

CANADIAN NATIONAL RAILWAY CO  
Form 6-K  
October 22, 2015

**FORM 6-K**  
**SECURITIES AND EXCHANGE COMMISSION**  
**Washington, D.C. 20549**

**Report of Foreign Issuer**

**Pursuant to Rule 13a-16 or 15d-16**  
**of the Securities Exchange Act of 1934**

For the month of October, 2015

Commission File Number: 001-02413

**Canadian National Railway Company**  
(Translation of registrant's name into English)

**935 de la Gauchetiere Street West**  
**Montreal, Quebec**  
**Canada H3B 2M9**  
(Address of principal executive offices)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F:

Form 20-F  Form 40-F

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Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1):

Yes  No

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7):

Yes  No

Indicate by check mark whether by furnishing the information contained in this Form, the Registrant is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934:

Yes  No

If "Yes" is marked, indicate below the file number assigned to the registrant in connection with Rule 12g3-2(b): N/A

**Canadian National Railway Company**

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1. 2015 CN Investor Fact Book - Building for the Future

**Item 1**





Except where otherwise indicated, all financial information reflected in this document is expressed in Canadian dollars and determined on the basis of United States generally accepted accounting principles (U.S. GAAP).

For the most up-to-date information, please visit [www.cn.ca/en/investors](http://www.cn.ca/en/investors). A variety of informative documents is available, including annual reports, proxy statements, quarterly earnings, press releases, company presentations and weekly performance metrics.

## COMPANY PROFILE

CN is a world-class transportation leader and the only transcontinental railway in North America. Our 19,600-mile network spans Canada and Mid-America, connecting three coasts: the Atlantic, the Pacific and the Gulf of Mexico. We offer fully integrated rail and other transportation services, including intermodal, trucking, freight forwarding, warehousing and distribution. Our extensive network, along with our co-production arrangements, routing protocols, marketing alliances and interline agreements provide connections to all points in North America and beyond. A true backbone of the economy, CN handles over \$250 billion worth of goods, hauls about 20 per cent of Canada's exports, and carries more than 300 million tons of cargo annually. If you eat it, drive it or use it, chances are we move it.

CN's freight revenues are derived from seven commodity groups representing a diversified and balanced portfolio of goods transported between a wide range of origins and destinations. This product and geographic diversity positions CN to weather economic fluctuations and enhances our potential for growth opportunities. CN is the originating carrier for approximately 85 per cent of traffic moving along our network and close to 70 per cent of our traffic originates and terminates on our network, which allows CN to capitalize on service and asset utilization advantages.

CN is an engaged company, committed to safety for our employees, our customers and the communities in which we operate. CN strives to provide a safe, supportive work environment that values diversity, respect, integrity and pride. With a clear strategic agenda driven by a commitment to safety, innovation, productivity, collaboration and sustainability, CN aims to create value for its customers and shareholders.

2015 CN INVESTOR FACT BOOK



*As used herein, the word “Company” or “CN” means, as the context requires, Canadian National Railway Company and/or its subsidiaries.*

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Certain information included in the *2015 CN Investor Fact Book* constitutes “forward-looking statements” within the meaning of the United States Private Securities Litigation Reform Act of 1995 and under Canadian securities laws. CN cautions that, by their nature, these forward-looking statements involve risks, uncertainties and assumptions. The Company cautions that its assumptions may not materialize and that current economic conditions render such assumptions, although reasonable at the time they were made, subject to greater uncertainty.

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Such forward-looking statements are not guarantees of future performance and involve known and unknown risks, uncertainties and other factors which may cause the actual results or performance of the Company or the rail industry to be materially different from the outlook or any future results or performance implied by such statements. Important risk factors that could affect the forward-looking statements include, but are not limited to, the effects of general economic and business conditions, industry competition, inflation, currency and interest rate fluctuations; changes in fuel prices; legislative and/or regulatory developments; compliance with environmental laws and regulations; actions by regulators; various events which could disrupt operations, including natural events such as severe weather, droughts, floods and earthquakes; labor negotiations and disruptions; environmental claims; uncertainties of investigations, proceedings or other types of claims and litigation; risks and liabilities arising from derailments; and other risks detailed from time to time in reports filed by CN with securities regulators in Canada and the United States. Reference should be made to “Management’s Discussion and Analysis” in CN’s annual and interim reports, Annual Information Form and Form 40-F filed with Canadian and U.S. securities regulators, available on CN’s website ([www.cn.ca/en/investors](http://www.cn.ca/en/investors)), for a summary of major risks.

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CN assumes no obligation to update or revise forward-looking statements to reflect future events, changes in circumstances, or changes in beliefs, unless required by applicable Canadian securities laws. In the event CN does update any forward-looking statement, no inference should be made that CN will make additional updates with respect to that statement, related matters, or any other forward-looking statement.

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2015 CN INVESTOR FACT BOOK 2

2015 CN INVESTOR FACT BOOK 3

This year's edition of the *CN Investor Fact Book* is aptly entitled "Building for the Future." Although CN has been an industry leader for many years, we're not content to rest on our laurels. We are intently focused on how to shape our future and the steps we need to take to stay at the forefront of the industry.

The *Fact Book* is an important resource for anyone wanting to learn more about CN. It explains our business model and operating philosophy, our network and equipment, as well as our markets and financials. It lays out our goals in a comprehensive manner. In short, this book has CN covered.

2014 was a good year for CN. Among our many achievements, we moved record volumes, including the largest grain harvest in Canadian history, earned our highest revenues and profits ever, and improved many of our service metrics. CN's growth continues to outpace base economic conditions at low incremental cost. We're building on a strong foundation of Operational and Service Excellence, with an end-to-end supply chain approach. We continue to grow the business by helping our customers to win in their markets and, at the same time, improve our own efficiencies. Our focus on efficiency and profitable growth is the basis for driving solid shareholder value.

A MESSAGE  
FROM  
CLAUDE  
MONGEAU

Some of our other accomplishments in 2014 included launching innovative tools to improve our interaction with customers, such as iAdvise. iAdvise addresses key customer pinch points, especially in the first and last miles of the shipment cycle, by providing merchandise customers with a suite of electronic tools to help them manage their shipments. We also opened two new state-of-the-art training facilities for employees. Our CN Campus delivers a modern, hands-on training curriculum focused on instilling a strong safety culture and upgrading skills for hundreds of railroaders every week. Our sustainability practices confirmed CN as the leader in the Transportation and

Transportation Infrastructure sector of the Dow Jones Sustainability World Index and we were named to the CDP Climate Performance Leadership Index.

