

# Shipping oil off the West Coast

## What policies exist or are needed to support it?

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The marine transportation of crude energy products to international markets is of strategic importance to Canada. Crude oil exports from western Canada are growing, and better market access could yield an additional \$131 billion to Canada's gross domestic product by 2030.<sup>1</sup> Crude oil is already the single largest commodity handled within the Canadian marine transportation system. Transport Canada estimates that there are approximately 20,000 oil tanker movements off the coast of Canada each year, 85 per cent of which are on the East Coast.

Most of the recent public attention has focused on potential oil tanker traffic from new pipeline developments on the West Coast. However, it is important to note that crude oil and product tanker traffic in Canada's Exclusive Economic Zone, internal waters and

the Strait of Juan de Fuca occurred prior to and after the completion of the Alaskan pipeline in 1975. For example, the oil export port of Valdez, Alaska, averaged 401 vessel calls per year between 2002 and 2010, generating marine traffic in Canadian waters.

Beginning in 1982, British Columbia's North Coast experienced significant methanex exports in chemical tankers until the production facility at the Port of Kitimat closed in 2005. Since then, approximately 22 tanker vessels have imported condensate into Kitimat for shipment by rail to Alberta each year. On British Columbia's Southeast Coast, the Westridge marine terminal in Port Metro Vancouver generates an average of 90 tanker vessel visits each year. British Columbia has relatively modest tanker traffic compared to the top 10 Puget Sound locations. These coastal communities immediately adjacent to British Columbia's waters safely receive an

average of 1,028 tanker port calls and about 3,200 tug and tank barge movements each year.<sup>2</sup>

Even with this volume of shipping traffic, the public response to the maritime transportation of crude oil products is driven by the memories and images of oil spills such as the Deepwater Horizon in 2010 and Exxon Valdez in 1989. These types of events serve to fuel anti-oil tanker public sentiment and calls for political action to ban this economic activity. Residents of coastal communities believe they are exposed to most of the risks with increased tanker traffic and doubt that sufficient resources from the economic wealth generated by expanding industry will be directed towards protecting their interests and the marine environment. Federal parliamentarians in response to public sentiments have engaged in a number of recent attempts to address concerns by introducing private

Transport Canada estimates that there are currently about 20,000 oil tanker movements off the coast of Canada each year, 85 per cent of which are on the East Coast. Here, a tanker is seen on the West Coast, outside Vancouver.



member-sponsored legislation to ban oil tanker traffic in West Coast waters.

### CRUDE OIL TRANSPORTATION RISKS AND OUTCOMES

Before examining Canadian data, it is useful to consider the worldwide safety performance of the industry. The International Tanker Owners Pollution Federation Ltd. reveals that 2011 was the lowest year on record for oil spill volume and number of major incidents. The trend toward fewer spills from tankers and less oil being spilled is being maintained.<sup>3</sup> Independent tanker association INTERTANKO reports that 99.9 per cent of oil transported by ship arrived safely and that the total volume of cargo involved in oil spills declined significantly while the total miles of cargo increased.

This data strongly suggests that the international regulatory structure has had positive

effect on improving the safety performance of the world tanker industry. From an international perspective, the risks associated with an oil spill in the marine environment have decreased over the years, primarily due to increased preventive measures including the phase-in of double-hulled tankers, the requirements to have contracts with response organizations, and increased monitoring and inspection.

While the absolute number of commercial shipping accidents is very low, it is nevertheless important to analyze the type of marine accidents that do arise. Data collected pursuant to the Canadian Transportation Accident Investigation and Safety Board Act provides important insights into the type, frequency and distribution of maritime incidents involving the transport of crude petroleum in Canada. The data indicates that the absolute number of marine occurrences involving tankers is low in

Canada. Tankers were involved in 2.4 per cent of marine occurrences across the country. The data also indicates that accidents aboard tankers averaged 10.1 incidents a year out of total of 422.4 incidents across Canada in the five main regions.

### POLICY TOOLS USED TO MANAGE SHIPPING RISKS IN CANADA, INCLUDING OIL TANKERS

Together with the skills of highly dedicated and professional mariners, there are several policy tools in place internationally and in Canada to manage tanker shipments of crude oil. These include:

- Project-specific risk assessments
- Port state control
- Vessel traffic management schemes
- Compulsory marine pilotage
- Port authority and terminal procedures
- Oil spill response
- Tug assistance

### OPPORTUNITIES FOR IMPROVEMENT

It is fair to say that the regulation of international shipping in Canadian waters is a highly developed and sophisticated regime using experienced participants working in conjunction with industry to regulate shipping in the public interest. Tankers are given closer scrutiny than other commercial vessels because of the potential pollution risk posed. Yet, there are opportunities for improvement.

