Railway Association of Canada

RAIL TRENDS 2015

www.railcan.ca

Railway Association of Canada

RAC members as of Dec. 31, 2014

ISBN: 978-1-927520-04-8

MIX
Paper from responsible sources
FSC® C102810

99 Bank Street
Suite 901
Ottawa, ON
K1P 6B9

Phone: (613) 567-8591
Fax: (613) 567-6726
Email: rac@railcan.ca

www.railcan.ca

MEMBER COMPANIES 2014

GSR	6970184 Canada
AMT	Agence métropolitaine de transport
APR	Alberta Prairie Railway Excursions
AMTK	Amtrak
AMMC	ArcelorMittal Infrastructure Canada
CFA	Arnaud Railway
BCRY	Barrie-Collingwood Railway
BRR	Battle River Railway
BCR	BCR Properties
BSR	Big Sky Rail
BNSF	BNSF Railway
CP	CP
CBNS	Cape Breton & Central Nova Scotia Railway
CR	Capital Railway
CTRW	Carlton Trail Railway
CMQ	Central Maine & Québec Railway
CEMR	Central Manitoba Railway
CN	CN
CFL	Compagnie du chemin de fer Lanaudière
CSX	CSX Transportation
EMRY	Eastern Maine Railway
ETR	Essex Terminal Railway
GO	GO Transit
GEXR	Goderich-Exeter Railway
RMR	Great Canadian Railtour Company
GSR	Great Sandhills Railway
GWR	Great Western Railway
HBRY	Hudson Bay Railway
HCRY	Huron Central Railway
KRC	Keewatin Railway
KFR	Kettle Falls International Railway
LMR	Last Mountain Railway
NBSR	New Brunswick Southern Railway
NCR	Nipissing Central Railway
NS	Norfolk Southern Railway
ONR	Ontario Northland Transportation Commission
OSR	Ontario Southland Railway
OBRY	Orangeville Brampton Railway
OVR	Ottawa Valley Railway
PDCR	Prairie Dog Central Railway
CFQG	Québec Gatineau Railway
QNSL	Québec North Shore and Labrador Railway
RS	Roberval and Saguenay Railway
CFRR	Romaine River Railway
SCFG	Société du chemin de fer de la Gaspésie
SSR	South Simcoe Railway
SOR	Southern Ontario Railway
SRY	Southern Railway of British Columbia
SLQ	St. Lawrence & Atlantic Railroad (Québec)
SSRY	Stewart Southern Railway
SCR	Sydney Coal Railway
TTR	Toronto Terminals Railway
CFC	Train Touristique de Charlevoix
PCHR	Trillium Railway
TSH	Tshiuetin Rail Transportation
VIA	VIA Rail Canada
WCE	West Coast Express
WP&YR	White Pass and Yukon Route Railroad

ASSOCIATE MEMBERS
2014

Absopulse Electronics
Accuworx
Alexander Holburn Beaudin & Lang LLP
Almita Piling
Amsted Rail
Bayside Canadian Railway
Bombardier Transportation
CANAC Railway Services
Canada Heavy Haul Railway United Technologies
Canadian Heartland Training Railway Services
Canadian Rail Research Laboratory
Canadian Urban Transit Association
C-CORE
CentrePort Canada
Contrans Flatbed Group
CPCS Transcom Limited
Crescent Point Energy
CSTP
Davanac
Dominion Railway Services
Drain-All
Elbow River Marketing
Entretien ferroviaire Boivin
Envirotec Services Incorporated
Ferus Natural Gas Fuels
FLO Components
Forma-Train
GATX Rail Canada Corporation
Gestion AFM-Séma
HDR Engineering
Hewitt Equipement
Hulcher Services
IBI Group
Itech Environmental Remediation
Kenneth Peel
LOGISIG
Loram
Marathon Drilling
McCarthy Tétrault
Mecfor
Montréal Port Authority
NARSTCO
Newalta Industrial Services
Ontario Steel Haulers
PNR Railworks
Progressive Rail Specialized Logistics
Quantum Murray LP
Quester Tangent Corporation
Rail Cantech
Raildecks
RailTerm
RB&C Maintenance of Way
Red Giant Oil Company
Red River College
Réparations ferroviaires K.L.N.
RTC Rail Solutions
Sandy Cooke Consulting
Soulanges Railway Services
Stantec
Supco Canada Railway Supply Group
Swift Railroad Contractors
Tervita
T-Rail Products
Vidal Street Industrial Park
Whiting Equipment Canada
X-Rail Signalisation

TABLE OF CONTENTS

PRESIDENT'S MESSAGE

For Canada's freight and passenger railways, 2014 was defined by one of the coldest winters in Canadian history and its resulting impact on railway operations.

In the freight rail sector, the perfect storm of unusually harsh weather and the largest grain crop in 100 years resulted in well-publicized transportation bottlenecks across the country.

Some critics suggested that those delays were due to a lack of investment, capacity, preparedness or effort on the part of Canada's railways. The data presented in the following pages suggests otherwise.

Rail Trends 2015 illustrates the outstanding performance of Canada's freight and passenger railway sector in 2014. Freight railways worked collaboratively with supply chain partners — including ports, terminal operators and others — to transport more traffic than ever before, including the record grain crop. In addition, Canada's passenger railways moved millions of travellers while reducing congestion and emissions.

Most importantly, Canada's railways achieved these results while improving their overall safety record — a testament to the industry's commitment to moving goods and people efficiently and safely.

Sincerely,

Michael Bourque
President and Chief Executive Officer
Railway Association of Canada

FOREWORD

This is the 23rd edition of *Rail Trends*, the Railway Association of Canada's (RAC) annual report on the performance of Canada's freight and passenger railways. This publication contains a rolling 10-year review of financial and statistical results, reflecting multiple aspects of railway performance in Canada.

The data in *Rail Trends* comes from RAC members — Class 1 and shortline railways, as well as tourist, intercity and commuter passenger service providers. While RAC represents the vast majority of non-Class 1 railways in Canada, it does not represent the entire sector. Data reflects performance in Canada only.

Canada's Class 1 freight railways (CN and CP) account for the majority of Canadian freight rail activity. For that reason, most of the data presented in *Rail Trends* reflects Class 1 carriers. Figures may not add up to totals due to rounding. Definitions of railway terms appear in Appendix A, and safety-specific definitions are provided in Appendix B.

The data in *Rail Trends* is categorized into the following sub-sections:

- Freight traffic
- Passenger transportation
- Safety
- Financial information, investments and taxes
- Employment
- Track and equipment

Statistical highlights (year-over-year and 10-year comparison)

	2005	2013	2014
Revenue ton-miles (billions)	241.7	291.2	**306.3**
Revenue tonne-kilometres (billions)	352.9	425.1	**447.1**
Miles of rail operated[1]	30,380	27,270	**27,304**
Kilometres of rail operated	48,893	43,887	**43,942**
Locomotives	3,253	3,043	**2,696**
Freight cars (000)	102	59	**59**
Gallons of fuel (millions)	486	464	**485**
Litres of fuel (millions)	2,209	2,111	**2,203**
Employees	35,389	33,167	**32,681**
Annual wage per employee ($)	71,994	88,153	**92,491**

1 Miles (kilometres) of rail operated includes rail over which a railway has operating rights.

FREIGHT TRAFFIC

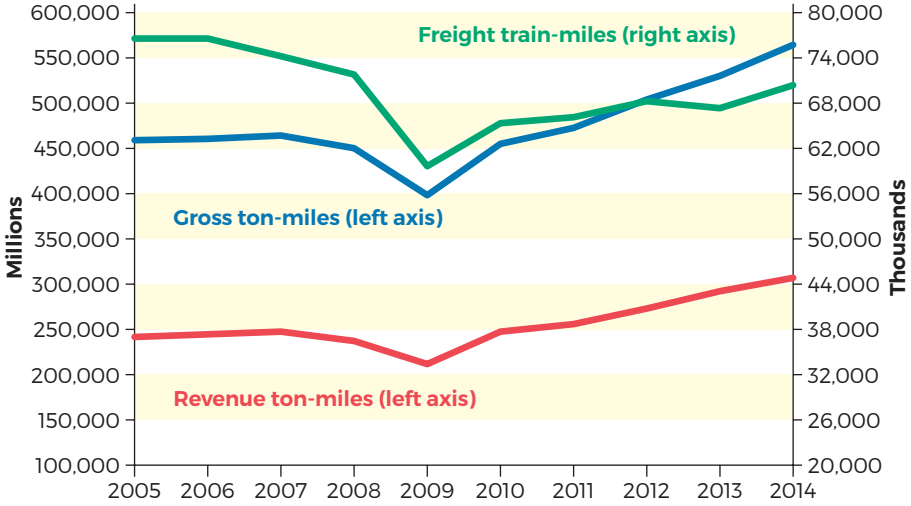
Canada's railways moved more goods than ever before in 2014, continuing an upward trend that began in 2010. This pattern demonstrates the capacity of Canada's railways to move essential commodities safely and efficiently, while allowing Canadian businesses to compete in North America and internationally.

