CTRF 51 Annual Conference

CTRF-TRF Joint Conference

North American Transport Challenges in an Era of Change
Les défis des transports en Amérique du Nord à une aire de changement

Toronto, Ontario
May 1-4, 2016

Platinum Sponsor

UNIVERSITY OF TORONTO
FACULTY OF APPLIED SCIENCE & ENGINEERING
Transportation Research Institute

UTTRI

GOVERNMENT HOPPER CARS AND THE CANADIAN GRAIN HANDLING AND TRANSPORTATION SYSTEM

Steve Pratte, Canadian Canola Growers Association

Introduction

Canada's Grain Handling and Transportation System (GHTS) is a complex, multi-actor supply chain that transports the collective output of Western Canadian grain farmers to a variety of domestic and international markets. Over the last three decades the GHTS has had to address the handling needs of a harvest that has swelled from 40 to 60 million tonnes annually.[1] One of the critical underpinnings in this supply chain is a fleet of about 22,000 covered hopper cars that are used to gather grain from a prairie rail network spanning over 17,000 route-miles in length.[2] This fleet is an amalgam of equipment supplied by the federal government, two provincial governments, both major railways, shippers and third-party lessors. These hopper cars also represent a mix of both old and new equipment, that vary significantly in terms of physical size and carrying capacity.

This paper surveys the evolution of the current hopper-car fleet, its present condition, and its ability to provide for the future handling needs of the GHTS. Finally, it points to some of the practical considerations inherent in replacing the publicly-supplied portion of this fleet, which now represents approximately half of the cars in service, as they approach the end of their economic life.

Government Acquisition of Hopper Cars

For much of the 20th century, the movement of Western Canadian grain was dominated by a single issue: railway freight rates. Although its genesis reaches back to 1897, what become known as the Crow's Nest Pass Freight Rates – or more simply the "Crow Rate" – were statutorily frozen in 1927, and remained virtually unchanged for the next half century. However, by the early 1960s it was becoming apparent that inflation had steadily undermined these rates and that the railways were losing ever larger sums of money in handling grain. Although these losses initially led the railways to defer maintenance on their prairie branch line networks, the lines were eventually starved of capital altogether. Likewise, the railcar fleet, which was then composed entirely of railway-supplied boxcars, suffered from a similar form of neglect. Gradually, the railways' grain-gathering network became incapable of supporting the demands that were being placed upon it.

This dysfunctionality became particularly evident in the late 1960s and early 1970s when the GHTS proved incapable of fully accommodating large grain sales to China and Russia. In an effort to partially address these issues, the federal government embarked on a program calling for the purchase of 2,000 new cylindrical covered hopper cars in 1972. This would be the first step in the assembly of a federal fleet encompassing almost 13,500 covered hopper cars over the next 20 years.[3] To this would be added another 6,000 publicly-supplied covered hopper cars: 4,000 from the Canadian Wheat Board (CWB); 1,000 from the Government of Alberta; and 1,000 from the Government of Saskatchewan.[4] All of these cars, which were apportioned roughly equally between CN and CP, were essentially supplied to the railways free of charge. By the mid-1980s these publicly-supplied hopper cars had almost completely replaced the ubiquitous railway boxcar as the principal asset employed in moving grain through the GHTS.[5]

Addressing the GHTS's equipment needs would prove to be but one facet of the financial assistance provided by the federal government. In part, this reflected the policies framed within the recently passed

National Transportation Act (1967), which acknowledged the principle that a railway should be compensated for services that it is required to provide as an imposed public duty. Although the Act effectively deferred any immediate action on grain, the political atmosphere led to the initiation of two significant inquiries in 1975, both of which helped lay the foundation for much of the reforms that would follow: the Hall Commission on Grain Handling and Transportation; and the Snavely Commission on the Costs of Transporting Grain by Rail. In the interim, the federal government committed $700 million to the Prairie Branch Line Rehabilitation Program, which would finance the physical upgrading of a core network of grain-dependent branch lines and support the use of an expanding fleet of publicly-supplied covered hopper cars.[6]