On a personal note, January 2015 marked five years since I became the President and CEO of CN. I am very proud of how we've performed since 2010, through innovation, teamwork, careful planning and solid execution. One of the amazing transformations that has happened since 2010 has been our workforce renewal. Well over half of CN employees today were not with us five years ago. The fact that we're still an industry leader despite that much change is a testament to how well our new recruits are being onboarded and adopting the CN way of railroading.

Our entire team is focused on building the CN of the future. We are determined to strengthen CN's role as a true backbone of the economy and continue to do so with an unwavering commitment to safety. We continue to invest ahead of the curve to support our growth agenda. In 2015, CN is planning to invest \$2.7 billion to maintain network integrity and fluidity, and to grow the business at low incremental cost.

Looking ahead, I feel tremendous confidence in our franchise, our opportunities and our people. We have a proven business model and demonstrated ability to execute and deliver every day. In this, our 20th year since CN's privatization, I look forward to building a solid future for the next 20 years.

**Claude Mongeau**

President and CEO

## LEADERSHIP TEAM

**Claude Mongeau** became President and Chief Executive Officer of CN on January 1, 2010. He joined CN in May 1994 and has held the positions of Vice-President Strategic and Financial Planning, and Assistant Vice-President Corporate Development. He was appointed Executive Vice-President and Chief Financial Officer in October 2000.

**Sean Finn** was appointed Executive Vice-President Corporate Services and Chief Legal Officer in December 2008. He is responsible for a wide array of legal, government, regulatory, public affairs, risk mitigation and security matters. Mr. Finn joined CN in January 1994 and led the Company's corporate tax function. He was appointed Treasurer and Principal Tax Counsel in August 1996, Vice-President Treasurer and Principal Tax Counsel in January 2000, Senior Vice-President, Chief Legal Officer and Corporate Secretary in December 2000, and Senior Vice-President Public Affairs, Chief Legal Officer and Corporate Secretary in February 2003.

**Luc Jobin**, CN's Executive Vice-President and Chief Financial Officer, joined CN in mid-2009 to oversee the Company's financial management and strategic planning. In January 2010, Mr. Jobin also assumed responsibility for the information technology function at CN. From 2005 to 2009, Mr. Jobin was an Executive Vice-President of Power Corporation of Canada. Before that, he spent 22 years with Imasco Limited and Imperial Tobacco, rising to President and CEO.

**Jean-Jacques Ruest** was appointed Executive Vice-President and Chief Marketing Officer in January 2010, with responsibility for providing strategic



direction and leadership for CN's Sales, Marketing and CN Supply Chain Solutions groups. Mr. Ruest joined CN in 1996 as Vice-President Petroleum and Chemicals. He was appointed Vice-President Industrial Products in 2003, Vice-President Marketing in 2004 and Senior Vice-President Marketing in June 2006.

**Jim Vena** was appointed Executive Vice-President and Chief Operating Officer in February 2013. Mr. Vena joined CN in 1977 as a Brakeman and worked in numerous operating jobs from Yardmaster, Conductor and Locomotive Engineer to Trainmaster and Superintendent, among other duties. In 2005, he was named Vice-President of CN's Champlain District. In 2006, he was appointed Vice-President Operations Eastern Region and then Senior Vice-President Eastern Region. He became Senior Vice-President Western Region in June 2007. Prior to his most recent appointment, Mr. Vena had served as Senior Vice-President Southern Region since April 2009.

**Janet Drysdale** was appointed Vice-President Investor Relations in December 2012. Prior to that, she had been Director Economics and Strategy since October 2009. Ms. Drysdale joined CN in 1996, initially working as a Project Officer before moving to positions of increasing responsibility in Sales & Marketing, Investor Relations and Financial Planning.

**Kimberly Madigan** was appointed Vice-President Human Resources in January 2010. In her role, she is responsible for managing CN's Human Resources, Labor Relations and Medical Service groups. Ms. Madigan joined CN in 1999 as Vice-President Human Resources for CN's U.S. operations. She assumed network-wide responsibilities in 2002 as Vice-President Labor Relations for North America and Vice-President People in June 2009.

## A TRANSFORMATIONAL JOURNEY

In 2015, CN is celebrating the 20th anniversary of our Initial Public Offering (IPO). It has been a remarkable transformational journey since the Government of Canada privatized CN on November 17, 1995. The privatization of CN was the largest in Canadian history, raising \$2.2 billion for government coffers.

We've made huge strides since that day. Once considered an industry laggard and largely a Canada-only enterprise, CN today is one of the leaders of the North American rail industry in terms of efficiency and service. We span eight Canadian provinces and 16 U.S. states, transporting freight traffic seamlessly over a 19,600-mile network that reflects more than \$8 billion of acquisitions since 1998. CN has taken the lead in developing collaborative supply chain solutions, emphasizing new first-mile/last-mile services for merchandise freight, and scheduled services for bulk freight.

## BUILDING A STRONG FRANCHISE THROUGH ACQUISITIONS

Building from a strong core Canadian network, CN has made several strategic acquisitions since privatization:

### **1998**

#### **Illinois Central**

This ground-breaking addition linked Canada to the Gulf of Mexico and made CN the fifth-largest railroad in North America (based on revenues), increasing its competitiveness with trucking and other railways.

### **2001**

#### **Wisconsin Central**

This addition filled an important gap at the heart of CN's transcontinental network with a direct link from Western Canada into Chicago, IL.

### **2004**

## **BC Rail**

CN strengthened its forest products franchise and extended its reach into northern British Columbia.

## **Great Lakes Transportation**

This acquisition allowed CN to gain new efficiencies in network performance, and become a major player in the commodities stream for the U.S. steel industry.

## **2009**

### **Elgin, Joliet and Eastern**

For the first time, CN linked its five rail lines entering Chicago from all directions into one seamless system around the city, creating an important competitive advantage.

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## BUILDING A SOLID OPERATING MODEL

As a Precision Railroad® – CN’s business model that ensures disciplined operational execution and intense asset utilization – we’ve transformed ourselves into one of the most efficient railroads in North America. By balancing Operational and Service Excellence, we continue to drive asset utilization and productivity while also improving end-to-end customer service. Our unique supply chain approach is redefining the way we interact with customers and supply chain partners.

At CN, we believe that safety is the key to outstanding railroading. Our vision is to be the safest railroad in North America by building a strong safety culture. That’s why CN invests significantly in training, coaching, recognition and employee involvement initiatives. We also understand that minimizing our environmental footprint is fundamental to achieving sustainable business success.

