Mackenzie Valley Project

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Natural Resources & Energy Specialization

Agenda

• Introduction
• Project Components
• Stakeholders
• Production
• North American Natural Gas
• Risks
• Current Status
• Summary

Natural Resources & Energy Specialization
Introduction

• Mackenzie Valley Pipeline
  – A partnership between oil companies and aboriginal groups
  – Potential to unlock 64 trillion cubic feet of natural gas
  – Initial project cancelled 25 years ago
  – Higher natural gas prices have given the project a second chance

Project Components

• Projected cost – At least $7 Billion
• 1200 km pipeline
• 3 ‘anchor’ fields
  – Taglu (owned by Imperial Oil)
  – Parsons Lake (owned by Conoco Phillips and ExxonMobil Canada)
  – Niglintgak (owned by Shell Canada)
• Gathering System at each field
• Removal of Natural Gas Liquids at Inuvik
• Tie into current natural gas network in Alberta
Stakeholders

- Oil Companies
  - Imperial Oil
  - Conoco Phillips
  - Shell Canada
  - ExxonMobil Canada
- Aboriginal Groups
  - Deh Cho
  - Sahtu
  - Gwich’in
  - Inivaluit
  - Others
- Government
  - Federal Government
  - North West Territories Government
Oil Companies

- Ownership stake in pipeline related to their initial gas production

<table>
<thead>
<tr>
<th>Owner</th>
<th>Initial Stake</th>
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<tr>
<td>Aboriginal Pipeline Group</td>
<td>33.3%</td>
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<tr>
<td>Imperial Oil</td>
<td>33.3%</td>
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<td>Conoco Phillips</td>
<td>16.7%</td>
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<td>Shell Canada</td>
<td>11.3%</td>
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<td>ExxonMobil Canada</td>
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- Will have the opportunity exploit their natural gas reserves
- Potential to have additional gas discoveries

Aboriginal Groups

- An initial 1/3 ownership stake in the pipeline through Aboriginal Pipeline Group
- 2600 workers at peak construction
  - At least 800 from NWT
  - 140 permanent NWT jobs
- Oil Companies will participate with government in training local workers
  - $21M to be shared equally by producers and government
Environmental Groups

• Boreal Forest Conservation Framework protects at least 50% of boreal forest in Canada’s North
  – Only 5 of 16 distinct natural regions in Mackenzie Valley are protected
• Sierra Club of Canada concerned about fragmentation of boreal forests
• Habitats could be damaged

Government

• Expected tax and royalty revenues of approximately $87 billion over 45 year project life
• Increased employment and economic self sufficiency for Canada’s North
Production

- Initial production of 800 million cubic feet per day
- Pipeline capacity of 1.2 billion cubic feet per day
- Potential Natural Gas reserves – 64 trillion cubic feet
  - 9 tcf found, 55 tcf to be discovered)
  - Current Canadian reserves listed at 56 tcf (end of 2005)

North American Natural Gas

North America Natural Gas Consumption & Production

[Graph showing consumption and production trends from 1995 to 2005]
North American Natural Gas

- North American Natural Gas Reserves (tcf)

<table>
<thead>
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<th>1985</th>
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<th>2004</th>
<th>2005</th>
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Environmental Risks

- Destruction of boreal forest
- Damage bird and animal habitats
- Leaks/Explosions
- Sierra Club states this gas will go to increase development of energy intensive Oil Sands
Social Risks

• Strains to infrastructure
• Industrial development conflicting with traditional lifestyle of aboriginals
• Potential lack of skilled workforce

Legal Risks

• Regulatory delays continue to increase overall project cost
• Aboriginal Land and Water Boards
• Aboriginal Land Use Planning Board
• Mackenzie Valley Environmental Impact Review Board
• Regulatory Process expected to continue until mid-2008
Current Status

- Two sets of public hearings
  - Engineering and Economics by NEB
  - Environmental and Social consequences by JRP
- Imperial Oil to reveal new cost estimate later this year (could be as high as $10 Billion)
- Gas could begin to flow in 2011

Summary

- Appears to be strong economic benefits for all stakeholders
- There are environmental issues that need to be addressed
- Should be demand for this additional natural gas
• Thank You!

• Questions?

For more information

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