REVENUE TON-MILES, GROSS TON-MILES & FREIGHT TRAIN-MILES

Freight rail traffic, as measured by revenue ton-miles (RTM), rose to a record high of 306.3 billion RTM (447.1 billion revenue tonne-kilometres or RTK) in 2014. This represents 5.2 per cent growth from the previous year, and a 19.9 per cent increase over the 2009–2013 average of 255.5 billion RTM (373.1 billion RTK).

Year over year, gross ton-miles (GTM) grew 6.6 per cent to 564.3 billion GTM (823.8 billion gross tonne-kilometres or GTK), and freight train-miles (freight train-kilometres) increased by 4.6 per cent.

	Revenue ton-miles (millions)	Revenue tonne-kilometres (millions)	Gross ton-miles (millions)	Gross tonne-kilometres (millions)	Freight train-miles (000)	Freight train-kilometres (000)
2005	241,745	352,912	457,950	668,540	76,400	122,953
2006	243,744	355,831	459,633	670,997	76,451	123,035
2007	247,709	361,619	463,356	676,433	74,100	119,253
2008	237,323	346,457	449,922	656,821	71,712	115,409
2009	210,898	307,880	397,293	579,990	59,576	95,877
2010	247,154	360,809	455,047	664,303	65,157	104,859
2011	255,001	372,264	473,312	690,960	66,082	106,348
2012	273,504	399,275	503,879	735,590	68,145	109,668
2013	291,172	425,069	529,379	772,816	67,207	108,160
2014	**306,282**	**447,127**	**564,313**	**823,815**	**70,313**	**113,157**


Freight train-miles (right axis)
Gross ton-miles (left axis)
Revenue ton-miles (left axis)
Millions
Thousands
600,000
550,000
500,000
450,000
400,000
350,000
300,000
250,000
200,000
150,000
100,000
80,000
74,000
68,000
62,000
56,000
50,000
44,000
38,000
32,000
26,000
20,000
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014


5680
5680
CN

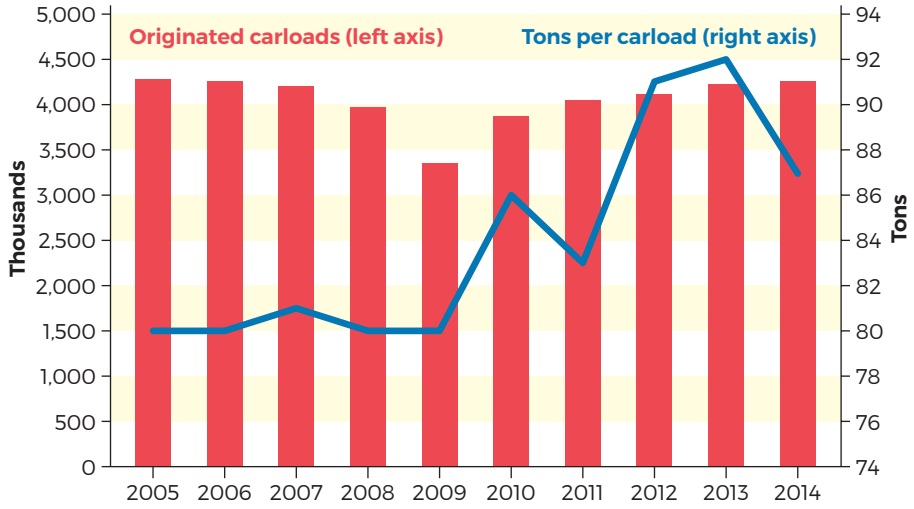
Photo: CN

CARLOADS

The number of carloads originated in Canada[2] edged up by 0.1 per cent in 2014 from the previous year, led by intermodal goods and agricultural products. However, the overall weight of freight transported fell by 5.1 per cent, as railways carried fewer heavy commodities such as coal and minerals. As a result, the tonnage per carload declined by 5.4 per cent from the previous year.

In 2014, carloads and tons (tonnes) originated increased by 8.0 per cent and 8.2 per cent, respectively, over their five-year averages.

	Carloads originated (000)	Tons originated (000)	Tonnes originated (000)	Tons per carload	Tonnes per carload
2005	4,290	343,464	311,590	80	73
2006	4,260	339,394	307,897	80	73
2007	4,196	337,989	306,623	81	73
2008	3,984	318,688	289,114	80	73
2009	3,367	269,028	244,062	80	73
2010	3,872	334,264	303,258	86	78
2011	4,044	337,074	305,793	83	76
2012	4,113	375,780	340,907	91	83
2013	4,234	388,621	352,557	92	83
2014	**4,238**	**368,970**	**334,730**	**87**	**79**



2 A detailed profile of railway industry performance by province is available on *www.railcan.ca*.

CARLOADS BY COMMODITY

Rail Trends tracks 11 commodity groupings moved by freight railways in Canada.[3] Based on the number of carloads moved, the largest increases among commodity groupings in 2014 (according to each grouping's year-over-year increase) were agricultural products (+17.6%), fuels & chemicals (+9.9%), and food products (+9.9%). The largest declines were reported in the minerals (-16.5%) and coal (-12.1%) groupings.

Carloads originated by commodity grouping[4]

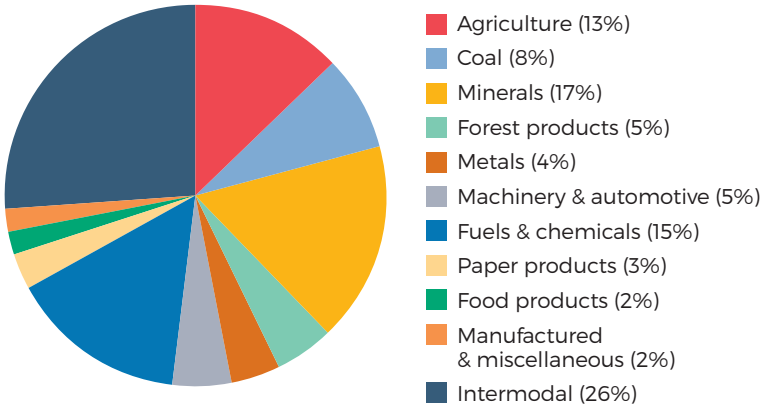
	Agriculture	Coal	Minerals	Forest products	Metals	Machinery & automotive
2005	416,473	353,197	657,410	433,138	295,022	235,480
2006	453,151	321,266	600,823	388,035	362,000	244,395
2007	454,034	349,983	609,422	317,158	359,982	234,830
2008	430,292	324,931	574,645	253,279	369,475	195,308
2009	474,980	277,048	368,631	182,395	273,800	148,123
2010	462,445	327,419	703,270	205,120	160,895	185,962
2011	466,305	348,556	790,520	228,448	160,827	186,522
2012	472,474	353,201	805,952	209,654	161,541	220,216
2013	465,340	383,013	810,750	215,254	150,906	199,068
2014	**547,122**	**336,632**	**676,865**	**213,980**	**157,086**	**193,294**

	Fuels & chemicals	Paper products	Food products	Manufactured & miscellaneous	Intermodal	Total
2005	469,655	333,830	44,169	65,629	769,936	4,073,939
2006	470,833	274,092	41,454	66,333	819,552	4,041,934
2007	470,876	252,150	41,822	65,923	832,663	3,988,843
2008	443,125	228,072	42,365	75,160	847,647	3,784,299
2009	401,141	175,693	42,232	79,445	741,807	3,165,295
2010	419,905	170,823	52,240	92,949	847,832	3,628,860
2011	432,657	157,780	54,948	94,935	890,168	3,811,666
2012	479,669	149,740	60,906	93,129	946,223	3,952,706
2013	539,566	150,029	56,405	103,605	987,186	4,061,122
2014	**593,186**	**139,110**	**61,993**	**101,733**	**1,072,278**	**4,093,278**

3 Statistics Canada provides monthly statistics of commodity movements in Canada in its *Railway Carloadings* publication. This publication offers a brief analysis, along with a number of tables showing car loadings and tonnes carried for 63 commodity groupings.