## BUILDING THE NEXT GENERATION OF RAILROADERS

The most important success factor for CN is our people. Since 2010, CN has hired 14,000 employees to renew our workforce because of attrition, retirements and our growing business. This seismic shift represents over half of our workforce! In 2014 alone, we onboarded more than 3,900 new employees. A cornerstone of this renewal is CN’s \$55-million investment in two state-of-the-art training centres in Winnipeg, MB, and Homewood, IL. Through our CN Campus, we are providing hundreds of CN students a week with consistent hands-on training for all key railway jobs.

## REWARDING SHAREHOLDERS

With a clear strategic agenda, driven by a commitment to running trains safely, minimizing our environmental impact, and striving for innovation, productivity, and supply chain collaboration, CN continues to aim to create value for our shareholders. This value goes far beyond the long-term appreciation of our share price, which has grown at a compound annual rate of close to 20 per cent over the past 20 years. We also return significant amounts of dollars each year in the form of dividends and share repurchases (\$2.3 billion in 2014).

## CONSISTENT DIVIDEND PAYMENT

CN's dividend policy is based on our overall financial performance and cash flow generation. Decisions on dividend payout are made on an annual and quarterly basis by our Board of Directors. CN has increased its dividend 19 consecutive times since 1995 at an average compound annual growth rate of 17 per cent. Earlier in 2015, CN's Board of Directors approved a 25 per cent increase in the quarterly dividend to common shareholders, from \$0.2500 per share in 2014 to \$0.3125 per share in 2015. For Canadian and U.S. tax information regarding CN dividends, please consult [www.cn.ca/en/investors](http://www.cn.ca/en/investors).

## OPPORTUNISTIC SHARE REPURCHASE PROGRAM

CN has created significant value for shareholders through regular share repurchases since its first buyback program in 2000. The Company may repurchase shares pursuant to a normal course issuer bid at prevailing market prices plus brokerage fees, or such other prices as may be permitted by the Toronto Stock Exchange. Up to the end of 2014, CN repurchased over 550 million shares through normal course issuer bids for a total cash expense of close to \$14 billion. The current share repurchase program runs from October 24, 2014 until no later than October 23, 2015. It allows for the buyback of up to 28 million common shares, representing 3.9 per cent of the common shares outstanding not held by company insiders on October 15, 2014.

## STRONG FINANCIAL PERFORMANCE

The strength of our franchise is evidence that CN can deliver the goods in more ways than one. Operational and Service Excellence is at the heart of our objective to grow the business faster than the overall economy and achieve this growth at low incremental cost. CN is committed to creating superior value for shareholders through sustainable financial performance, including strong free cash flow. We expect our strategy of pursuing deeper customer engagement as well as service and productivity improvements to support these efforts.

CN has split its stock on four occasions in the 20 years since the IPO. The most recent, a two-for-one stock split, occurred in 2013.

### **CN stock splits**

<b>Pay date</b>	<b>Split ratio</b>
September 27, 1999	2 for 1
February 27, 2004	3 for 2
February 28, 2006	2 for 1
November 29, 2013	2 for 1



## FINANCIAL &amp; OPERATIONAL MEASURES

<b>Financial measures</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b>Key financial performance indicators</b>					
Total revenues (\$ millions)	8,297	9,028	9,920	10,575	<b>12,134</b>
Rail freight revenues (\$ millions) <sup>(1)</sup>	7,728	8,450	9,306	9,951	<b>11,455</b>
Operating income (\$ millions)	3,024	3,296	3,685	3,873	<b>4,624</b>
Adjusted diluted earnings per share (\$) <sup>(2)</sup>	2.10	2.41	2.81	3.06	<b>3.76</b>
Free cash flow (\$ millions) <sup>(3)</sup>	1,618	1,746	1,661	1,623	<b>2,220</b>
Gross property additions (\$ millions)	1,718	1,712	1,825	2,017	<b>2,297</b>
Share repurchases (\$ millions)	913	1,420	1,400	1,400	<b>1,505</b>
Dividends per share (\$)	0.54	0.65	0.75	0.86	<b>1.00</b>
<b>Financial position</b>					
Total assets (\$ millions)	25,206	26,026	26,659	30,163	<b>31,792</b>
Total liabilities (\$ millions)	13,922	15,346	15,641	17,210	<b>18,322</b>
Shareholders' equity (\$ millions)	11,284	10,680	11,018	12,953	<b>13,470</b>
<b>Financial ratios</b>					
Operating ratio (%)	63.6	63.5	62.9	63.4	<b>61.9</b>
Adjusted debt-to-total capitalization ratio (%) <sup>(4)</sup>	36.8	40.0	40.4	39.4	<b>40.1</b>
Adjusted debt-to-adjusted EBITDA multiple (times) <sup>(4)</sup>	1.69	1.69	1.61	1.72	<b>1.58</b>

*In 2014, certain Other revenues were reclassified to the commodity groups within rail freight revenues. This change has no impact on the Company's previously reported results of operations as Total revenues remain unchanged. The 2010 to 2013 comparative figures have been reclassified in order to be consistent with the 2014 presentation.*

*<sup>(1)</sup> See the section entitled Adjusted performance measures in the MD&A of the 2014 Annual Report for an explanation of this non-GAAP measure.*

*<sup>(2)</sup> See the section entitled Liquidity and capital resources – Free cash flow in the MD&A of the 2014 Annual Report for an explanation of this non-GAAP measure.*

*<sup>(3)</sup> See the section entitled Liquidity and capital resources – Credit measures in the MD&A of the 2014 Annual Report for an explanation of this non-GAAP measure.*

*See page 146 for a reconciliation of non-GAAP measures.*

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<b>Operational measures<sup>(1)</sup></b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b>Statistical operating data</b>					
Gross ton miles (GTMs) ( <i>billions</i> )	341.2	357.9	383.8	401.4	<b>448.8</b>
Revenue ton miles (RTMs) ( <i>billions</i> )	179.2	187.8	201.5	210.1	<b>232.1</b>
Carloads ( <i>thousands</i> )	4,696	4,873	5,059	5,190	<b>5,625</b>
Route miles ( <i>includes Canada and the U.S.</i> )	20,600	20,000	20,100	20,000	<b>19,600</b>
Employees ( <i>end of period</i> )	22,444	23,339	23,430	23,721	<b>25,530</b>
Employees ( <i>average for the period</i> )	22,055	23,079	23,466	23,705	<b>24,635</b>
<b>Key operating measures</b>					
Rail freight revenue per RTM ( <i>cents</i> ) <sup>(2)</sup>	4.31	4.50	4.62	4.74	<b>4.93</b>
Rail freight revenue per carload (\$) <sup>(2)</sup>	1,646	1,734	1,839	1,917	<b>2,036</b>
GTMs per average number of employees ( <i>thousands</i> )	15,471	15,509	16,354	16,933	<b>18,217</b>
Operating expenses per GTM ( <i>cents</i> )	1.55	1.60	1.62	1.67	<b>1.67</b>
Labor and fringe benefits expense per GTM ( <i>cents</i> )	0.51	0.51	0.51	0.54	<b>0.52</b>
Diesel fuel consumed ( <i>US gallons in millions</i> )	355.7	367.7	388.7	403.7	<b>440.5</b>
Average fuel price ( <i>\$ per US gallon</i> )	2.64	3.39	3.47	3.55	<b>3.72</b>
GTMs per US gallon of fuel consumed	959	973	987	994	<b>1,019</b>
<b>CN-owned rolling stock</b>					
Diesel locomotives ( <i>end of period</i> )	1,839	1,880	1,913	2,029	<b>2,087</b>
Freight cars ( <i>end of period</i> )	70,236	67,796	68,006	67,103	<b>68,432</b>

