.1.1	Uplands	3-13
3.4.1.2	Shoreline	3-13
3.4.2	Facility Details	3-13
3.4.2.1	Terminal Design	3-13
3.4.2.2	Tanker Berths	3-14
3.4.2.3	Ancillary Marine Facilities	3-16
3.4.3	Construction	3-16
3.4.3.1	Dredging	3-16
3.4.3.2	Marine Construction	3-17
3.4.4	Operations	3-17
3.4.4.1	Marine Tank Terminal	3-17
3.4.4.2	Tanker Loading and Unloading Facilities	3-17
3.4.4.3	Ship Criteria and Consideration	3-18
3.5	System Protection, Control and Communication	3-19
3.6	Resource and Material Requirements	3-19
3.7	Waste Management	3-20
3.8	Contingency Management	3-20
3.9	Project Costs and Opportunities, Economics, Construction and Operations	3-21
3.9.1	Capital Costs	3-21
3.9.2	Employment Requirements	3-21
3.9.3	Community Supply and Services Opportunities	3-22
4	Consultation	4-1
4.1	Introduction	4-1
4.2	Program Goals	4-1
4.2.1	Corporate Vision	4-1
4.2.2	Consultation and Communication Principles	4-2
4.2.3	Goal and Objectives of Involvement	4-3
4.2.4	Definition of "Stakeholder"	4-3
4.2.5	Regulatory Requirements for Consultation Program	4-4
4.3	General Consultation	4-4

4.3.1	Consultation Before June 2005	4-4
4.3.2	General Project Communications Since June 2005	4-4
4.3.3	Non-Aboriginal Communities and Municipalities	4-5
4.3.4	Community Open Houses	4-5
4.3.5	Environmental Non-government Organizations	4-5
4.3.6	Non-government and Community Based Organizations.....	4-6
4.4	Regulatory Consultation.....	4-7
4.5	Aboriginal Engagement.....	4-7
4.5.1	Relations with Aboriginal Peoples	4-8
4.5.2	Gateway Approach to Aboriginal Engagement.....	4-8
4.5.2.1	Agreements.....	4-9
4.5.2.2	Activities	4-9
4.5.3	Aboriginal Traditional Knowledge (ATK).....	4-11
4.5.3.1	Aboriginal Traditional Knowledge Components.....	4-11
4.5.3.2	Carrier Sekani Tribal Council Aboriginal Interest and Use Study	4-11
4.5.4	Environmental and Socio-Economic Assessment and Crown Agencies.....	4-12
5	Scope of the Assessment.....	5-1
5.1	Scope of the Project.....	5-1
5.1.1	Pipeline and Terminals	5-1
5.2	Factors to be Considered	5-2
5.2.1	Mandatory Factors.....	5-2
5.2.2	Other Factors.....	5-3
5.2.3	Socio-Economic Factors.....	5-3
5.2.4	Shipping	5-4
5.2.5	Matters Not Considered.....	5-4
5.3	Scope of the Factors to be Considered	5-4
5.3.1	Environmental Elements.....	5-4
5.3.2	Effects of the Environment on the Project.....	5-6
5.3.3	Malfunctions and Accidents	5-6
5.3.4	Significance Criteria	5-7
5.3.5	Alternative Means.....	5-7
5.3.6	Boundaries	5-7
5.3.6.1	Temporal Boundaries	5-7
5.3.6.2	Spatial Boundaries	5-8
5.3.7	Cumulative Environmental Effects Considerations.....	5-8
5.3.7.1	Inland Terminal.....	5-9
5.3.7.2	Pipeline Corridor.....	5-9
5.3.7.3	Gateway Marine Terminal and Marine Infrastructure.....	5-10
5.3.7.4	Shipping and Navigation in Confined Channel Assessment Area	5-10
Appendix A Information Regarding Species of Special Conservation Status		
Appendix B Scope of Factors to be Considered		
Appendix C Proposed Filing Requirements for Marine Elements		