4 Not all RAC member-companies record carloads originated by commodity grouping. The intermodal total is estimated by multiplying the number of intermodal units by an average load factor to determine the equivalent number of carloads.

The chart below illustrates carloads originated by commodity grouping as a percentage of all commodity carloads in 2014.



In 2014, RAC members moved a record 487,794 carloads of grain in Canada, an increase of 21.4 per cent from the previous year, and 18.0 per cent over the five-year average.[5] The industry's contribution enabled Canada's grain supply chain to move the historic bumper crop of 2013–2014.

Photo: Shutterstock

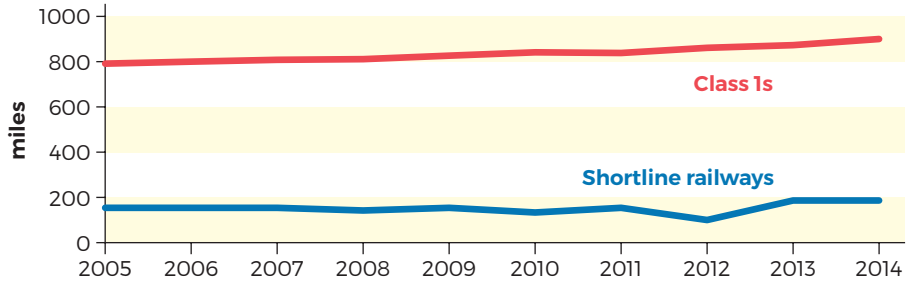
5 Source: Statistics Canada, CANSIM Table 404-0002.

AVERAGE CARS PER FREIGHT TRAIN & AVERAGE LENGTH OF HAUL

Canada's railways have made significant investments in logistics technologies and locomotive power, allowing for longer trains to be operated and more efficient railway movements. In 2014, the average length of haul[6] by transcontinental railways (CN and CP) and shortline railways increased by 4.2 per cent and 2.2 per cent, respectively, to record highs. The average number of cars per freight train[7] also increased by 1.0 per cent to a record high of 100 cars.

	Average miles (kilometres) hauled by transcontinental railways (CN and CPR)		Average miles (kilometres) hauled by shortline railways		Average cars per freight train
	Miles	Kilometres	Miles	Kilometres	
2005	789	1,270	149	240	79
2006	803	1,292	159	256	79
2007	807	1,299	151	243	81
2008	818	1,316	146	235	82
2009	830	1,336	159	256	87
2010	850	1,368	138	163	92
2011	849	1,366	170	274	81
2012	868	1,396	99	159	90
2013	871	1,402	186	300	99
2014	**908**	**1,462**	**190**	**306**	**100**

Average length of haul



6 Calculated by dividing revenue ton-miles (revenue tonne-kilometres) by revenue tons (revenue tonnes).

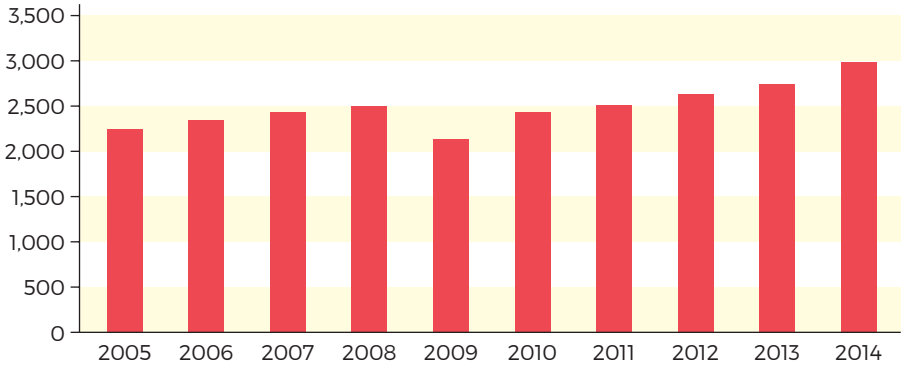
7 Calculated by dividing loaded and empty car-miles (car-kilometres) by train-miles (train-kilometres).

INTERMODAL TRAFFIC

Total intermodal traffic[8] originated in Canada — including container and trailer traffic — rose by 8.4 per cent to a record high of more than 2.9 million units in 2014. Intermodal traffic in 2014 was 19.6 per cent higher than the five-year average of 2.5 million units.

	Trailers (000)	Containers (000)	Total (000)
2005	112	2,134	2,246
2006	106	2,251	2,357
2007	102	2,334	2,436
2008	101	2,396	2,497
2009	83	2,033	2,116
2010	81	2,361	2,442
2011	80	2,424	2,504
2012	98	2,540	2,638
2013	118	2,628	2,746
2014	**93**	**2,883**	**2,978**

Intermodal units originated (000) (containers & trailers)



8 Total intermodal traffic originated in Canada reflects both the Canadian and U.S. operations of Canadian Class 1 railways. Intermodal units are actual counts of trailers and containers, regardless of size, and are not "twenty-foot equivalent units (TEUs)."

RATES

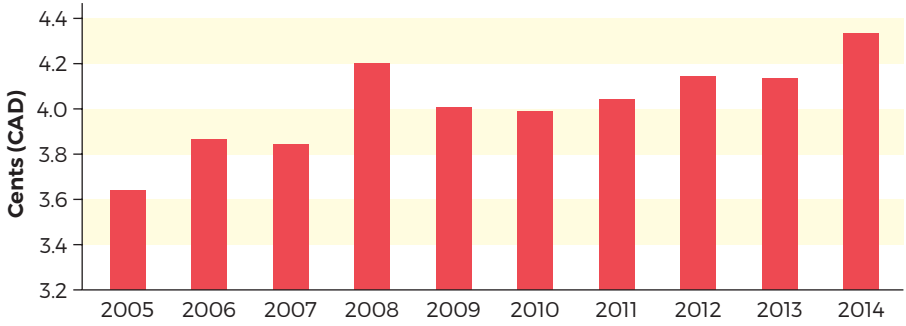
FREIGHT REVENUE PER RTM

Freight revenue per RTM[9] is often viewed as a proxy for railway rates because it shows the level of revenue collected by railways for moving goods over a certain distance.

In 2014, freight revenue per RTM grew by 4.9 per cent from the previous year, as revenues outpaced traffic growth. Since 2005, freight revenue per RTM has increased by an average of 2.1 per cent each year, while commodity prices have risen by an average of 2.5 per cent per year.[10]

	Freight revenue (cents) per		Index
	RTM	RTK	2001 = 100
2005	3.64	2.49	111.3
2006	3.87	2.65	118.3
2007	3.84	2.63	117.4
2008	4.20	2.87	128.4
2009	4.00	2.74	122.3
2010	3.99	2.74	122.0
2011	4.04	2.77	123.5
2012	4.14	2.84	126.6
2013	4.13	2.83	126.5
2014	**4.34**	**2.97**	**132.7**

Freight revenue per RTM



9 Calculated by dividing freight revenue by revenue ton-miles (revenue tonne-kilometres).

10 Source: Bank of Canada data.

FREIGHT REVENUE BY COMMODITY

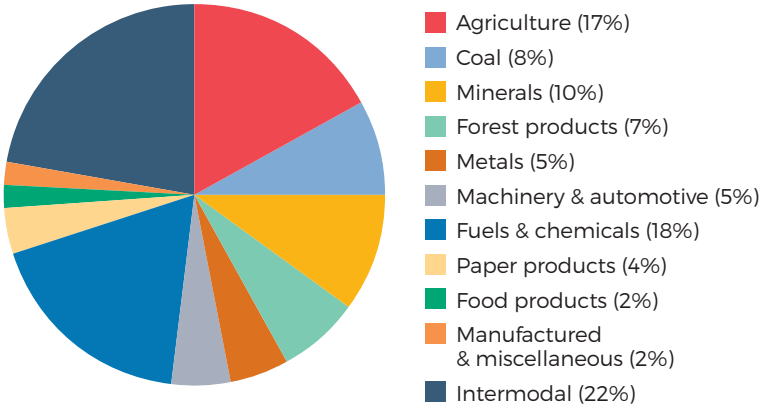
Freight revenue increased by 9.6 per cent to $9.9 billion in 2014 from the previous year. On a revenue basis, the largest increases among commodity groupings (based on each grouping's year-over-year increase) were fuels and chemicals (+23.7%), agricultural products (+20.4%), and food products (+17.2%). Year over year, revenues decreased in the coal (-8.7%) and paper products (-3.2%) groupings.