Government Movement towards Fleet Divestiture

The tenets underpinning the *National Transportation Act* were rooted in the needs of an economically efficient marketplace. Moreover, the principles that gave rise to the subsidization that followed also set the stage for a political debate over how to best achieve the Act's broader policy objectives. Gradually, public policy began to shift towards greater economic deregulation of the GHTS. Following passage of the *Western Grain Transportation Act* in 1983, the long established Crow Rate was replaced; superseded by a new regime that allowed substantially higher railway freight rates, which were apportioned between grain producers and the federal government through a subsidy mechanism known as the "Crow Benefit." This direct subsidization of grain transportation by the federal government ended a decade later, following passage of the *Canada Transportation Act* (1995), which also implemented a new "maximum rate scale" (in effect from 1995 to 2000). Subsequent revisions to the Act, which came into effect in 2000, replaced this rate mechanism with the Maximum Revenue Entitlement (MRE), the regime currently in place today.

The publicly-supplied hopper car fleet, now firmly ensconced within the GHTS, stood largely on the periphery of these broader policy reforms. It was not until the federal Minister of Finance tabled the government's Budget Plan in March 1996, that its intention to divest itself of the federal hopper car fleet was revealed. The process by which this policy objective was to be advanced came with the tabling of Bill C-31, which received Royal Assent on June 20, 1996.[7] More significantly, it ignited a wider debate within the stakeholder community regarding who should take ownership or control of the federal hopper-car fleet.

The Question of Fleet Ownership

Mandated with conducting another review of the GHTS in 1997, Justice Willard Estey considered the ownership question in his final report to the federal Minister of Transport. His perspective was not concerned with the economics of the ownership and maintenance arrangements in effect at the time but, rather, with the overarching role of the government as the owner of an essential component of the transportation system. While the railways had the option of purchasing the cars apportioned to them (e.g. their share of the government fleet) and had expressed some interest in doing so, a number of grain companies and farmer groups had also voiced the need for safeguarding their involvement in grain transportation. In so doing, they argued for some form of ownership or control in the federal fleet.

Although Estey did not recommend a specific course of action to the government, he noted that neither the federal nor provincial governments could sell their hopper cars at less than fair-market value owing to the terms of various trade agreements, but could likely do so at "bargain prices." Estey made one concluding observation, noting that an open auction would likely be the most prudent approach to a potential divestiture, but that this "may not satisfy the farm organizations in their search for a bargain price without penalty".[8]

Emerging from the fray as an early suitor for the federal fleet was the Farmers Rail Car Coalition (FRCC), which, in October 2002, advanced a formal proposal to acquire the cars. While the federal government entered into negotiations with the FRCC for a possible sale, the parties were unable to formalize a transfer agreement. As a result, on May 4, 2006, the Minister of Transport announced that the government had opted to retain ownership of the federal fleet, indicating that this would maximize the benefits for farmers as well as taxpayers.[9] Concurrent with this announcement, the federal government also stated that it would begin negotiating new operating agreements with CN and CP.

By this time, however, virtually all of the publicly-supplied hopper cars had already passed the midway point in their expected service lives, then deemed to be about 40 years. Moreover, they were becoming increasingly obsolete given the railway industry's investment in railcars capable of carrying heavier loads. Constructed largely of steel with a capacity of 4,550 cubic feet, and an original maximum gross weight of 263,000 pounds, these railcars were less desirable when compared to the newest generation of jumbo covered hoppers, which have a capacity of at least 5,150 cubic feet and a maximum gross weight of 286,000 pounds.

New Operating Agreements with CN and CP

On October 12, 2007, the federal government announced that it had successfully concluded new agreements with both CN and CP for the operation, maintenance and refurbishment of its hopper car fleet.[10] A summary of the major elements in these operating agreements is presented below in Table 1.