List of Tables

Table 1-1	Partial List of Federal Authorizations.....	1-7
Table 1-2	Federal and Provincial Authorities Receiving the PIP	1-11
Table 1-3	Gateway Contact Information.....	1-14
Table 1-4	Legal Contact Information	1-14
Table 2-1	Communities in Alberta	2-14
Table 2-2	Non-Aboriginal Communities in Alberta - Demographic Characteristics (2001 and 1996)	2-19
Table 2-3	Non-Aboriginal Communities in Alberta - Economic Data (2001)	2-20
Table 2-4	Aboriginal Groups in Alberta - Demographic Characteristics (2005)	2-21
Table 2-5	Communities in British Columbia	2-22
Table 2-6	Non-Aboriginal Communities in British Columbia - Demographic Characteristics (2001 and 1996)	2-23
Table 2-7	Non-Aboriginal Communities in British Columbia - Economic Data (2001).....	2-25
Table 2-8	Aboriginal Groups in British Columbia - Demographic Characteristics (2005)	2-26
Table 3-1	Preliminary Pipeline System Design Parameters	3-4
Table 3-2	Pump Stations and Power Supply - Proposed Location	3-5
Table 3-3	Proposed Pump Station Design Parameters.....	3-6
Table 3-4	Approximate Number of Crossings.....	3-12
Table 3-5	Proposed Tank Terminal Design Parameters - Kitimat.....	3-13
Table 3-6	Marine, Loading and Offloading Facilities - Design Parameters.....	3-14
Table 4-1	Aboriginal Communities	4-10

List of Figures

Figure 1-1	Overview of the Pipeline Corridor.....	1-3
Figure 2-1	Alberta Pipeline Route and Natural Subregions	2-3
Figure 2-2	British Columbia Pipeline Route and Biogeoclimatic Zones	2-7
Figure 2-3	Location of Gateway Marine Terminal.....	2-10
Figure 2-4	Study Area Communities, Rural Municipalities and Aboriginal Territories in Alberta	2-15
Figure 2-5	Study Area Communities, Rural Municipalities and Aboriginal Territories in British Columbia	2-17
Figure 3-1	Proposed Gateway Pipeline Schedule	3-2
Figure 3-2	Forecast of Peak Labour Requirements.....	3-22

List of Photos

Photo 3-1	Pump Station - Example.....	3-6
Photo 3-2	Pipeline - Laying.....	3-7
Photo 3-3	Typical Pipeline Construction - Lowering	3-9

Abbreviations

AIUS	Aboriginal Interest and Use Study
API	American Petroleum Institute
ATK	Aboriginal Traditional Knowledge
bbl	barrels
BEC	Biogeoclimatic Ecological Classification
BPD	barrels per day
CBO	community based organization
CCAA	Confined Channel Assessment Area
CCME	Canadian Council of Ministers of the Environment
CEAA	<i>Canadian Environmental Assessment Act</i>
CEA Agency	Canadian Environmental Assessment Agency
CESA	cumulative effects study area
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
CPCN	Certificate of Public Convenience and Necessity
CSA	Canadian Standards Association
CSTC	Carrier Sekani Tribal Council
CWH	Coastal Western Hemlock
DFO	Fisheries and Oceans of Canada
DWT	deadweight tonnes
EA	environmental assessment
Enbridge	Enbridge Inc.
ENGO	environmental non-government organization
EPP	environmental protection plan
ERP	emergency response plan
ESA	Environmental and Socio-Economic Assessment
EWS	extra workspace
FA	Federal Authority
Gateway	Gateway Pipeline Limited Partnership
GDP	Gross Domestic Product
HDD	horizontal directional drilling
hp	horsepower
IMO	International Marine Organization
kPa	kiloPascals
KP	kilometre post
kV	kilovolt
LRMP	Land and Resource Management Plan
LSA	local study area
MAOP	maximum allowable operating pressure
MD	Municipal District
NADC	Northern Alberta Development Council
NCDC	Northern Corridor Development Corporation
NEB	National Energy Board
NGO	non-government organization
OPEP	oil pollution emergency plan
PAR	preliminary area of response
PDA	potential development area
PEAA	project effects assessment area
PIP	Preliminary Information Package
PPBoR	Plans, Profiles and Books of Reference