Revenue from carloads originated by commodity grouping ($ millions)

	Agriculture	Coal	Minerals	Forest products	Metals	Machinery & automotive
2005	948	738	811	969	429	414
2006	1,125	676	764	928	489	433
2007	1,157	709	819	780	476	445
2008	1,161	706	833	646	531	443
2009	1,259	502	525	478	317	337
2010	1,221	598	772	500	381	394
2011	1,297	713	898	564	424	381
2012	1,374	749	926	611	455	508
2013	1,433	833	973	660	448	481
2014	**1,725**	**760**	**1,030**	**702**	**501**	**481**

	Fuels & chemicals	Paper products	Food products	Manufactured & miscellaneous	Intermodal	Total
2005	804	642	74	112	2,152	8,093
2006	836	582	81	114	2,377	8,405
2007	837	541	81	116	2,452	8,413
2008	902	531	89	126	2,702	8,672
2009	818	423	94	113	2,273	7,139
2010	853	437	128	130	2,592	8,006
2011	928	427	146	133	1,893	7,805
2012	1,155	411	161	153	1,997	8,499
2013	1,420	406	155	174	2,019	9,001
2014	**1,756**	**393**	**181**	**177**	**2,162**	**9,869**

The chart below illustrates revenues by commodity grouping as a per cent of all revenues collected by RAC freight member-railways in 2014.



Canada's freight railways pass their productivity gains directly on to their customers — as they move more traffic, they are able to charge lower prices. In fact, Canada has some of the lowest freight rail rates in the world. Between 2005 and 2014, freight rail traffic grew by an average of 3.0 per cent per year. By comparison, average freight rail rates — as measured by revenue per revenue ton-mile (revenue tonne-kilometre) — increased by an average of 2.1 per cent each year, while commodity prices grew by an average of 2.5 per cent per year during that same period.

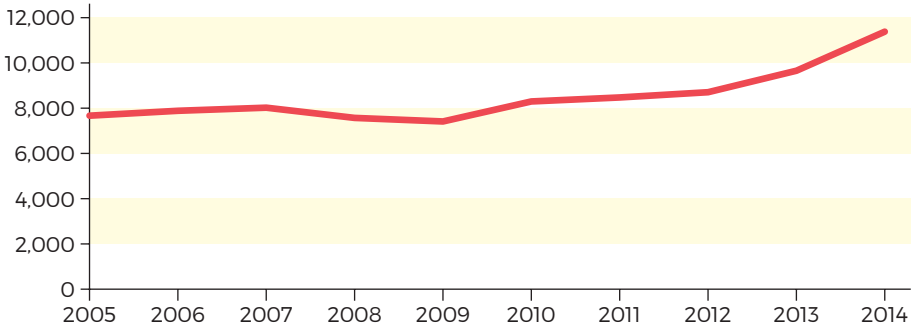
Photo: CP

PRODUCTIVITY

The best measure of freight railway labour productivity is the rate of revenue ton-miles per employee.[11] By this measure, employee productivity rose by 17.6 per cent in 2014, as traffic increased and the freight railway workforce shrunk.

	Revenue ton-miles per employee (000)	Revenue tonne-kilometres per employee (000)	Road miles per employee	Road kilometres per employee
2005	7,679	11,210	0.96	1.54
2006	7,963	11,625	0.98	1.58
2007	8,045	11,745	0.96	1.54
2008	7,625	11,132	0.94	1.51
2009	7,404	10,809	0.98	1.58
2010	8,287	12,098	0.96	1.54
2011	8,496	12,402	0.90	1.46
2012	8,772	12,806	0.86	1.39
2013	9,608	14,026	0.91	1.47
2014	**11,302**	**16,499**	**0.84**	**1.35**

RTM per employee (000)



11 Calculated by dividing the annual sum of revenue-producing tonnage by the average number of freight railway employees.

FUEL CONSUMPTION AND COST

Investments in modern locomotives, among other fuel-management technologies and policies, have allowed Canada's railways to make substantial emissions reductions, and to improve their fuel efficiency by 27.5 per cent since 2005.

In 2014, freight railways consumed 484.6 million gallons (2.2 billion litres) of fuel, up 4.4 per cent from the previous year, while moving a record amount of traffic. As a result, the freight railway sector's fuel efficiency[12] improved by 0.5 per cent to a record 667 RTM per gallon (215 RTK per litre). The cost of diesel fuel[13] increased by 8.8 per cent to $4.83 per gallon ($1.06 per litre) in 2014.

	Total fuel consumed		Revenue ton-miles per gallon of fuel consumed	Revenue tonne-kilometres per litre of fuel consumed	Cost of diesel fuel	
	gallons (000)	litres (000)			per gallon ($)	per litre (cents)
2005	485,915	2,209,007	523	168	2.38	52.5
2006	486,218	2,210,384	527	169	2.81	61.8
2007	492,125	2,237,237	529	170	3.07	67.6
2008	480,661	2,185,120	520	167	4.23	93.0
2009	411,612	1,871,221	545	175	2.94	64.8
2010	450,782	2,049,289	562	182	3.25	71.40
2011	436,558	1,984,178	621	202	4.25	93.46
2012	471,912	2,145,346	615	198	4.24	93.33
2013	464,275	2,110,651	664	214	4.44	97.63
2014	**484,572**	**2,202,872**	**667**	**215**	**4.83**	**106.21**

Canada's railways move 75 million people and close to 70 per cent of all intercity surface goods in Canada each year, while producing just 3 per cent of our country's transportation-related greenhouse gas emissions – making rail one of Canada's greenest transportation options.

12 Calculated by dividing total revenue ton-miles (revenue tonne-milometres) by the total volume of fuel consumed.

13 Includes fuel expenses and gallons (litres) consumed by both freight and passenger railways.

PASSENGER TRANSPORTATION

Canada's passenger railways move millions of people each year, while reducing congestion on highways and limiting harmful emissions. In 2014, overall passenger rail traffic grew, mainly due to a rise in the use of commuter rail.

COMMUTER RAIL

Within the passenger sector, the total number of railway commuters in British Columbia, Ontario and Quebec — the three provinces with commuter railway services — increased by 2.2 per cent in 2014 from the previous year. Commuter passenger-miles rose by 2.0 per cent, and commuter train-miles grew by 3.0 per cent. However, the average number of commuters per train declined by 3.7 per cent, year over year.

	Commuter passenger[14]		Commuter train		Average rail commuters per train	Rail commuters (000) in British Columbia, Ontario and Quebec
	miles (000)	kilometres (000)	miles (000)	kilometres (000)		
2005	224,833	361,834	2,820	4,539	283	58,235
2006	237,781	382,672	2,730	4,394	300	60,634
2007	247,066	397,615	2,808	4,518	339	63,393
2008	256,123	412,190	2,832	4,558	340	67,052
2009	245,942	395,806	2,876	4,628	301	65,962
2010	256,134	412,209	3,008	4,841	310	68,562
2011	278,244	447,791	3,171	5,103	255	68,427
2012	288,161	463,752	4,356	7,011	342	70,035
2013	2,570,664	4,137,075	4,477	7,205	287	70,266
2014	**2,622,039**	**4,219,754**	**4,610**	**7,419**	**276**	**71,829**

Photo: Shutterstock

14 Commuter passenger-miles (commuter passenger-kilometres) statistics before 2013 exclude GO Transit, which began reporting this data to RAC in 2013.