Arguably the most significant feature in these new agreements was the effort to be expended in addressing some of the cars' commercial drawbacks. In general terms, they required CN and CP to physically upgrade the cars to a higher standard. This involved raising the railcars' carrying capacity to 286,000 pounds along with certain mandated repairs that would add another ten years to their service lives.[11] About this same time, the owners of other publicly-supplied hopper cars also embarked on upgrading programs of their own, most notably the Government of Saskatchewan and the CWB, in 2006 and 2009 respectively.[12]

However, not all of the nearly 19,500 original publicly-supplied hopper cars would be upgraded. By the end of 2007 attrition had already reduced the number of remaining cars to an estimated 16,800.[13] In the case of the federal fleet, CN and CP committed to upgrade all steel hopper cars built after 1974 under a five-year rehabilitation program. This meant that what remained of the 2,000 cars built prior to 1975, along with the remnants of some 2,400 aluminum cars built between 1975 and 1977, would be scrapped. Also to be withdrawn from service were those cars too heavily damaged to be repaired economically. By the close of 2014, Transport Canada reported that only 8,410 of the nearly 13,500 hopper cars it had furnished to these two carriers remained in service.[14]

While the other publicly-supplied fleets did not see such deep losses, a number of their cars had also been withdrawn from service. This included 250 cars that were returned following the expiry of their leases with the CWB in 2005.[15] At the same time, new commercial agreements with CN and CP were altering the long-standing arrangements that had governed the use of these cars. When the Government of Saskatchewan decided in 2011 to give priority in leasing its equipment to the province's short line railways, the remnants of the almost 500 cars previously assigned to CN were gradually turned over to the Last Mountain Railway.[16] Similarly, CP began turning back all of the cars it had been supplied with by the CWB in 2014.[17] Of the almost 5,100 hopper cars estimated to still be in service at the close of 2014, only about 3,100 remained assigned to CN and CP.[18]

Table 1 – Major Elements of Government Hopper Car Operating Agreements with CN and CP[19]	
Duration	• Ten years with one year notice of termination in eighth year, for no more than 3,000 cars. • If not terminated, agreement remains evergreen.
Use of Cars	• Can be used to carry grain in North America. • Can be used for other commodities if precautions are taken to protect physical integrity.
Payment for Use	• Cars are provided to railways at no cost for regulated grain movements. • Alternate-use payments for non-regulated movements.
Maintenance	• Railways are responsible to maintain cars to federal government safety standards and industry operating standards. • Government will conduct inspections every second year to ensure cars meet these standards. • Railways are responsible for maintenance costs.
Refurbishment	• All steel cars built after 1974 will be inspected during the first 5 years of the agreement to identify refurbishment requirements. • Cars will be refurbished to industry standards at railways' expense. • Refurbishment includes replacing defective gates that results in grain leakage and installing safety reflectors on every car. • The government will conduct post-refurbishment inspections to ensure needed work has been completed.
Replacement	• Railways are responsible for replacing cars that are retired or destroyed, which is consistent with their obligations under *The Canada Transportation Act*.

Operating Reports	• Reports include:
	  • Monthly reporting on car use.
	  • Monthly reporting on destroyed cars and repairs.

Public Annual Reports	• The Public Annual Report will:
	  • Summarize information in monthly operating reports.
	  • Report on change in railways' grain fleets – retirements, destroyed cars and additions.
	  • Summarize results of refurbishment and maintenance inspections.
	  • Summarize information on revenues received from the railways.

Current Composition of Hopper Car Fleet

By its own accounts, the railways had a combined fleet of almost 22,400 hopper cars in circulation at the close of 2014.[20] Comprised within this were an estimated 8,400 federal hoppers along with some 3,100 hoppers supplied to them through the CWB and other governments. This implies that CN and CP were supplementing this equipment with approximately 10,900 other cars, both railway and shipper supplied. While the railways have always contributed some equipment to the mix, this increase suggests that there has been a substantial shift in the overall composition of the fleet used to move Western Canadian grain; from one almost entirely comprised of publicly-supplied equipment to one in which they constitute about half. Undoubtedly, much of this overall expansion was occasioned by the growth in railway traffic, which itself largely paralleled the increase in grain production.

