POTENTIAL ECONOMIC IMPACTS of an oil spill at sea from tankers carrying oil from the



PROPOSED NORTHERN GATEWAY PIPELINE



Findings from the 2012 UBC Fisheries Centre Research Reports study, *Potential Economic Impact of a Tanker Spill on Ocean-Based Industries in British Columbia* by Ngaio Hotte and U. Rashid Sumaila. (ftp://ftp.fisheries.ubc.ca/FCRR/20-7.pdf)



Enbridge has assessed the potential economic benefits of the project and biophysical impacts of an oil spill at sea.



Enbridge has **not** assessed the potential economic losses from an oil spill from large oil tankers in North Pacific waters. That is the purpose of the independent report from UBC.

Employment in the North Coast Region

Ocean-based industries are critical to the economy and well-being of communities in BC's north coast region.



10% of the population directly employed in ocean-based industries

30% employed in oceanbased industries when indirect and related ("induced") employment is considered

9.3% regional unemployment rate, higher than provincial unemployment rate of 6.6%

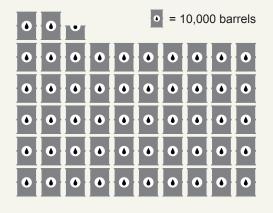
Proposed Route of Pipeline

The project proposes to pipe oil from Alberta's oil sands to Kitimat, BC.

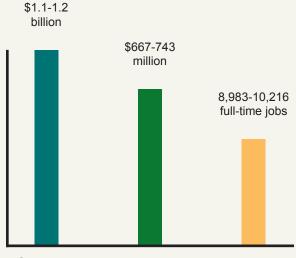


Daily Quantities of Oil

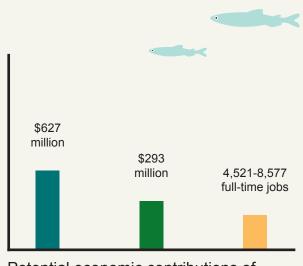
The proposed project would transport 525,000 barrels/day of different types of oil and blended bitumen for export.



Comparison of Economic Contributions



Current **annual** economic contributions of all ocean-based industries in region



Potential economic contributions of pipeline project over **50-year period**

Legend Output = Value of total output GDP = Gross domestic product Employment = Full-time jobs

Further Potential Losses

Estimated additional potential economic costs from spill response, clean-up and litigation activities, based on an independent consultant report commissioned by Enbridge.

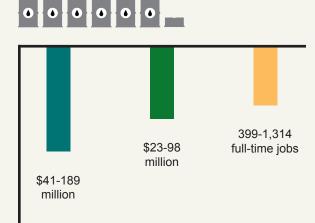


Potential economic losses resulting from hydrocarbon spills over **50-year period**

Medium Impact Spill Scenario:

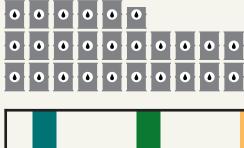
Location: Ness Rock

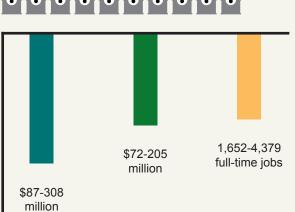
Amount: 10,000m3 / 63,000 barrels

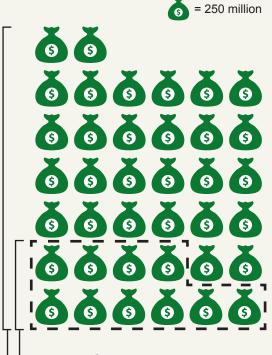


High Impact Spill Scenario:

Location: Grenville Rock Amount: 41,000m3 / 257,000 barrels







Range of cost:

-\$2.4 billion (low estimate) -\$9.6 billion (high estimate)