INTERCITY PASSENGER RAIL

In the intercity passenger sector, passenger-miles and passenger train-miles decreased by 3.1 and 1.3 per cent, respectively, in 2014 from the previous year. The average number of intercity passengers per train[15] declined by 1.8 per cent, while the average length of journey edged down by 0.6 per cent.

	Passenger cars in service	Number of passengers (000)	Passenger miles (millions)	Passenger kilometres (millions)
2005	538	4,322	919	1,479
2006	537	4,320	906	1,458
2007	538	4,478	912	1,468
2008	540	4,899	986	1,588
2009	559	4,538	894	1,439
2010	545	4,477	877	1,412
2011	544	4,461	888	1,428
2012	542	4,246	871	1,402
2013	552	4,186	861	1,386
2014	**552**	**4,094**	**834**	**1,343**

	Passenger train		Passenger car	
	miles (000)	kilometres (000)	miles (000)	kilometres (000)
2005	7,415	11,933	49,966	80,412
2006	7,381	11,879	49,400	79,501
2007	7,330	11,796	48,708	78,388
2008	7,414	11,932	49,140	79,083
2009	7,334	11,803	47,290	76,106
2010	7,331	11,799	46,275	74,472
2011	7,273	11,705	48,239	77,633
2012	7,075	11,386	48,725	78,415
2013	6,809	10,958	43,673	70,285
2014	**6,720**	**10,814**	**41,587**	**66,928**

15 Calculated by dividing the number of intercity passengers by the number of passenger trains.

	Average intercity passengers per train	Average length of journey		Average passenger load factor (%)	On-time performance (%)
		miles	kilometres		
2005	124	217	349	55	81
2006	123	214	344	54	84
2007	124	209	336	55	77
2008	133	206	332	59	75
2009	122	203	327	57	83
2010	120	204	328	57	82
2011	122	204	328	55	84
2012	123	213	342	54	82
2013	126	214	344	56	82
2014	**124**	**213**	**342**	**60**	**76**

Photo: VIA Rail

SAFETY

Nothing is more important to Canada's railways than operating safely. In 2014, the railway industry introduced new initiatives to improve safety, transparency and emergency preparedness, while accelerating existing efforts. The industry also increased its training and outreach, and invested $1.8 billion to maintain and upgrade the safety and efficiency of its Canadian network.[16]

Excluding crossing and trespassing incidents, non-main-track accidents accounted for more than three quarters of all railway accidents in 2014. Most non-main-track accidents are minor and occur during switching operations at speeds of less than 10 m.p.h.

NOTE: Rail Trends safety data reflects the performance of RAC's federally and provincially regulated freight and passenger member-railways. The data in this section comes from the Transportation Safety Board of Canada (TSB) and RAC. The TSB maintains a database of safety performance statistics on federally regulated railways, as well as provincially regulated railways that voluntarily report their data. RAC collects similar statistics for its member-railways. Each organization uses the same safety definitions, and the data reflects railway operations in Canada only.

Photo: CP

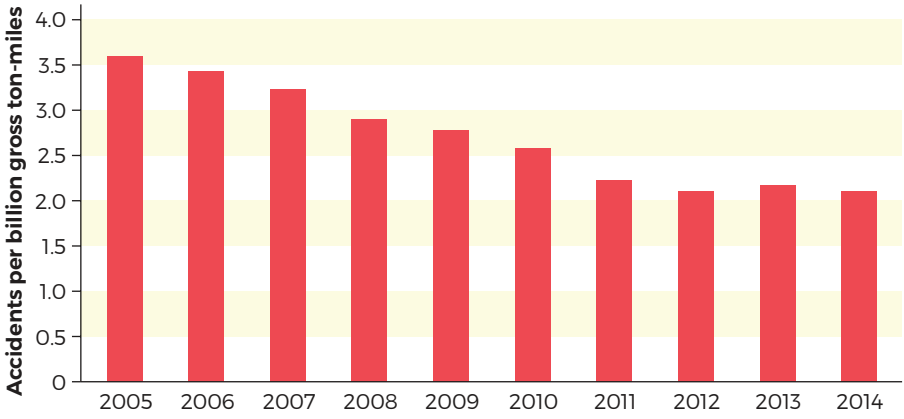
16 See the Investments sub-section for a breakdown of railway industry investments.

FREIGHT

In 2014, the freight sector's accident rate[17] fell by 2.8 per cent to 2.11 accidents per billion gross ton-miles (BGTM), the second-lowest freight accident rate ever recorded. This accident rate was 11.0 per cent lower than the five-year average. Since 2005, the freight sector's accident rate has dropped by 41.4 per cent. Main-track collisions and derailments accounted for less than 10.0 per cent of all freight rail accidents in 2014.

	Freight accidents	BGTM	Accident rate
2005	1647	457.95	3.60
2006	1578	459.63	3.43
2007	1497	463.36	3.23
2008	1304	449.92	2.90
2009	1104	397.29	2.78
2010	1155	447.05	2.58
2011	1057	473.31	2.23
2012	1060	503.88	2.10
2013	1149	529.38	2.17
2014	**1191**	**564.31**	**2.11**

Freight accident rate



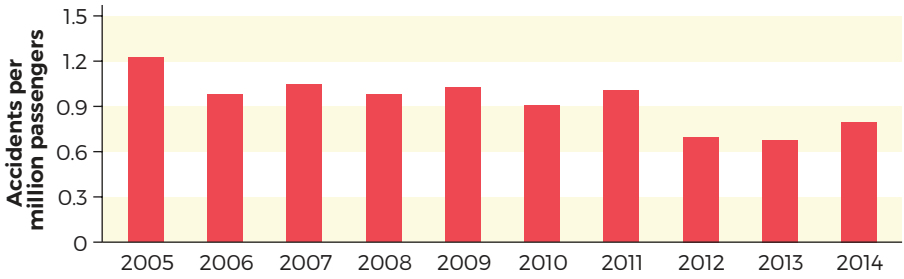
17 Calculated by dividing the number of reportable freight rail accidents by the freight sector's workload in gross ton-miles.

PASSENGER

In 2014, the passenger rail sector's accident rate[18] rose by 17.6 per cent to 0.80 accidents per million passengers, but fell by 8.0 per cent from the five-year average. Since 2005, the passenger sector's accident rate has fallen by 35.0 per cent. Main-track collisions and derailments accounted for less than 5.0 per cent of all passenger rail accidents in 2014.

	Passenger accidents	Intercity passengers	Commuters	Tourist passengers	Total (million)	Accident rate
2005	77	4322	58,235	277	63	1.23
2006	64	4320	60,634	360	65	0.98
2007	72	4478	63,393	378	68	1.05
2008	71	4899	67,052	352	72	0.98
2009	73	4538	65,962	175	71	1.03
2010	67	4477	68,562	222	73	0.91
2011	74	4461	68,427	192	73	1.01
2012	52	4246	70,035	214	74	0.70
2013	51	4250	70,092	215	75	0.68
2014	**61**	**4094**	**71,829**	**371**	**76**	**0.80**

Passenger accident rate



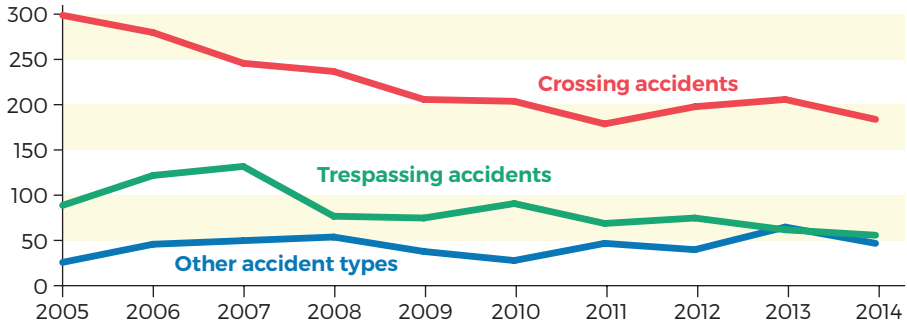
18 Calculated by dividing the number of passenger rail accidents by the total number of intercity and tourist passengers and rail commuters.