(1) *Statistical operating data, key operating measures and rolling stock information are unaudited and based on estimated data available at such time and are subject to change as more complete information becomes available. As such, certain of the comparative data have been restated. Definitions of these indicators are provided at the end of this Fact Book or on our website, [www.cn.ca/glossary](http://www.cn.ca/glossary).*

(2) *In 2014, certain Other revenues were reclassified to the commodity groups within rail freight revenues. This change has no impact on the Company's previously reported results of operations as Total revenues remain unchanged. The 2010 to 2013 comparative figures have been reclassified in order to be consistent with the 2014 presentation.*

*(3) See the section entitled Liquidity and capital resources – Free cash flow in the MD&A of the 2014 Annual Report for an explanation of this non-GAAP measure.*

*See page 146 for a reconciliation of non-GAAP measures.*

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CN's business agenda starts with an unwavering commitment to safety and a mindset of balancing Operational and Service Excellence through disciplined execution in all aspects of running our railroad. We work hard to operate more efficient trains, reduce dwell times at terminals and improve overall network velocity. Through these efforts, we strive to provide cost-effective and high-quality service to our customers.

#### OPERATIONAL EXCELLENCE

CN's objective of delivering operational excellence focuses on improving every process that affects the shipment of our customers' goods. Our railroaders are continually monitoring all aspects of CN's operations: scheduling, measuring, executing and reviewing. Constant improvement is a hallmark of how we do business. We never accept the status quo and strive to raise the bar at every opportunity. With this philosophy, fewer railcars and locomotives are needed to ship the same amount of freight in a tight, reliable and efficient operation. We continue to strengthen our commitment to operational excellence through a wide range of innovations anchored in continuous improvement.

BALANCING  
OPERATIONAL  
AND SERVICE  
EXCELLENCE

#### SERVICE EXCELLENCE

For CN, service excellence means expanding our perspective, working closely with customers and supply chain partners to deliver quality end-to-end service. Our goal is to provide broad-based service innovations that benefit customers and allow us to grow profitably. To that end we collaborate with customers and other players to become a true supply chain enabler. We encourage all links in the supply chain to move away from a silo mentality towards daily engagement, information sharing, problem solving and execution. We work

closely with our partners on solutions that will help our customers win in their marketplace. Supply Chain Collaboration Agreements with ports, terminal operators and customers leverage key performance metrics that drive efficiencies across the entire supply chain.

CN's great franchise allows us to offer a wide range of integrated services, including direct access to six port facilities, 17 automotive distribution facilities, 21 forest products transload centres, 21 CargoFlo® bulk distribution terminals, 16 metals and minerals distribution centres, and 21 intermodal terminals across Canada and the U.S.

#### CustomerFIRST

CN is moving to address key customer pinch points, especially in the first and last miles of a shipment, through a portfolio of initiatives called CustomerFIRST. The program is playing an important part in continuously improving service to our customers. Through CustomerFIRST, we have improved our empty railcar management and invoice accuracy. CN is also leveraging technology to connect supply chain partners and expand our e-Business capabilities.

iAdvise, our latest initiative to communicate better with customers, provides merchandise customers with a suite of electronic tools to easily order or release equipment, input all required documentation, and track shipments en route. CN automatically forecasts car deliveries 24 hours in advance and advises customers of any service exceptions in a timely manner to help them manage their inventories and adjust their work schedules. Customers benefit from up-to-date information, directly from the people who plan the local train assignments, and are updated electronically via CN systems.

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**INVESTING** CN is investing significantly to build for the future, increasing capacity and fluidity while enhancing safety and integrity across our network.

**TO**

**SUPPORT** In the five years leading up to and including 2014, CN has spent over \$9.5 billion on capital investments. CN's capital expenditures amounted to \$2.3 billion in 2014. CN expects to invest \$2.7 billion in its capital program in 2015.

**OUR**

**GROWTH**

**AGENDA** REINVESTING IN THE BUSINESS

2015 CN INVESTOR FACT BOOK 23

## TRACK AND ROADWAY

By investing in our track and roadway, CN can enhance the safety and integrity of our plant and increase fluidity and capacity to grow the business efficiently. In 2014, CN invested \$1.6 billion in track and roadway infrastructure, compared with \$1.4 billion in 2013. These expenditures include the replacement of rail, ties and other track materials, as well as bridge improvements. In recent years, CN has also invested in longer sidings to allow for more efficient long-train operations and train-mile savings.

In 2014, CN committed more than \$100 million to upgrade our Edmonton – Winnipeg and Winnipeg – Chicago corridors. On our main line, we installed sections of double track, crossovers and high-speed switches. We also extended sidings and made yard improvements. This is in addition to the \$100 million invested in 2013 to increase capacity on our main line between Edmonton and Winnipeg as well as the parallel secondary Prairie North Line (PNL). Now, the upgraded PNL serves as a “relief valve” for the main corridor, providing flexibility and resilience to the network.

CN’s acquisition in 2009 of the former Elgin, Joliet and Eastern (EJ&E) network that encircles Chicago allowed us to link all five of our rail lines entering Chicago from all directions into one seamless system. By the end of 2014, CN had spent more than US\$125 million on infrastructure improvements to the former EJ&E network, such as improved connections, track extensions and signaling. CN has also invested more than US\$100 million for upgrades to improve the capacity and efficiency of the former EJ&E’s Kirk Yard in Gary, IN, now our principal railcar classification and interchange yard in the Chicago area. In addition, CN has spent roughly US\$80 million to date on environmental and safety mitigation, as well as fulfilling our commitment in the Voluntary Mitigation Agreements CN reached with 28 EJ&E communities. CN will spend approximately US\$45 million more in 2015-16 to complete two grade separations in Illinois mandated by the Surface Transportation Board.