With the onus for replacing the federal cars having shifted from the federal government to the railways, it is evident that both CN and CP have already gone beyond the requirements to replace at least a portion of the retired cars with their own equipment. But focusing simply on the number of hopper cars in the standing fleet must be cautioned when attempting to gauge the GHTS's overall capacity. This is because not all hopper cars have the same carrying capacities. While the governing weight limitation of 286,000 pounds apply equally, a modern jumbo hopper car can carry over 13% more product by volume than the cylindrical hopper cars used in the publicly-supplied fleet (5,150 cubic feet versus 4,550 cubic feet). This means that the replacement rate need not be one-for-one but, rather, something closer to nine for every ten

retired. Similarly, the productivity gain derived from an improvement in the car cycle also contributes to a lower replacement rate. By way of example, the average car cycle associated with moving grain in the Vancouver corridor during the 1999-2000 crop year was estimated at 19.6 days. By the close of the 2014-15 crop year that value had fallen to an estimated 14.6 days.[21] The inference is clear: only three quarters of the rolling stock needed to move a given amount of grain 15 years ago is required today. These are important factors when considering that the replacement cost of a single covered hopper car now stands at roughly $100,000.

Trends in North American Railcar Ownership

In considering the hopper cars needed for future grain handling, one should be mindful of the broader trends in equipment ownership, which leans towards non-railway proprietors over railways. In actual fact, the ownership of railway equipment is dominated by third-party leasing companies, which, in turn, provide these cars to railways, shippers and other parties under a variety of commercial leasing arrangements (both short and long-term). As of January 2015, lessors held title to 50% of the rolling stock in North America; TTX, a specialized railway-owned lessor, 10%; railways, 22%; and shippers; 18%.[22] Moreover, there has been a significant decline in railway ownership, which decreased from a 53% share in 2000.[23] In some sectors, the use of non-railway owned equipment is particularly pronounced. This is most evident in the North American tank-car fleet, where 99% of the equipment in circulation is privately owned. For covered hopper cars, the share accorded to non-railway owners is a somewhat lesser 75%.[24] This shift in ownership is also reflected in the fact that 87% of the investment in new rolling stock between 2000 and 2008 was made by private owners.[25]

A key consideration in the long-term viability of the North American railcar fleet is the level of investment required to augment, replace and maintain it. The owner's ability to receive a reasonable rate of return on investment, commensurate with the commercial risk, is a key consideration in such decisions. The railways have shown a greater propensity to avoid this risk while private-car owners have demonstrated a willingness to seize the commercial opportunity despite weak returns.[26] Private car owners generate revenue in one of three ways: by leasing cars to shippers; by leasing them to railways (under long-term, short-term and "car-hire" based leasing arrangements); and by selling them to shippers and railways. In North America, a leasing contract with a shipper will typically have a 3 to 5 year term.

Government Hopper Car Fleet and the Maximum Revenue Entitlement

In considering the replacement of the publicly-supplied hopper-car fleet, it is worth noting how the associated costs are to be factored into the MRE. To a large extent, this is accomplished through the annual calculation of the Volume-Related Composite Price Index (VRCPI), which is determined by the Canadian Transportation Agency (Agency) in advance of each approaching crop year by the statutorily-set date of April 30. Section 151(4)(c) of *The Canada Transportation Act* states:

> *The Agency shall make adjustments to the index to reflect the costs incurred by the prescribed railway companies for the purpose of obtaining cars as a result of the sale, lease or other disposal or withdrawal from service of government hopper cars and the costs incurred by the prescribed railway companies for the maintenance of cars that have been so obtained.*[27]

The Agency notes that the railways can "obtain" cars under the following arrangements: purchase; short-term or long-term lease; per-diem rental; and exchange arrangements.[28] Similarly, cars can be obtained from: a U.S. subsidiary of the railway company; other railway companies; and third parties.