CROSSING AND TRESPASSING ACCIDENTS

The number of crossing accidents decreased by 10.7 per cent in 2014 from the previous year, and fell by 7.4 per cent from the 2009–2013 average. Trespassing accidents dropped by 9.7 per cent, year over year, and fell by 24.7 per cent from the five-year average. Other accident types declined by 27.7 per cent from 2013.

	Crossing accidents	Trespassing accidents	Other accident types
2005	299	89	26
2006	280	122	46
2007	246	132	50
2008	237	77	54
2009	206	75	38
2010	204	91	28
2011	179	69	47
2012	198	75	40
2013	206	62	65
2014	**184**	**56**	**47**

Accidents by type of occurrence



Operation Lifesaver (OL) is an organization sponsored by Canada's railway industry and Transport Canada, which works to teach Canadians about rail crossing and trespassing safety. In 2014, OL's network of more than 400 volunteers conducted nearly 800 presentations and other activities across Canada about the importance of public-rail safety.

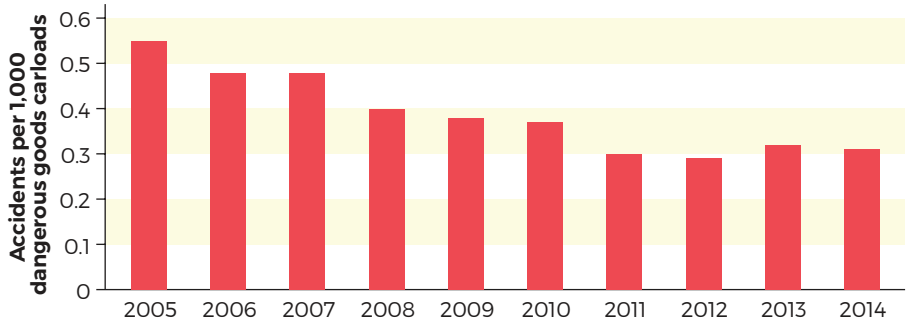
ACCIDENTS INVOLVING DANGEROUS GOODS

Canada's railways are legally obligated to move dangerous goods[19] under the *Canada Transportation Act*. Over many years, the industry has developed a strong safety record thanks to robust investments in infrastructure, training and technology.

In 2014, the industry's accident rate involving dangerous goods[20] fell by 3.1 per cent from the previous year, and by 6.1 per cent from the 2009–2013 average. More than three quarters of reportable dangerous goods accidents in 2014 occurred off the main track.

	Total accidents involving dangerous goods	Dangerous goods carloads	Accident rate (accidents per 1,000 dangerous goods carloads)
2005	229	414,752	0.55
2006	196	406,425	0.48
2007	206	426,789	0.48
2008	170	422,764	0.40
2009	145	379,650	0.38
2010	149	400,318	0.37
2011	129	425,124	0.30
2012	124	428,660	0.29
2013	157	493,360	0.32
2014	**179**	**576,226**	**0.31**

Accidents involving dangerous goods



19 "Dangerous goods" are defined in section 2 of the *Transportation of Dangerous Goods Act*, 1992.

20 Calculated by dividing total accidents involving dangerous goods by the number of dangerous goods carloads moved by Canada's railways.

In 2014, Canada's railways trained more than 9,500 first responders, railway employees and industrial plant workers on dangerous goods handling and emergency response. The industry also sponsored more than 300 first responders to receive rail-specific dangerous goods training in Pueblo, Colo. Canada's railways also held 125 safety-related public meetings with mayors, city managers and First Nations chiefs from coast to coast, and shared information about the goods moving through 565 communities, to help first responders prepare and plan.

Photo: Sarah Mayes

FINANCIAL INFORMATION, INVESTMENTS AND TAXES

Over the last 10 years, Canada's railways have invested close to 14 per cent of their revenues — more than $16.0 billion — back into their Canadian network. These investments cover all areas of railroading, and ensure Canada's railway sector remains globally competitive, sustainable, and most importantly, safe.

OPERATING EXPENSES

In 2014, the Canadian rail sector's operating expenses rose 10.1 per cent to $11.4 billion, mainly due to higher costs for transportation,[21] fuel, and equipment maintenance.

Operating expenses ($ millions)

	Transportation	Fuel	Equipment maintenance	Maintenance-of-way and structures	General and administrative	Total
2005	2,241	1,159	1,382	1,493	1,501	7,776
2006	2,224	1,367	1,575	1,408	1,637	8,211
2007	2,337	1,513	1,634	1,549	1,462	8,495
2008	2,376	2,032	1,564	1,718	1,477	9,167
2009	2,065	1,212	1,555	1,612	1,908	8,352
2010	2,195	1,464	1,452	1,766	2,294	9,171
2011	2,381	1,854	1,570	1,910	2,059	9,774
2012	2,534	2,002	1,549	1,873	2,617	10,575
2013	2,521	2,061	1,698	1,968	2,132	10,380
2014	**2,976**	**2,340**	**1,876**	**2,109**	**2,131**	**11,431**

Photo: Cando Rail Services

21 Transportation costs are expenses incurred through the movement of rolling stock (locomotives, railcars, etc.) that are not reported under other operating expense categories.

OPERATING REVENUES

The Canadian rail sector's operating revenue grew to $14.7 billion in 2014, a 9.9 per cent jump from 2013. Operating revenue is made up of three components: freight, passenger and other revenue sources. Freight revenue accounted for more than 90.0 per cent of total operating revenue in 2014, while passenger revenue accounted for just over 5.0 per cent. Other revenue is largely accrued from services provided to passenger and commuter rail companies, as well as switching, demurrage (the rental or storage of railcars) and miscellaneous rentals.

OPERATING INCOME

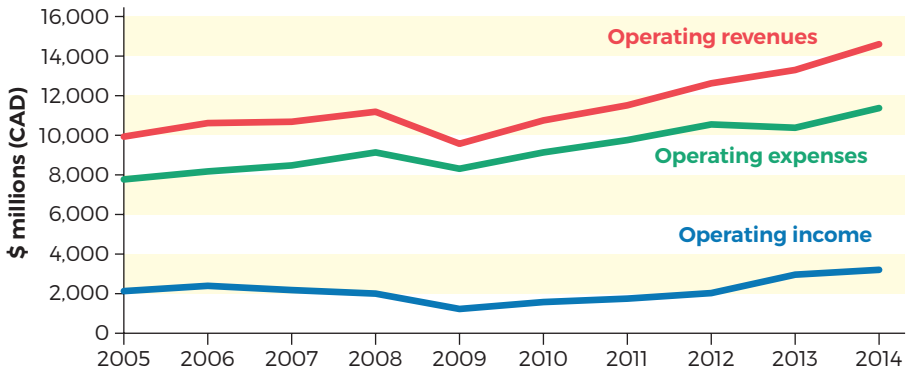
The operating income[22] of RAC members rose 9.2 per cent to $3.2 billion in 2014.

Operating revenue ($ millions)

	Freight	Passenger	Other	Total
2005	8,794	576	570	9,940
2006	9,430	622	561	10,613
2007	9,516	624	564	10,704
2008	9,957	661	579	11,197
2009	8,433	627	539	9,599
2010	9,551	673	544	10,768
2011	10,305	668	561	11,533
2012	11,322	674	637	12,633
2013	12,040	668	622	13,330
2014	**13,287**	**687**	**679**	**14,653**

Operating income ($ millions)

	Total
2005	2,164
2006	2,402
2007	2,209
2008	2,030
2009	1,247
2010	1,598
2011	1,760
2012	2,058
2013	2,948
2014	**3,218**



22 Operating income reflects earnings before interest and taxes.

INVESTMENTS

Canada's railways invested $1.8 billion into their Canadian network in 2014, a 2.4 per cent increase from the previous year, and a 4.8 per cent rise over the five-year average. In particular, investment (based on year-over-year changes) increased for intermodal equipment (+211.8%), other equipment (+32.5%), and track and roadway (+10.1%).