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## ROLLING STOCK

By regularly investing in rolling stock, we are ensuring a modern, fuel-efficient locomotive fleet to drive productivity and to better serve our customers. Additional benefits include lowering our carbon footprint, increasing locomotive reliability and tapping growth opportunities. Between 2012 and 2014, CN acquired 129 new Alternating Current (AC) traction locomotives which provide significantly better rail adhesion for pulling heavier and longer trains. Three AC locomotives can pull the same number of cars as four direct current (DC) locomotives. AC locomotives comply with stringent U.S. Environmental Protection Agency (EPA) standards and have dynamic brake capability at very low speed.

DISTRIBUTED POWER (DP) allows a locomotive to be placed anywhere along the length of a freight train and be remotely controlled from the lead locomotive. Units equipped with DP allow us to run longer, more efficient trains, particularly in cold weather, while improving train handling and safety. At the end of 2014, 590 locomotives in CN's fleet were equipped with DP (about 45 per cent of our high-horsepower locomotive fleet).

In 2014, CN invested \$325 million in rolling stock, compared with \$286 million in 2013. In order to handle expected traffic increases and improve operational efficiency, CN took delivery in 2014 of 60 new AC locomotives and ordered 90 more for delivery in 2015 and another 90 for 2016. Over the last two years, we also ordered over 1,200 new centrebeam cars, typically used for shipping lumber.

## INFORMATION TECHNOLOGY AND SYSTEMS

Access to timely and accurate information is critical to supporting our ongoing efforts to drive innovation and efficiency in customer service, cost control, asset utilization, safety and employee engagement. In 2014, CN invested \$144 million in IT, compared with \$130 million in 2013. Looking ahead, asset telemetry, wireless communications, and the next generation of business intelligence solutions continue to create new opportunities to advance CN's model of Operational and Service Excellence. Improving mobile access to information and expanding the visibility of real-time data continue to enable CN to take an increasingly proactive approach to decision-making, boosting

### **RTBI – Right Time Business Intelligence**

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our efficiency and enhancing the consistency, reliability and safety of the service to our customers.

Over the past 10 years, CN has improved overall locomotive fuel productivity by approximately 20 per cent. Today, CN leads the North American rail industry in fuel efficiency, consuming close to 15 per cent less fuel per GTM than the industry average. In 2015, we're targeting an additional 1.5 per cent improvement, which goes straight to the bottom line.

IT plays a key role in CN's fuel-efficiency improvements, given the importance of systems that allow fuel usage measurements and monitoring. Our Fuel Management Excellence program aims to reduce fuel consumption and greenhouse gas emissions with state-of-the-art technologies and better train handling. Here are a couple of examples:

**Horsepower Tonnage Analyzer** is an initiative to match horsepower to tonnage. If a train is moving overpowered, the crew receives instructions to shut down one of the units or reduce the notch at which it is operating in order to conserve fuel, without affecting the schedule.

**Wi-Tronix®**, a locomotive telemetry system, standardizes and transmits locomotive event recorder data – speed, notch, direction, location, fuel consumption, etc. – in real time to the CN data centre from anywhere in North America. The information is used to support fuel conservation, safety monitoring, locomotive health monitoring and incident investigation. In 2014, CN had approximately 1,350 Wi-Tronix® recorders installed on locomotives.

## CREATING VALUE FOR CUSTOMERS

Innovation and customer service have been at the centre of CN's business model for 20 years. Today, our unique supply chain approach is redefining the way we interact with customers, suppliers and other partners. By deepening customer engagement, leveraging the strength of our franchise, and delivering Operational and Service Excellence, CN seeks to provide quality and cost-effective service that creates value for our customers.

### CustomerFIRST

We are sharpening our focus through a portfolio of initiatives called CustomerFIRST. We are moving to address key customer pinch points and provide greater visibility, especially in the first and last miles of a shipment. In 2011, CN launched the first of several key initiatives to improve how we do business with our customers. The program has played an important part in generating good service reviews from customers. Some of the initiatives include:

**Private Pipeline Management** provides enhanced management tools to customers who own their own railcars

**Standardized Service Delivery** provides common processes and tools across our regional Service Delivery Centres

**First-Mile/Last-Mile Focus** provides meaningful and accurate visibility on shipments in the first and last miles of a trip

**Supply Chain Tools** improve decision-making across supply chain partners

## SUPPLY CHAIN INNOVATION

Over the past few years, we've raised our game through an approach that looks at the entire movement of goods through the complete supply chain; not just how we handle our portion of the process. We are increasingly involved in every step of the way, working with all supply chain players to improve how products and material get to where they need to be.

CN's major push in first-mile/last-mile activities is all about quality interaction with customers from end-to-end:

- Developing a sharper outside-in perspective
- Better monitoring of traffic forecasts
- Higher and more responsive car order fulfillment
- Proactive customer communication at the local level supported by iAdvise, an information tool that is improving the reliability and consistency of shipment information

This mindset is driving solid results. We have some of the best transit times in the industry and a spotlight on all customer touch points. At CN, our focus on seamless end-to-end transportation solutions helps to make our customers more competitive in their own markets, both at home and abroad.

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## SELL ONE CN

Sell One CN is all about selling the whole portfolio of CN services through a “single point of contact.” Understanding the scope of our customers’ supply chain is key, as is proposing the right suite of services to meet their business needs. After all, that’s what being a supply chain enabler is all about. Our suite of services includes: rail, intermodal, customs, bulk handling, freight forwarding, trucking, warehousing, rail barge and ferry.

As part of the Sell One CN model, we look for ways to offer greater flexibility and increased capacity to our customers so they can move their product quickly and efficiently to market. For example, we’re providing our traditional carload customers (e.g., lumber, panels, pulp, steel or grain) with innovative intermodal solutions that improve their productivity and help us grow against trucking. This co-operative approach is a win-win for CN and our customers.

## CUSTOMER SERVICE – IT’S IN OUR DNA

At CN, we’ve broadened our commitment to service excellence through a wide range of continuous improvement innovations. For example, in bulk markets, the CN Scheduled Grain Plan Service has resulted in much improved car-spotting reliability and shows how we’re driving fundamental innovation in the industry. In manufacturing markets, be it forest products or metals, CN is focused on better car order fulfillment to gain market share one carload at a time. In intermodal, CN is taking advantage of supply chain agreements to open up new gateway markets, building on mutual trust and continuous improvement of key performance metrics.

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## iADVISE

iAdvise, the latest initiative in CN's first-mile/last-mile strategy to communicate better with customers, built critical mass in 2014 when the program was rolled out for CN's largest merchandise customers, with smaller customers also coming on stream in 2015.

iAdvise began with notifying customers about service exceptions in a timelier manner to help them adjust their work plans. It has now evolved into an innovative set of tools and processes to further improve the way CN works and communicates with our customers.