RA	Responsible Authority
RCS.....	Resident Construction Supervisor
RO	Response Organization
RoW	right-of-way
RSA.....	regional study area
<i>SARA</i>	<i>Species at Risk Act</i>
SCADA.....	supervisory control and data acquisition
TEK	traditional ecological knowledge
TLU	traditional land use
TRC.....	TERMPOL Review Committee
TRP	TERMPOL Review Process
VC	valued component
VLCC.....	very large crude carriers
VOC	volatile organic compound

Glossary

Aboriginal	A collective name for the original peoples of Canada and their descendants, without regard to their separate origins and identities, including First Nations, Inuit and Métis.
biophysical (in the Project)	Conditions related to biological phenomena, including air, climatic, noise, aquatic (hydrogeology, hydrology, water quality and fisheries) and terrestrial (landform, permafrost, soils, vegetation and wildlife) conditions.
bitumen	A highly viscous mixture, mainly of hydrocarbons heavier than pentanes. In its natural state, it's not usually recoverable at a commercial rate through a well because it's too thick to flow.
cathodic-protection system	A method of protecting tanks, pipelines and other metallic structures from corrosion by counteracting the natural electric current that causes corrosion.
condensate	A mixture consisting mainly of pentanes and heavier hydrocarbons recovered as a liquid from: <ul style="list-style-type: none"> • field separators, scrubbers or other gathering facilities • the inlet of a natural gas processing plant before the gas is processed
cumulative environmental effect (in environmental and socio-economic assessments)	A condition that occurs when a residual environmental effect of a current project combines with an environmental effect from another past, present or reasonably foreseeable project(s).
design ship	Either: <ul style="list-style-type: none"> • The marine carrier's prototype that the proponent intends to use to ship cargo of the nature contemplated by the TERMPOL Review Process, including <i>inter alia</i> bulk oil, chemicals, liquefied gas, or any other cargo identified by Transport Canada - Marine Safety as posing a risk to a ship, its crew, the public or the environment • the prototype of the ship contemplated to use the proponent's proposed cargo transshipment facilities
environmental effect	As per <i>Canadian Environmental Assessment Act</i> , in respect to a project: <p>A. any change that the project may cause in the environment, including any change it may cause to a listed wildlife species, its critical habitat or the residences of individuals of that species, as those terms are defined in the Species at Risk Act</p> <p>B. any effect of any change referred to in (A) on:</p> <ul style="list-style-type: none"> • health and socio-economic conditions, • physical and cultural heritage, • the current use of lands and resources for traditional purposes by Aboriginal persons, or • any structure, site or thing that is of historical, archaeological, paleontological or architectural significance, or • any change to the project that may be caused by the environment.

horizontal directional drilling	A crossing technique used in pipeline construction in which pipe is buried under a watercourse or other obstacle at depths much greater than conventional crossings. A hole is drilled beneath the watercourse and the pre-assembled pipeline is pulled back through it. It is one type of trenchless crossing. This method is also used to avoid grading steep slopes or locations lacking adequate workspace for conventional pipeline laying.
hydrostatic testing	A quality-control check of the structural soundness of a pipeline or facility before operations begin. In this test, the line, tank or vessel is filled with water or a glycol-water mixture and pressurized to a designated point, with pressure maintained for a specific period. Any ruptures or leaks revealed by the test are repaired. The test is repeated until no problems are noted.
oil	Petroleum ordinarily found in liquid form and, for the purpose of this document, includes bitumen, diluted bitumen and synthetic crude oil.
pig	An inline device for pipeline cleaning and inspection. Manifolds are installed on either end of sections of pipe and the pigs are propelled through the pipeline.
pigging	The act of pushing a device (pig) through a pipeline to physically clean deposits from the inner surface of the pipeline, to remove liquids or to do internal inspections of the pipeline.
stringing	Off-loading and placing pipe sections along the pipeline route end to end.
Suezmax	A large tanker capable of transiting the Suez Canal fully loaded; the maximum draught allowed in the canal is approximately 52 feet 6 inches salt water (about 150,000 deadweight).
terminal	A facility for the receipt, storage and delivery of oil and condensate, including tankage, manifolds, flowlines, surface structures, utilities, measurement and maintenance equipment, loading, unloading, berthing and moorage, and other associated equipment, structures and surface improvements