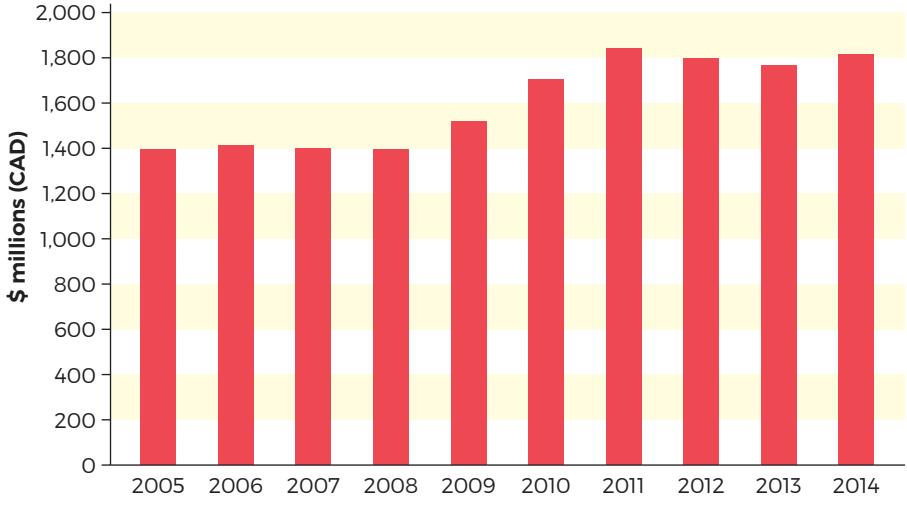
Investments ($ millions)

	Track & roadway	Buildings & related machinery & equipment	Signals, communications & power	Terminals & fuel stations
2005	582	189	95	27
2006	613	212	74	37
2007	618	255	44	43
2008	688	189	79	26
2009	706	257	72	24
2010	804	231	109	16
2011	971	314	108	15
2012	961	269	122	41
2013	892	357	100	32
2014	**982**	**287**	**93**	**10**

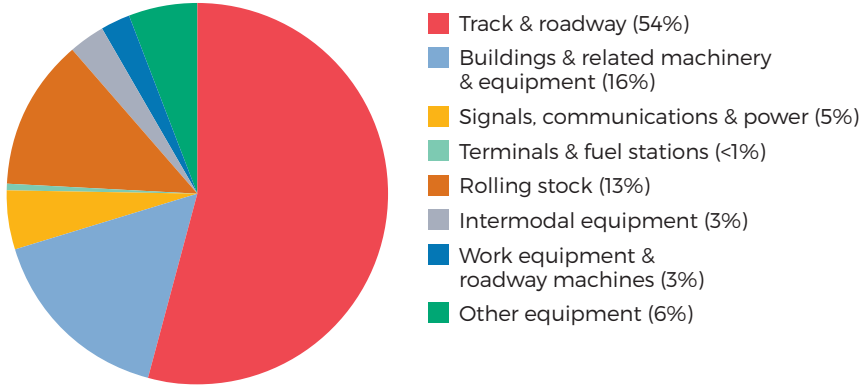
	Rolling stock	Intermodal equipment	Work equipment & roadway machines	Other equipment	Total additions
2005	416	39	31	15	1,394
2006	352	48	44	28	1,408
2007	350	30	41	18	1,399
2008	290	29	68	22	1,391
2009	317	34	42	72	1,524
2010	427	15	49	55	1,706
2011	307	11	53	64	1,844
2012	255	22	49	77	1,795
2013	239	17	50	77	1,764
2014	**230**	**53**	**48**	**102**	**1,806**

Photo: Rocky Mountaineer

Investments



The chart below illustrates investments by category as a percentage of all investments made by RAC member-railways in 2014.



TAXES

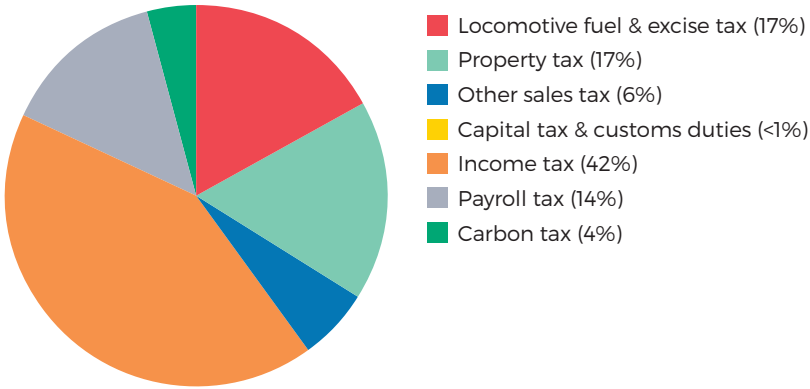
In 2014, Canada's railways paid $1.1 billion in total taxes — a 9.8 per cent decrease from the previous year. The main contributor to this decline was a 26.5 per cent drop in the total corporate income taxes paid by railways from the previous year.

Meanwhile, payroll taxes grew by 2.7 per cent in 2014 over the previous year.

Taxes by category ($ millions)

	Locomotive fuel & excise tax	Property tax	Other sales tax	Capital tax & customs duties	Income tax	Payroll taxes	Carbon tax[23]	Total
2005	180	155	98	31	101	151	n/a	716
2006	188	155	102	21	471	147	n/a	1,084
2007	188	154	97	15	381	154	n/a	989
2008	187	152	99	14	323	155	n/a	930
2009	177	152	97	14	265	148	n/a	853
2010	195	150	96	14	185	147	n/a	787
2011	204	153	70	0	372	158	n/a	957
2012	220	158	70	0	159	170	n/a	777
2013	219	169	43	1	629	150	n/a	1,209
2014	**186**	**179**	**65**	**1**	**462**	**154**	**44**	**1,091**

The chart below illustrates taxes paid by category as a percentage of total taxes paid by RAC member-railways.



23 Prior to 2014, carbon tax data was included in the *Locomotive fuel & excise tax* category.

Payroll taxes ($ millions)

	Canada/Quebec Pension Plan	Unemployment insurance	Health taxes	Total
2005	72	36	43	151
2006	72	32	43	147
2007	75	33	46	154
2008	77	33	45	155
2009	74	30	44	148
2010	73	31	43	147
2011	77	34	47	158
2012	84	37	49	170
2013	75	32	43	150
2014	**77**	**37**	**40**	**154**

Taxes by jurisdiction ($000)

	Locomotive fuel & excise tax		Fuel tax per litre (cents)	Property tax	
	2013	2014	2014	2013	2014
Alberta	4,739	5,034	1.5	15,825	16,254
British Columbia	56,904	16,413	10.7	42,011	41,204
Manitoba	10,687	11,090	6.3	14,118	13,644
Nfld. & Labrador	0	0	16.5	33	33
New Brunswick	1,195	1,183	4.3	1,865	1,976
Nova Scotia	0	0	15.4	3,000	2,816
Ontario	23,835	26,212	4.5	34,300	43,671
Quebec	4,143	3,404	3.0	38,863	39,508
Saskatchewan	38,645	40,114	15.0	18,542	19,645
Northwest Territories	0	0	11.4	61	93
Federal	78,791	82,650	4.0	0	0
Total	218,939	**186,100**		168,617	**178,844**

	Other sales tax		Capital tax & customs duties		Income tax	
	2013	2014	2013	2014	2013	2014
Alberta	73	0	594	1027	46,384	37,585
British Columbia	16,674	35,074	0	0	0	1,358
Manitoba	14,089	15,972	137	137	612	1,414
Nfld. & Labrador	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0
Nova Scotia	0	0	23	0	4	4
Ontario	26	2,154	118	118	47,248	48,514
Quebec	469	1,470	0	0	28,471	19,545
Saskatchewan	10,908	9,643	88	88	649	2,634
Northwest Territories	0	0	0	0	0	0
Federal	380	513	-376	-375	505,634	351,343
Total	42,618	**64,826**	584	**995**	629,002	**462,396**