Using iAdvise, we send Local Service Notifications to customers. These messages automatically notify customers of work to be done when the Daily Operating Plan is committed to – before the switching assignment leaves the classification yard. In addition to receiving this notification, customers have access to CN's new first-mile/last-mile report on e-Business, which includes CN's new Delivery Date commitment.

This tool provides CN customers with more visibility on the status of traffic moving on our system as well as the cars at the destination yard and at their facilities. This increased visibility and accuracy – the customer, CN service delivery representatives, account managers and trainmasters all share common information – helps customers better plan their operations.

CN believes timely, accurate information is key to building customers' confidence. iAdvise has the potential to build their trust and elevate CN ahead of the competition.

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## DELIVERING ON OUR GROWTH AGENDA

It is our stated objective to grow the Company faster than the overall economy, and to do so at low incremental cost. Over the past five years, CN has demonstrated a strong track record of growth, outpacing both the economy and industry by a wide margin. This was especially true in 2014 when our carloads and RTMs grew by a full three basis points faster than our industry peers.

(1) *Includes Canadian Pacific, Norfolk Southern, CSX, Union Pacific and Kansas City Southern*

(2) *Sources: U.S. Federal Reserve and Statistics Canada*

We are accomplishing this strong performance through our business model which is based on continuous service improvement, a supply chain approach that allows us to grow with our customers, and a culture that encourages nimbleness and the ability to seize opportunities quickly.

CN's end-to-end collaboration is fostering growth and efficiencies throughout the entire supply chain. For example:

Intermodal growth has been fueled by CN's increasing share of trade with Asia, where our end-to-end service from the West Coast has resulted in record-high shipment volumes.

During the 2013-14 crop year, CN helped Canada to move its largest-ever grain crop and set an all-time record for grain exports. This was achieved despite the worst winter conditions in several decades.

The U.S. housing market is recovering steadily from the lows of the Great Recession and CN is quick to take advantage of opportunities.

- Potash demand continues to grow and Canada has a strong competitive position in world markets.

CN's private car management team has fostered strong relationships with key customers in the areas of fuel, liquefied petroleum gas (LPG), plastics, liquid sulfur, crude oil and frac sand. The team provides rail logistics expertise that has reduced private car dwell times and improved car velocity, resulting in higher volumes on the network.

With a clear strategic plan driven by our commitment to Operational and Service Excellence, CN creates value for our customers and shareholders.

	<b>Revenues</b>			<b>Carloads</b>		
	<i>\$ millions</i>			<i>thousands</i>		
	<b>2014</b>	<b>2013</b>	<b>Change</b>	<b>2014</b>	<b>2013</b>	<b>Change</b>
Petroleum & chemicals	2,354	1,952	21%	655	611	7%
Metals & minerals	1,484	1,240	20%	1,063	1,048	1%
Forest products	1,523	1,424	7%	433	446	(3%)
Coal	740	713	4%	519	416	25%
Grain & fertilizers	1,986	1,638	21%	640	572	12%
Intermodal	2,748	2,429	13%	2,086	1,875	11%
Automotive	620	555	12%	229	222	3%
<b>Total rail freight</b>	<b>11,455</b>	<b>9,951</b>	<b>15%</b>	<b>5,625</b>	<b>5,190</b>	<b>8%</b>
Other	679	624	9%			
<b>Total</b>	<b>12,134</b>	<b>10,575</b>	<b>15%</b>			

BUSINESS

UNIT

OVERVIEW

	<b>RTMs</b>			<b>Rail freight revenue/RTM</b>		
	<i>millions</i>			<i>cents</i>		
	<b>2014</b>	<b>2013</b>	<b>Change</b>	<b>2014</b>	<b>2013</b>	<b>Change</b>
Petroleum & chemicals	53,169	44,634	19%	4.43	4.37	1%
Metals & minerals	24,686	21,342	16%	6.01	5.81	3%
Forest products	29,070	29,630	(2%)	5.24	4.81	9%
Coal	21,147	22,315	(5%)	3.50	3.20	9%
Grain & fertilizers	51,326	43,180	19%	3.87	3.79	2%
Intermodal	49,581	46,291	7%	5.54	5.25	6%
Automotive	3,159	2,741	15%	19.63	20.25	(3%)
<b>Total rail freight</b>	<b>232,138</b>	<b>210,133</b>	<b>10%</b>	<b>4.93</b>	<b>4.74</b>	<b>4%</b>

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CN serves petroleum and chemical producers throughout Canada and the U.S., with expertise in the Alberta Heartland, Eastern Canada as well as the Gulf of Mexico. Most of our petroleum and chemicals shipments originate in:

- The Louisiana petrochemical corridor between New Orleans and Baton Rouge
- Western Canada, a key oil and gas development area and a major centre for natural gas feedstock and world-scale petrochemicals and plastics
- Regional plants in Eastern Canada

The Petroleum and Chemicals group comprises a wide range of commodities, including chemicals and plastics, crude oil, natural gas liquids, refined petroleum products and sulfur. The primary markets for these commodities are within North America and, as such, the performance of this commodity group is closely correlated with the North American economy as well as oil and gas production.

PETROLEUM  
&  
CHEMICALS

## CHEMICALS AND PLASTICS

The current low natural gas price environment in North America is having a positive effect on the chemicals and plastics sector. Lower feedstock and energy costs are leading to new investments that increase the productivity of North American plastics and chemical plants – creating opportunities for CN. These streamlined plants are in areas where CN enjoys significant market share, namely the Louisiana petrochemical corridor, northern Alberta and southern Ontario. The increased production is serving solid demand in the automotive, construction and packaging sectors.

CN works with both producers and receivers to establish end-to-end supply chain solutions and promote the trade of CN-sourced raw materials and end products.



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“We are a true supply chain enabler, connecting crude producers with their suppliers and markets.”

James Cairns

Vice-President

Petroleum and Chemicals

See map of CN CargoFlo® facilities on pages 100-101

An extensive network of strategically located CargoFlo® facilities for liquids transfer and break-bulk needs complements CN’s direct-rail franchise, enabling us to offer complete door-to-door service to customers. This network provides the economy of long-distance rail transportation with the flexibility of short-haul truck delivery anywhere in Canada, the U.S. and Mexico.

## CRUDE OIL AND CONDENSATES

CN is an important link in the crude oil supply chain. Our vast rail network provides customers with accessible single-line connectivity between Western Canada and the Gulf Coast, with efficient movement through the all-important Chicago area, as well as Eastern Canada. CN also connects with other Class I railroads to reach the U.S. East Coast, U.S. West Coast and Texas.

