

**Estimated Contributions Earned by Railways from  
Handling of Statutory Grains and Grain Products  
2013/14**

**Prepared for**

**The Agricultural Producers Association of  
Saskatchewan  
Saskatchewan Wheat Development Commission  
Saskatchewan Barley Development Commission  
Saskatchewan Pulse Growers**

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## EXECUTIVE SUMMARY

This report presents Travacon's estimate of contributions earned by the Canadian National Railway (CN) and Canadian Pacific Railway (CP) from handling of statutory grain and grain products in crop year 2013/14.

For the crop year 2013/14, based on the maximum revenue entitlement (MRE) determined by the Canadian Transportation Agency (CTA) (Decision 451-R-2014) CN and CP combined earned a contribution from statutory grain of \$ 478.4 million, which was \$ 12.44 per tonne and 61 % of volume-related variable cost (VRVC). This was \$ 322 million, or \$ 8.36 per tonne, in excess of the contribution level of 20 % that was deemed fair and adequate under the *Western Grain Transportation Act (WGTA)*, and which Travacon believes is the maximum that could be earned under effective competition.

Based on actual revenues earned by the railways, net of applicable penalties, CN and CP combined earned a contribution from statutory grain of \$ 476.5 million.

In 2010, in its Decision LET-R-66-2010, the CTA stated that it had calculated that the railway average system contribution was 20.3 % of variable costs, close to the level deemed fair and adequate for statutory grain under the *WGTA*. This contribution level was adopted for setting rates for railway interswitching.

## **INTRODUCTION**

This report has been prepared on behalf of The Agricultural Producers Association of Saskatchewan (APAS), the Saskatchewan Wheat Development Commission, the Saskatchewan Barley Development Commission, and the Saskatchewan Pulse Growers. It contains estimates of the contributions earned by Canadian National Railway (CN) and Canadian Pacific Railway (CP) from handling statutory grain and grain products in the crop year 2013/14.

The estimates contained herein have been based upon the following data sources:

- CTA 2013/14 Revenue Cap Decision 451-R-2014.
- Statistics Canada Monthly Railway Carloadings
- Railway financial and statistical reports
- Canadian Grain Commission grain delivery data
- Travacon railway cost model

## **RAILWAY COSTING CONCEPTS**

For regulatory purposes, railway costs are defined in the economic sense, including operating expenses (including depreciation) and cost of capital. Cost of capital provides an allowance for coverage of debt interest, corporate income taxes and a fair return on shareholders' equity. Cost of capital is determined by the application of a regulator-determined annual percentage rate to the net book

value of railway assets (e.g., track structure, locomotives, freight cars, working capital).

Volume-related variable costs (VRVC) include that portion of total costs which varies, up or down, in response to change in traffic volume. Like total costs, these variable costs include operating expenses (including depreciation) and cost of capital, with the latter relating to assets whose quantity is variable with changes in traffic volume (e.g., locomotives, freight cars and a portion of track structure and working capital). The author of this report estimates that volume-related variable costs represent 80 to 85% of the total costs of CN and CP.

Contributions above variable costs are required to cover constant costs (the portion of total costs that is not variable), although there is doubt as to the need to cover the totality of constant cost. On average, a contribution of 20- 25% of variable cost is required to fully cover constant costs. The following summarizes available references respecting Canadian railway contributions from freight movements:

- Under conditions of effective competition, Travacon estimates that railway contributions to cover constant costs will not exceed 20 % of VRVC.
- In its Decision LET-R-66-2010, the CTA determined that the railway average system contribution was 20.3 % of variable costs, and it has since incorporated that contribution level in its determinations of railway interswitching rates.
- When freight rates for rail movements of statutory grain and grain products were set under provisions of the *Western Grain Transportation Act (WGTA)*, a contribution of 20 % of VRVC was considered fair relative to other commodities and adequate to meet the financial needs of the railways.