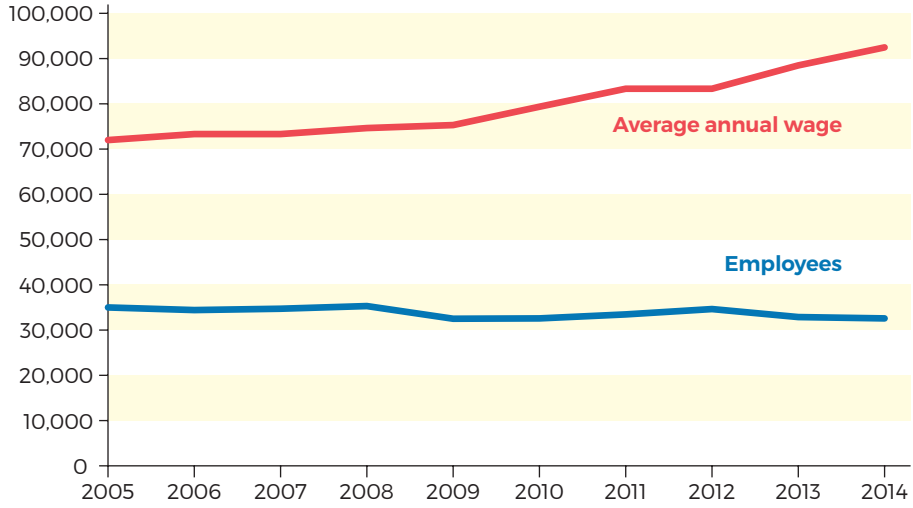
EMPLOYMENT

A large percentage of Canadian railway employees are reaching retirement age, and the workforce is shrinking due to attrition. In 2014, RAC member-companies developed education and recruitment initiatives in partnership with stakeholders, to ensure that Canada's railway industry remains well positioned to both replenish and grow its workforce.

The Canadian rail industry's workforce shrunk by 1.5 per cent in 2014, while the sector's compensation[24] grew by 3.4 per cent. As a result, the average annual wage per employee increased by 4.9 per cent in 2014, to $92,491.

	Total compensation ($ millions)	Average number of employees	Average annual wage per employee ($)
2005	2,548	35,389	71,994
2006	2,535	34,558	73,356
2007	2,566	34,938	73,440
2008	2,633	35,208	74,790
2009	2,439	32,337	75,415
2010	2,584	32,565	79,346
2011	2,797	33,624	83,163
2012	2,870	34,629	82,883
2013	2,924	33,167	88,153
2014	**3,023**	**32,681**	**92,491**

Employment



24 Compensation includes salaries and compensation paid, but excludes company paid benefits such as the Canada/Quebec Pension Plan, unemployment insurance and health taxes.

TRACK AND EQUIPMENT

Canadian railways operated 27,304 miles (43,942 kilometres) of track in 2014, up 0.1 per cent from the previous year.[25] The increase was mainly due to track mileage reported by new RAC member-railways.

The industry's freight car fleet was reduced by 1.4 per cent in 2014, mainly due to shippers owning more of their own cars. The number of locomotives in service fell by 11.4 per cent from the previous year.

	Miles	Kilometres	Index 2000 = 100	Freight cars in service	Locomotives in service
2005	30,380	48,893	104.9	101,606	3,253
2006	29,978	48,243	103.5	99,946	3,271
2007	29,713	47,816	102.6	92,373	3,165
2008	29,366	47,258	101.4	83,984	3,046
2009	28,163	45,323	97.3	75,836	2,742
2010	27,654	44,501	95.5	71,788	2,954
2011	27,102	43,617	93.6	71,750	2,977
2012	26,923	43,328	93.0	64,485	3,063
2013	27,270	43,887	94.2	59,395	3,043
2014	**27,304**	**43,942**	**94.3**	**58,577**	**2,696**

Track operated, by provinces and territories

	2013		2014	
	Miles	Kilometres	Miles	Kilometres
Alberta	4,150	6,679	4,041	6,503
British Columbia	4,174	6,717	4,174	6,717
Manitoba	2,662	4,284	2,833	4,559
Nfld. & Labrador	162	261	162	261
New Brunswick	720	1,159	720	1,159
Nova Scotia	419	674	419	674
Ontario	6,270	10,091	6,265	10,082
Quebec	3,554	5,719	3,613	5,815
Saskatchewan	5,083	8,181	5,002	8,050
Northwest Territories	75	121	75	121
Total	27,270	43,887	**27,304**	**43,942**
Intercity passenger trains[26]	7,820	12,585	7,820	12,585
Commuter and tourist trains[27]	2,365	3,806	3,101	4,990
Segments terminating in the U.S.[28]	152	244	152	244
Grand total	37,607	60,523	**38,377**	**61,762**

25 Segments of track acquired by non-RAC-member railways would have the effect of reducing the total track mileage reported in Rail Trends.

26 Reflects intercity passenger railways' track and operating rights over track owned by other railways.

27 Reflects commuter and tourist railways' track and operating rights over track owned by other railways.

28 Reflects railway subdivisions that begin in Canada and terminate in the United States.

APPENDIX A
GLOSSARY

Class 1 railway: A railway with annual operating revenues exceeding $250 million for two consecutive years.

Container: A large, weatherproof box designed for shipping and/or transferring freight between rail, truck or marine modes. Specialized containers are equipped with heating and cooling capabilities for perishable products.

Gross ton-mile (Gross tonne-kilometre): The movement of total train weight over a distance of one mile. Total train weight is comprised of the freight cars, their contents and any inactive locomotives. It excludes the weight of the locomotives pulling the trains.

Intermodal service: The movement of trailers or containers by rail and at least one other mode of transportation. Import and export containers generally are shipped via marine and rail. Domestic intermodal service usually involves truck and rail.

On-time performance: The ability to meet customer requirements as to pick-up and delivery schedules.

Passenger-mile: A passenger-mile denotes one mile travelled by one passenger, and is used to measure the volume of passenger traffic.

Revenue ton-miles (Revenue tonne-kilometres): The movement of one revenue-producing ton of freight over a distance of one mile.

Shortline railway: A railway with annual operating revenues of less than $250 million for two consecutive years.

Track operated: The first main track over which a railway operates. This excludes second and other main track, passing tracks and crossovers, industrial tracks, spurs and yard tracks. Excludes track used by intercity passenger trains, commuter and tourist trains, and segments of track terminating in the U.S.

Train-mile: The movement of a train the distance of one mile.

APPENDIX B
SAFETY DEFINITIONS

The following definitions apply to railway occurrences that are required to be reported under the *Canadian Transportation Accident Investigation and Safety Board Act* and its associated regulations.

Reportable railway accident
An incident in which:

1. a person is killed or sustains a serious injury as a result of
   (i) getting on or off or being on board the rolling stock, or
   (ii) coming into contact with any part of the rolling stock or its contents;

2. the rolling stock or its contents
   (i) are involved in a collision or derailment,
   (ii) sustain damage that affects the safe operation of the rolling stock,
   (iii) cause or sustain a fire or explosion, or
   (iv) cause damage to the railway that poses a threat to the safe passage of rolling stock or to the safety of any person, property or the environment.

Dangerous goods involvement
An accident is considered to have dangerous goods involvement if any of a train's cars carrying (or having last contained) a dangerous good derails, strikes or is struck by any other rolling stock or object. It does not mean that there was any release of product. Also included are crossing accidents in which the motor vehicle involved (e.g., tanker truck) is carrying a dangerous good.

Crossing accident
A crossing accident is when a locomotive or railcar is involved in a collision with a motor vehicle or pedestrian at a railway crossing, resulting in death, serious injury or property damage.

Trespassing accident
Trespassing accidents occur when people — primarily pedestrians who are not authorized to be on railway rights-of-way — are struck by locomotives or railway cars anywhere other than at railway crossings.

Other accident types
Other accident types include but are not limited to, trespassing, collisions/derailments involving track units, rolling stock collisions with objects, or employee/passenger accidents.

APPENDIX C
CONVERSION FACTORS

Miles to kilometres	1.6093
Tons (short) to metric tonnes	0.9072
Gallons to litres	4.5461
Revenue ton-miles to revenue tonne-kilometres	1.4599
Kilometres to miles	0.6214
Metric tonnes to tons (short)	1.1023
Litres to gallons	0.2200
Revenue tonne-kilometres to revenue ton-miles	0.6850