Over the last decade, the Agency has rendered several decisions relating to how the government hopper cars are to be treated under the MRE and Section 151(4)(c) of the Act. In short, the Agency is vested with

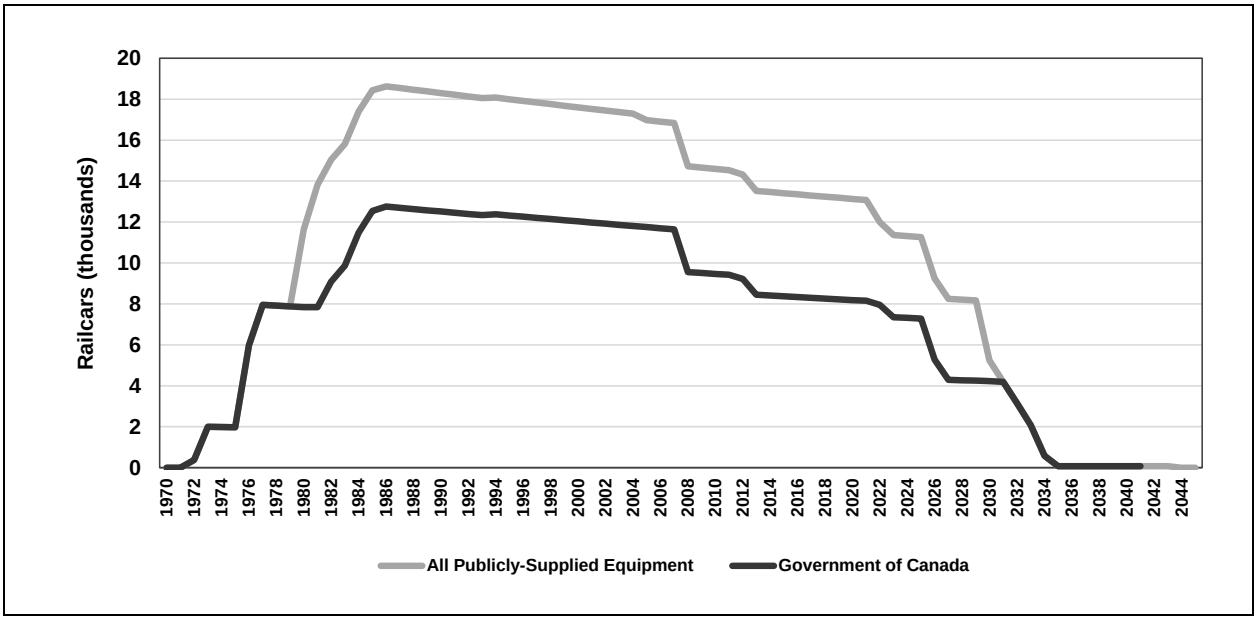
the authority to adjust the VRCPI to reflect the incremental costs of obtaining cars arising from the sale, lease, withdrawal or disposal of the government hopper car fleet, as well as those incurred for their maintenance.[29] Even so, issues surrounding the interpretation of the terms "government fleet"[30] and "incremental costs" remain.[31]

The most recent illustration of such a ruling by the Agency centred on the railways' attempt to use cars obtained from their American subsidiaries in regulated grain service.[32] This is an evolving area of Agency decision-making with precedent-setting implications, as both prescribed railways, which operate continentally, attempt to mobilize and deploy hopper-car capacity within the existing framework of the MRE.

Strategic Considerations

Notwithstanding the commercial considerations that might bring other unanticipated reductions, attrition will steadily reduce the number of publicly-supplied hopper cars now in circulation. The pace of that decline will accelerate noticeably in 2022 when the Alberta government's current 900-car fleet reaches the end of its economic life, and is withdrawn from service. A more significant reduction will follow between 2025 and 2027 when the remnants of 3,600 federal hopper cars bought in the mid-1970s are slated for retirement, which will reduce the residual to an estimated 4,300. By 2035, virtually all of the remaining cars will have been retired as well.[33] This projected decline is depicted visually in Figure 1.

Figure 1 – Government Hopper Cars in Service



What is clear is that the carrying capacity provided by all of these cars will have to be replaced. To date, the data suggests that CN and CP have been backfilling the decline occasioned by the equipment losses previously noted. Replacement of the remaining federal fleet entails an estimated capital expenditure of approximately $840 million. Were all publicly-supplied cars to be replaced, then the industry would face a potential capital investment in excess of $1.4 billion. It is worth noting that the North American demand for hopper cars – be it for the movement of grain or other commodities – has exploded in recent years, fueled largely by the demand for hydraulic fracturing sand. Although the pressures arising from this reportedly abated greatly in 2015, the backlog in orders for new equipment along with associated leasing rates remained comparatively high.[34] This suggests that while the need to substitute carrying capacity for

an aging fleet is not an immediate concern to the GHTS, it is an emerging one, and a potentially costly one as well.

