

The Advantages of Marine Transportation in Canada

Marine transportation is a superior distribution method for bulk goods and cargo because of the numerous economical advantages, beneficial environmental factors and the possibility of future development. Environmental conditions and government legislation will force Canada's transportation industry to improve its efficiency through the use of multi-modal distribution methods. For this improvement to be successful, a greater emphasis must be put on the utilization of marine based transport. Canada's advanced system of inland waterways can be used to improve product distribution on the domestic and international scale alike.

The United States is by far Canada's most important trading partner. In 2002, trades with the United States had a value of \$546 billion (Can) and accounted for 76% of Canada's total trade with the world (87% of exports, 68% of imports)¹. Four of Canada's top six trade routes with the United States involve Ontario and the American Central East Region which directly border the great lakes. In 2002, trade in this region was valued at \$168 billion (Can), more than 30% of Canada's overall trade with the U.S. However, despite proximity to the St. Lawrence Seaway, the majority of this cargo was transported exclusively by trucks. Trucking is also the primary mode of commercial transportation in Canada's domestic market, moving more than seven times more cargo (by value) than the marine industry.² When long term factors like inflated fuel prices, road deterioration and greenhouse gas emissions are considered, this trend is economically and environmentally unsound. Marine transportation offers a viable alternative.

As the price of fuel oil increases, long distance transportation using land based modes as exclusive mediums will become economically impractical. Furthermore, strict government legislation on environmental preservation is an inevitable eventuality and must be considered as well. A ship can move one tonne of cargo two hundred and forty kilometres on a single litre of fuel. A standard heavy truck would

require nearly ten times that amount to achieve the same results. Significantly less energy is required to propel rounded steel through water than flat rubber over asphalt. In 1997, the transportation of marine freight was responsible for less than 0.2% of Canada's overall greenhouse gas emissions. Rail contributed 2.9% while commercial trucking was responsible for an outstanding 27.2%.³ Based on these figures alone, it is obvious that the current system of freight transportation in Canada cannot be sustained and requires amendment.

The St. Lawrence Seaway is an aquatic axis of North American civilization with over ninety million people living in the immediate surrounding area.⁴ The Seaway provides waterborne access to nearly one quarter of North America's population and is capable of supporting significantly more volume than current levels reflect. In order to utilize the full potential of marine transportation in Canada, the government needs to cooperate with the Seaway Corporation by lowering the fees and operating costs of ships using the seaway. According to the Canadian Shipowners Association, an average two-way trip through the seaway usually costs between thirty and forty thousand dollars (Can) depending on the cargo. If these costs were reduced, the seaway could easily be used as an alternative mode of transportation to minimize shipping expenses and prevent unnecessary damage to the environment. However, government participation and an updated marine policy will be necessary to make any such changes possible.

Government participation has a major influence on all aspects of the transportation industry in Canada. Canadian National (CN) and Canadian Pacific (CP) both depend heavily on government owned hopper cars to transport wheat from Western Canada. Initially, these nineteen thousand hopper cars (80% of the Canadian fleet)⁵ were limited to operation west of Thunder Bay, except during the winter months when the seaway was closed. However, in 1989 "alternate use" legislation allowed the government-

purchased cars to be used in the East during summer months as well. In the eleven year period between 1989 and 2000, the accepted volume of “alternate use” increased more than twenty times and has put rail companies into direct competition with the seaway over routes which it could easily manage alone. The infrastructure of the St. Lawrence Seaway is government property, so it is ludicrous for the government to spend money assisting private corporations to compete with it. It is also fiscally nonsensical for the government to spend billions of dollars each year repairing roads and highways so that they can be subsequently destroyed by thousands of tractor trailers.

In 2002, Canada’s registered fleet of heavy and medium commercial trucks totalled five hundred eighty-three thousand six hundred. The average trip of a medium truck was about twenty thousand kilometres, while the average trip of most “heavies” reached more than seventy-five thousand kilometres. These two categories of truck were responsible for more than twenty-five billion road kilometres in that year alone.⁶ A small fraction of that distance driven on Canada’s weather-beaten roads is enough to cause considerable damage, and these figures don’t include the thousands of additional trucks that cross the border from the United States to avoid expensive American toll roads.

In the recent past, trucking has worked as the dominant method of large-scale transportation, but the sustainability of this wasteful mode has expired. The environmental consequences and economic drawbacks of trucking will soon make it impossible to maintain on this colossal scale. If the correct investments are made into the marine transportation industry, it could take over as the new primary mode of commercial transportation.

Marine shipping is the most efficient yet underutilised mode of transportation. Although the seaway has transported more than two billion tonnes of cargo since its opening in 1959, the true extent of its

potential remains untapped in comparison with alternate modes. The efficiency of marine transportation is exemplified by using backhauling as a standard practice of business. This preferred method ensures that ships rarely travel the seaway with empty cargo holds. For example, ships hauling iron ore up the seaway will often return with a shipment of wheat; every kilometre the ship travels is profitably utilized.

In Canadian trucking, 18% of the total road kilometres travelled by heavy trucks were driven while hauling no cargo at all.⁷ That's 3.25 billion kilometres of wasted fuel, damaged roads and squandered money. To reduce this figure, as well as numerous other wasteful practices, the St. Lawrence Seaway could be used to transport inbound cargo to the harbour nearest its final destination. From this proximate location, land based modes could complete the last portion of the delivery. The top five domestic trucking routes in Canada are: Hamilton to Toronto, Toronto to Montreal, Montreal to Toronto, Toronto to Hamilton and Montreal to Quebec City.⁸ All of these destinations are directly accessible from ports along the seaway. Goods could be shipped almost directly to their destination by water and an optimised network of rail and truck routes could complete the transport over much shorter distances. Damage to the environment would be drastically reduced and hundreds of tractor trailers (870 of them per ship filled to capacity)⁹ could be taken off Canada's severely pressured road system. Millions of trucking kilometres would be saved, lessening air pollution, road accidents and the cost of goods to the consumer.

The current system of industrial and commercial transportation requires immediate reassessment. The Canadian government must take responsibility and play a pro-active role in developing a farsighted plan to deal with escalating problems in this industry. A co-operative approach combining the use of water, rail and trucking would utilize the full potential of the St. Lawrence Seaway and marine transportation in Canada. Under the current administration of Paul Martin some of these real and effectual changes can be proposed. Before his political career with the Liberals, Prime Minister Martin was the

owner and president of Canadian Steamship Lines. He clearly understands the advantages and potential of marine transportation, having made his fortune as the operator of a major shipping corporation. However, regardless of who holds power on Parliament Hill, the need for leadership, vision and action is immediate. The current rate at which land based modes of transportation are used for shipping is unnecessary and highly detrimental to the environment. On all levels of consideration the change to utilizing the superiority of marine transportation is obvious.

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Endnotes

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⁴ Competitiveness. <<http://www.greatlakes-seaway.com/en/aboutus/competitiveness.html>>

⁵ A Framework for a Competitive Marine Transport Industry in Canada.
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⁹ Competitiveness. <<<http://www.greatlakes-seaway.com/en/aboutus/competitiveness.html>>