## CRUDE BY RAIL

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CN provides unique access to Alberta heavy crude oil, with a track network that directly overlays the Peace River, Athabasca and Cold Lake areas. CN also has a presence in the Canadian Bakken Shale light crude region in southern Saskatchewan.

CN provides single-line service from Western Canada to all eastern Canadian refineries: Sarnia and Nanticoke in Ontario, Montreal and Saint-Romuald in Quebec, and Saint John in New Brunswick. In addition, CN's customers have access to offshore markets via the St. Lawrence Seaway terminals at Tracy and Quebec City in Quebec. In the U.S., CN can access refineries and crude oil terminals directly (Petroleum Administrative Defense District - PADD II and III) or via other Class I railroads (PADD I, IV and V).

What began as simple truck-to-rail manifest service has quickly evolved and now includes a pipeline-connected tank-to-rail unit-train service. In 2014,

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CN moved almost 128,000 carloads of crude, up from approximately 75,000 in 2013 and 34,000 in 2012. In 2015, crude-by-rail shipments are being impacted by a low oil price environment.

For crude-by-rail customers, CN offers a safe and complementary alternative to pipelines with a number of competitive advantages, including lower capital costs and shorter lead times. Another advantage is scalability, since shippers can move 1, 2, 20, 100 or more railcars at a time as production fluctuates with market conditions. Geographic flexibility is one more advantage, enabling customers to move their product to various destinations where they can capitalize on price differentials or meet specific demand.

Crude can be moved by rail as pure bitumen (neat bitumen) when in coil-insulated cars, but needs to be diluted with up to 30% condensate (dilbit) in order to flow through a pipeline. The cost of moving neat bitumen in railcars is very competitive with transporting dilbit through pipelines. The economics of rail for both the customer and CN are further improved when condensate is shipped as a back-haul to the neat bitumen head-haul movement. In addition, neat bitumen is far less volatile than any other type of crude and can be considered a non-dangerous good to transport, like asphalt. Although current neat bitumen shipments are quite limited, CN believes this is a good future opportunity.

CN welcomes the new DOT/TC-117 tank car standards for the transport of crude oil and other flammable liquids unveiled on May 1, 2015, including the 9/16-inch tank shell, 11-gauge jacket, ½-inch full-height head shield, ½-inch thermal protection, and improved pressure-relief and bottom-outlet valves. Tank cars manufactured to transport flammable liquid after October 1, 2015, must meet these enhanced tank car standards. Older tank cars (DOT-111, CPC-1232) will be retrofitted or phased out, with the oldest and most

vulnerable tank cars converted by 2017 and only DOT/TC-117s in crude-by-rail service by 2025. The vast majority of tank cars are owned by customers or railcar leasing companies.

## CONDENSATES

Condensate is a by-product of natural gas production. Because condensate is typically liquid in ambient conditions and has very low viscosity, it is often used to dilute highly viscous bitumen from oil sands that cannot otherwise be efficiently transported via pipelines. CN currently moves volumes of condensate from the U.S. (e.g., the Gulf Coast, Pennsylvania and Kansas) to the Canadian oil sands region in Alberta.

## REFINED PETROLEUM PRODUCTS

Refined petroleum products are derived from crude oil and natural gas production through processes such as catalytic cracking and fractional distillation. Examples of refined petroleum products transported by rail include liquefied natural gas (LNG), fuel oils of various grades (from lightweight No. 2 to bunker oil No. 6), gasoline, diesel, jet fuel, asphalt, butane, propane and propylene.

Growth in a number of economic sectors is leading to increased industrial energy demand. As North American refineries adjust to the more abundant North American supplies of crude and natural gas, the slate of products is also evolving. CN is well positioned to take part in moving these products to market from key refining complexes in the Gulf Coast, Mid-America, Eastern Canada and Western Canada. CN's access to major Canadian shale areas (including Horn River, Montney, Duvernay, Cardium, Viking and Bakken) also create opportunities for inbound and outbound products.

## PROPANE BY RAIL: AN EMERGING MARKET

Propane is a by-product of natural gas processing and petroleum refining. It is commonly used as a fuel for heating, cooking, crop drying, and engines in fork lifts, buses, Zambonis and other vehicles. It is also an important feedstock in the production of polypropylene.

About half of western Canadian propane is used within the region and one third is shipped to Eastern Canada, with the balance transported to the U.S. Midwest.

In April 2014, the Cochin pipeline, which transported propane from Alberta to Illinois, was reversed to transport condensate to the oil sands. This pipeline reversal eliminated up to 100 railcars per day, at peak demand, of takeaway capacity from the Alberta market, which has created significant growth for CN.

Terminal facilities do not currently exist in Canada that allow for propane exports to overseas markets. However, a liquid bulk export terminal in Prince Rupert is in the planning stages. CN, through our rail partners, serves export terminals on the U.S. Gulf Coast and U.S. West Coast.

As demand in Asia grows over the next few years, and Canadian infrastructure is built to ship propane overseas, CN is very well positioned to take advantage of this new market opportunity.

## LIQUEFIED NATURAL GAS

World trade in LNG has more than tripled in the past 15 years. Japan, the world's single largest LNG market, saw a significant demand increase in 2011-12 as utilities expanded gas-fired power generation to make up for lost nuclear output after the Fukushima-Daiichi disaster. The second largest importer is South Korea followed by China and India. Together, Asia represents 75 per cent of all imports. We expect that Asian demand for this cleaner-burning fuel will continue to grow.

Canada does not currently have any operational LNG export facilities. However, several proposed LNG export facilities in Canada have entered the regulatory review process – mainly in Kitimat and Prince Rupert, BC.

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## SULFUR

Sulfur is a by-product of removing contaminants from natural gas and petroleum. It is used globally in a wide variety of industrial applications, including phosphate-fertilizer and metals production, mining, and synthetic fibre manufacturing. Canada is one of the world's largest exporters of sulfur. The majority of Canadian sulfur exports go to Australia, Mexico and China through the Port of Vancouver in dry (prilled) form, and to phosphate fertilizer producers in the U.S. in liquid (molten) form.

CN handles a significant portion of Canadian sulfur destined for export, in both molten and prilled forms. Over 90 per cent of CN's sulfur franchise originates in Western Canada. All CN-served gas plants have the necessary infrastructure to turn molten sulfur into prilled sulfur. However, petroleum refineries in Western Canada do not have sulfur prilling facilities. In order for sulfur to be exported overseas, it must be converted into the easily transported dry form. Therefore, Western Canadian refineries must either ship their by-product liquid sulfur over land to sulfur consumers within North America, stockpile the sulfur in large blocks, or truck it long distances at high cost to gas plants to use their prilling infrastructure.