While a major consideration for the grain sector will be on ensuring that the railways' existing carrying capacity is maintained, the longer-term trend towards even greater grain production suggests that still more carrying capacity may be needed in order to respond to this future growth. To this end, the technological advancements inherent in today's newer jumbo hopper cars, along with the manifest improvement in car cycles has already served to augment the current fleet's productivity. Replacement of the remaining publicly-supplied hopper cars on a one-for-one basis would thus help to increase the GHTS's carrying capacity. But the capital investment associated with this is significant and can only come from a select number of sources.

Given the North American trend towards greater private car ownership, it is unlikely that either CN or CP will want to make the outright investment that will be needed. Moreover, CP has openly argued that the MRE actually discourages the carrier from making such an investment.[35] Likewise, it is unlikely that any federal or provincial government will want to play anything other than a supporting role in this renewal. Government ownership may be viewed as a legacy of a past economic environment, and a policy response to the realities and challenges of a unique period in the GHTS's history.

This reinforces the likelihood that private ownership will assume a greater role in meeting the equipment needs of the GHTS over the course of the next twenty years. Not to be overlooked is the expanded role that may be played by shippers, especially those having already assembled small fleets of their own. CN's recently introduced private fleet integration programs suggests but one method by which the railway is attempting to secure access to this capacity.[36] Lastly, while the MRE is in force, additional consideration may well need to be given to the existing treatment of replacement hopper cars, particularly if it is not to undermine the investment that will be required.

Endnotes

[1] Statistics Canada. Field Crop Reporting.
[2] Quorum Corporation (July 2015). Data tables corresponding to "Grain Monitoring Program Report for: July 2015".
[3] Transport Canada (2015). Government of Canada Hopper Car Fleet: 2014 Annual Report.
[4] Gilson, J.C. (1982). Western Grain Transportation: Report on consultations and recommendations. Believing that the federal government should bear the responsibility for providing the rolling stock needed by the GHTS, the Manitoba government decided against joining Saskatchewan and Alberta in purchasing its own fleet of hopper cars. Nevertheless, the province agreed to lease some 400 cars for one year in 1980. These cars are not considered in the discussion presented here.
[5] During this transition, a number of CN and CP boxcars were rehabilitated, extending their useful lives by an estimated five years. Even so, the use of boxcars was gradually confined to branch lines where weight restrictions of 177,000 pounds remained. The last boxcars were withdrawn from grain service in the mid-1990s.
[6] A railway branch line was considered grain-dependent if over 60% of the traffic originated on the line consisted of grain. Rehabilitation of a grain-dependent branch line resulted in the weight restriction being lifted from the 177,000 pounds employed in loading boxcars to the much higher 263,000 pounds needed for covered hopper cars. This limitation was later raised to 268,000 pounds, the standard that still governs many of these branch lines today
[7] Bill C-31: An Act to implement certain provisions of the budget tabled in Parliament on March 6, 1996. 35th Parliament, 2nd Session. The Bill gave the Minister of Transport, on approval of the Minister of Finance, the power to "dispose of, and enter into agreements or arrangements" for the divestiture of the federal hopper-car fleet.
[8] Estey, W.Z. (1998).Grain Handling and Transportation Review – Final Report. p. 29.
[9] Transport Canada (May 4, 2006). News Release: Government of Canada to Retain Ownership of Grain Hopper Car Fleet.
[10] Transport Canada (October 12, 2007). News Release: Canada's New Government Concludes New Agreements with Railways Operating the Federal Grain Hopper Car Fleet. The agreement with CP became effective on July 1, 2007, while the agreement with CN took effect a month later, on August 1, 2007.
[11] Originally, these cars were expected to have a 40-year service life. Refurbishment of the railcars would allow them to be used in interline service beyond this point, and extend their service life to 50 years.