Even though Canada has not had a major oil spill in over 30 years, the adequacy of Canada's pollution prevention response regime is a valid policy concern. There is a need to ensure adequate financial resources are available to protect coastal communities and the marine environment. Parliament could create an independent agency responsible for conducting independent oil spill risk assessments and directing investments in spill prevention and response. It would also be possible to empower this agency with the provision of the marine navigation services, including pilotage. A single entity using Canada's air traffic safety governance model (NAV Canada) could be developed to provide both the strategic direction and the technical operations in light of new shipping projects. The private sector could partially fund the new agency through a cargo levy similar to the one used in the Ship-source Oil Pollution Fund. Since crude oil tankers represent the source of a large-scale incident, these vessels could be subject to an additional levy. In addition, higher levies may need to be made to the certified response organizations so there is an adequately financed spill-response capacity to meet risk from increased tanker traffic, and to address both the auditor general's concerns and the Government of Canada's review that is presently taking place.

Another option to consider from an economic perspective would be a requirement that in certain specific trades (the movement of ▶

bulk oil), the onboard cargo must be carried in Canadian flagged vessels, or a second registry as a legislative requirement of the coastal state and exporting nation. It would be totally within Canadian law to make this a legislative requirement and impose any restrictions or positive requirements on navigation in these Canadian tankers. For example, in the United States under the Jones Act, all the tankers traveling between Alaska and the lower 48 states are American-flagged tankers that meet U.S. Coast Guard requirements.

While the Canada Shipping Act gives the federal government the necessary statutory power to take all available steps with respect to ship-source oil pollution response to prevent, mitigate or clean up pollution, the Canadian approach may not be as operationally effective as the regime in the United Kingdom. In the United Kingdom, the secretary of state's representative for maritime salvage and intervention has the delegated authority for one individual to take operational control of a spill, or to prevent pollution.<sup>4</sup> In Canada, we presently have some overlap between agencies, and the effectiveness of our regime has never been tested in a real incident in over 30 years.

The sustainability of crude oil shipments could also be improved by allocating increased resources to the areas that matter most to coastal communities. The 2012 report *Sustaining Canada's Marine Biodiversity:*

*Responding to the Challenges Posed by Climate Change, Fisheries, and Aquaculture* observed that Canada is nowhere close to meeting our international commitments to establish a network of protected marine areas by 2012.<sup>5</sup>

In Canada, the main problem is that we have ad hoc and often reactive maritime policy development approach. Jim Prentice, the former federal minister of environment, now executive vice-president and vice-chairman of CIBC Bank, delivered a speech to the Vancouver Board of Trade in February that highlighted the importance of the marine pillar to Canada's energy policy. He observed that Ottawa has sole jurisdiction over our territorial waters, so it must take the lead in developing a management regime that will take into account the rewards as well as the environmental risks of increased West Coast tanker traffic. Legislation will be required. So, too, will contingency plans for unforeseen eventualities.

The path forward should include sustained independent policy funding that seeks input, and incorporates and evaluates insights from academics, government, private sector and First Nations perspectives. Both industry and government investment, leadership, resources and public communication are required to ensure a culture of continuous improvement as marine traffic volume expands and the overall vessel traffic mix changes in complexity. ■

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Joe Spears is a principal of the West Vancouver-based firm the Horseshoe Bay Marine Group. He is an ocean consultant with a particular interest in various aspects of shipping that embrace operation, governance, pollution prevention, and safety management that is based upon academic studies and professional work in the private and public sector.

Darryl and Joe will be speaking on this topic at the Canadian Transportation Research Forum Conference in Calgary on June 5, 2012, and will be speaking in the Transportation and Logistics Session at the CHOA Fall Business Conference on October 4-5, 2012. Email [wavepoint@shaw.ca](mailto:wavepoint@shaw.ca) for details.

ENDNOTES

- <sup>1</sup> Moore, M., Flaim, S., Hackett, D. et al. "Catching the Brass Ring: Oil Market Diversification Potential for Canada." University of Calgary School of Public Policy SPP Research Papers (Vol. 4, Issue 16: 2011).
- <sup>2</sup> U.S. Department of Transportation Maritime Administration (MARAD) [http://www.marad.dot.gov/library\\_landing\\_page/data\\_and\\_statistics/Data\\_and\\_Statistics.htm](http://www.marad.dot.gov/library_landing_page/data_and_statistics/Data_and_Statistics.htm). Vessels Calls (Crude & Product Tanker) to US Ports Washington State & Alaska.
- <sup>3</sup> Tanker Operator Annual Review. "Last year's oil spills lowest on record." *TANKEROperator* (March 2012).
- <sup>4</sup> The Secretary of States Representative for Maritime Salvage and Intervention (SOSREP) [www.dft.gov.uk/mca/sosrep.pdf](http://www.dft.gov.uk/mca/sosrep.pdf).
- <sup>5</sup> The Royal Society of Canada Expert Panel (2012). "Sustaining Canada's Marine Biodiversity: Responding to the Challenges Posed by Climate Change, Fisheries, and Aquaculture." The Academies of Arts, Humanities and Sciences of Canada.

  
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