Development of the volume-related variable costs for a specific movement is dependent upon the concept of service units. Service units are measures of

work performed by a railway with respect to a movement, and which can be related to specific components of the variable cost structure. Examples of service units are gross ton miles, train miles, locomotive unit miles, freight car miles, freight car days, train crew wages and gallons of fuel consumed. Associated with each service unit is a unit cost specifying the level of volume-related variable cost incurred by the railway per one unit of the service units expended. To calculate the total volume-related variable cost for a specific movement, the service units incurred by the railways to accomplish that movement are first determined, each service unit is multiplied by its corresponding unit cost, and the results thereof are summed to arrive at the total volume-related variable cost.

When the regulatory body calculates the volume-related variable costs for a specified movement, use is made of significant railway-confidential data supplied by the carriers. Such confidential data is not available to Travacon; hence, the volume-related variable costs as estimated in this report were prepared using the Travacon Railway Cost Model,<sup>1</sup> which relies exclusively on data available from clients and from public sources. Travacon considers that the results obtained thereby, as presented in this report, are reasonable.

## **TRAFFIC AND REVENUE**

Overall traffic and revenue were based on data contained in the CTA Revenue Cap Decision 451-R-2014 (Decision), with respect to the crop year 2013/14. Revenues were assessed on two bases, namely:

1. At the level of the MRE aggregated for CN and CP, or \$ 1,292.4 million per Table 2 at paragraph (36) of the Decision.

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<sup>1</sup> The Travacon Railway Cost Model provides estimates of railway variable costs on a basis consistent with that used for regulatory purposes.

2. At the revenues actually earned, less penalties assessed, aggregated for CN and CP, or \$ 1,290.5 million per Table 2 at paragraph 36 and at paragraph 38 of the Decision.

## **VARIABLE COSTS**

### **Volume-Related Variable Costs**

These costs were estimated using the Travacon cost model. Service units were estimated on the basis of input data respecting specifics of the railway method of operation from each originating train run to each destination, including such factors as train performance (train sizes and locomotive consist), car cycles, empty return ratios, train crew wages, fuel consumption and switching requirements. Car cycles and empty return ratios were estimated on the basis of analysis of movements of the car fleet in the two crop years.

On that basis, it is estimated that volume-related variable costs totaled \$ 784.2 million in crop year 2013/14.

### **Line-Related Variable Costs**

Line-related variable costs are costs other than volume-related that are incurred by the railways on lines that are deemed to exist solely for the purpose of statutory grain handling. For 2013/14 line-related variable costs are estimated at \$ 29.8 million.

## RAILWAY CONTRIBUTIONS

Based upon the information above, Table 1 presents Travacon’s estimates of railway contributions earned from handling of statutory grain and grain products in 2013/14.

**Table 1**  
**Estimated contributions earned by CN and CP from handling of**  
**statutory grains 2013/14**

	MRE		Actual revenues	
	millions	\$ per tonne	millions	\$ per tonne
Tonnes	38.5		38.5	
Revenues (1)	\$1,292.4	\$33.60	\$1,290.5	\$33.55
<b>Variable costs</b>				
Volume-related	\$784.2	\$20.39	\$784.2	\$20.39
Line-related	\$29.8	\$0.78	\$29.8	\$0.78
Total	\$814.0	\$21.17	\$814.0	\$21.17
Contribution to constant costs	\$478.4	\$12.44	\$476.5	\$12.39
<b>Percent contribution (2)</b>	<b>61.0</b>		<b>60.8</b>	
<b>Excess contribution (3)</b>	<b>321.5</b>	<b>\$8.36</b>	<b>\$319.6</b>	<b>\$8.31</b>

(1) In the “MRE” case, revenues are based on the MRE determined by the Agency at paragraph 35 of the Decision. In the “Actual revenues” case, revenues are determined as amounts determined as “Revenue” at paragraph 35 of the Decision, less the penalties determined at paragraph 38 of the Decision.

(2) Contribution is calculated as a percentage of volume-related variable cost.

(3) Excess contribution is the portion of the contribution to constant costs that exceeds 20 % of volume-related variable cost