[12] A notable exception was the Government of Alberta, which chose not to refurbish its fleet. As a result, its cars remain less desirable, with a lower carrying capacity and a 40-year service life.
[13] Quorum Corporation (October 2015). Estimate of Government-Supplied Cylindrical Covered Hopper Cars.
[14] Transport Canada (2015). Government of Canada Hopper Car Fleet: 2014 Annual Report.
[15] The Canadian Wheat Board (2006). Annual Report 2004-05.
[16] Saskatchewan Grain Car Corporation (2014). 2012-13 Annual Report.
[17] Canadian Transportation Agency (2015). Decision Number 374-R-2015. The decision notes in paragraphs 17 and 18 that the cars previously used by CP had been withdrawn from service and returned to the CWB by October 2, 2015.
[18] Quorum Corporation (October 2015). Estimate of Government-Supplied Cylindrical Covered Hopper Cars.
[19] Transport Canada (October 12, 2007). News Release: Canada's New Government Concludes New Agreements with Railways Operating the Federal Grain Hopper Car Fleet.
[20] Quorum Corporation (July 2015). Data tables corresponding to "Grain Monitoring Program Report for: July 2015". Note that the number of cars in active service fluctuates during the year for a variety of reasons.
[21] Ibid.
[22] GATX (2015). GATX Corporation: Company and Industry Profile. p. 31.
[23] Ibid.
[24] Progressive Railroading (July 2014). Rail car and locomotive statistics: Fleet Stats 2014.
[25] Corsi, T. M. and K. Casavant (2011). Economic and Environmental Benefits of Private Railcars in North America. North America Freight Car Association. Note that the "dependence of the railroad industry, the shippers using that industry, and the United States economy on the private car rail fleet is dramatic and growing" and the continued investment is facing several challenges.
[26] Ibid.
[27]Canada Transportation Act, Revised Statutes of Canada (1996, c.10).
[28] Canadian Transportation Agency (May 5, 2015). "Cost Adjustment to the Volume Related Composite Price Index (VRCPI) under the Maximum Revenue Entitlement (MRE) Program to Replace Free Government Hopper Cars". Agency Staff Consultation Document.
[29] As noted in paragraph 12 of Canadian Transportation Agency (April 27, 2006), Letter Decision No. LET-R-113-2006, the purpose of paragraph 151(4)(c) of the Act is "to ensure that the Maximum Revenue Entitlement regime recognizes the incremental costs incurred by prescribed railway companies as a result of the sale, lease or other disposal or withdrawal from service of government hopper cars…Because the prescribed railway companies have traditionally only incurred maintenance costs for these cars, the only cost component for these cars included in the cost base embedded in each of the prescribed railways' base year revenue under the Maximum Revenue Entitlement relates to maintenance."
[30] Section 147 of the Act defines a government hopper car as follows: *"government hopper car" means a hopper car provided to a prescribed railway company by the government of Canada or a province or the Canadian Wheat Board."*
[31] Refer to: Letter Decision No. LET-R-113-2006 (Adjusting VRCPI to Reflect Railway Leasing of Canadian Wheat Board Cars); Decision No. 67-R-2008 (Agency Applies One Time Reduction in 2007-08 VRCPI to implement Hopper Car Maintenance) and Decision No. 8-R-2013 (Adjusting VRCPI to Reflect Railway Leasing of Saskatchewan Government Cars).
[32] Refer to: Decision No. 374-R-2015 (CP application to amend 2014-14 VRCPI), Decision No. 304-R-2015 (Agency methodology for determining VRCPI), Agency Staff Consultation Document re: Cost adjustments to VRCPI under MRE to replace free government hopper cars (May 2015).
[33] Quorum Corporation (October 2015). Estimate of Government-Supplied Cylindrical Covered Hopper Cars.
[34] Railway Age (June 2015). 2015 Guide to Equipment Leasing. p. 21.
[35] Canadian Pacific Railway (2015). CP Submission to the Canada Transportation Act Review Panel.
[36] See: CN (2015). "Export Fleet Integration Program: Western Canada Grain – 2015". https://www.cn.ca/en/your-industry/grain