## OUTLOOK

With our unique operating model and capital expenditure program, CN delivers product to customers in an efficient and safe manner. Our service is supported by significant investments in rail infrastructure by producers and shippers. The current drop in oil prices, a tightening of price differentials among various types of crude and added pipeline capacity have impacted shipments of CN crude by rail. A recovery in crude-by-rail shipments would be driven by the widening of crude price differentials which may occur as incremental oil sands production comes online. In addition, as the opportunity to ship neat bitumen increases, crude-by-rail will remain a strong complement to crude shipments by pipeline.

Low natural gas prices are expected to continue to encourage new investments in the petrochemical sector. With its extensive track network, CargoFlo® transload centres and other facilities, CN is well positioned to bring customers' chemical and plastic shipments to North American markets, and to international destinations through port connections.

We expect that production of propane will increase over the coming years as a result of higher natural gas production. This, combined with a potential export gateway out of the Canadian West Coast, could provide good growth opportunities for CN. We are also capitalizing on opportunities in other refined petroleum products, including the movement of gasoline, jet fuel and diesel fuel.

CN's outlook for sulfur is solid as new production capacity is expected to come on stream in the next few years. The development of prilling capacity for northern Alberta sulfur producers will improve access to overseas markets and help counter the decline in sulfur produced by Alberta gas plants.

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“We are working closely with customers to develop innovative transportation solutions and help them win in their markets.”

Doug MacDonald

Vice-President

Industrial Products

METALS &  
MINERALS

CN has the market covered from A to Z – aluminum to zinc – and let’s not forget about frac sand, iron ore, steel, copper and lead. CN’s far-reaching rail service and our transload and port facilities make us a strong partner for our customers.

The Metals and Minerals group consists primarily of materials related to oil and gas development, steel, iron ore, non-ferrous base metals and ores, construction materials and machinery, and dimensional (large) loads. We provide unique rail access to base metals, iron ore and frac sand mining as well as aluminum and steel producing regions, which are among the most important in North America. This strong origin franchise, coupled with our access to port facilities and the end markets for these commodities, has made CN a leader in the transportation of metals and minerals products. The key drivers for this market segment are:

- Manufacturing production (e.g., automobiles, railcars, heavy equipment, aerospace)
- Non-residential (commercial and industrial) construction activity

- Government spending on infrastructure projects
- Energy development projects (i.e., oil, gas, wind, solar)
- World demand for ores and metals

#### METALS

CN ships primarily steel, aluminum, copper and zinc, serving key customers who are leaders in their respective markets. Through our strategically located network of 16 metals distribution centres, CN is working closely with customers to make the entire supply chain more efficient. Furthermore, CN's fleet of railcars for metals is the largest active fleet in Canada.

## STEEL

CN's steel portfolio is well diversified as our shipments are made to a wide variety of end markets; this helps to protect our business from the cyclical ups and downs that are typical in certain industries.

## ALUMINUM

Located in the provinces of Quebec and British Columbia, where hydroelectric power is abundant, the Canadian aluminum industry is the largest in North America, and is among the most competitive in the world. CN's extensive network gives us



unparalleled  
access to this  
industry as  
well as to port  
facilities and  
the end  
markets for  
aluminum.

#### THE RENAISSANCE OF THE ALUMINUM INDUSTRY

Ford's recent switch from steel to aluminum for the body of its 2015 F-150 pickup truck is a game changer. It's the first-ever mass-produced aluminum-bodied vehicle. And not just any vehicle! The F-150 is the most popular vehicle sold in North America. Analysts are forecasting the new F-150 to be the beginning of a new era. Aluminum content in car manufacturing is expected to grow rapidly as other carmakers follow Ford's lead. Carmakers are under pressure to produce lighter vehicles to help comply with government regulations on fuel consumption.

In response, the aluminum industry has announced investments in excess of \$2 billion to meet the expected demand. CN is exceptionally well positioned to benefit from this significant market change. Canada has the lion's share of the aluminum production in North America. There are ten aluminum production plants (smelters) in Canada. CN serves them all either directly, through our rail ferry or via a short-line partner. CN is working closely with the aluminum industry to develop and implement a reliable supply chain that meets the requirements of the automotive industry.

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## COPPER

CN has a strong position in the transport of copper, a highly ductile metal used as a conductor of heat and electricity, a building material and a constituent in various metal alloys.

## ZINC

Zinc is most commonly used as an anti-corrosion agent. Galvanization is a process that involves coating iron or steel with zinc to prevent corrosion. Zinc is also used as anode material for batteries. Zinc alloys include brass, bronze and solder.

## ENERGY MATERIALS

Increased activity in the shale oil and gas sector in recent years has created demand for frac sand, piping and other related materials.

## FRAC SAND

Hydraulic fracturing – or fracking – technology coupled with horizontal drilling has made unconventional oil and gas reserves economically viable – and significantly increased recoverable reserves of oil and gas. The oil and gas industry uses frac sand as a proppant (propping agent) to hold these shale fractures open in order to let natural gas and oil flow out. Global frac sand demand continues to grow – with Canada and the U.S. leading that demand. CN has direct access to one of the oil and gas sector’s most sought-after proppants – Northern White frac sand found in Wisconsin. As part of our commitment to bring this product to North America’s major shale basins, CN has invested approximately \$70 million in infrastructure upgrades on two of our Wisconsin subdivisions to help create the right supply chain connections between our frac sand customers and oil and gas shales in British Columbia, Alberta, Saskatchewan and the U.S.

In light of low energy prices, the shale oil and gas industry has been trying to find methods to lower its extraction costs. Some producers have implemented “super fracking,” a process that creates longer and deeper fractures in the shale to release more oil and natural gas. This process can require up to 100 carloads of frac sand per well compared to the typical 30 to 40 carloads, a potential opportunity for frac sand producers and CN.

## STEEL PIPES

CN steel shipments for the oil and gas industry include products such as steel transmission pipes for the construction of pipelines and drilling pipes for extracting oil and gas in the fracking process. While the recent slowdown in the oil and gas industry is impacting the shipments of steel pipes, the long-term fundamentals for this sector remain positive.

## MINERALS

The main commodities included in this group are aggregates, cement, roofing materials, non-ferrous ore concentrates and empty railcars.

## AGGREGATES

Shipments of aggregates by rail is a growing market for CN as local sand and gravel quarries in metropolitan areas are being depleted and replaced by sources further away. This added distance makes rail a more competitive option compared to trucks.

## CEMENT

Portland cement is by far the most common type of cement in general use around the world and is a basic ingredient of concrete, mortar and grout. These materials are used in many industries, including residential and non-residential construction. Increased government spending on infrastructure projects is having a positive impact on CN's cement volumes.

## NON-FERROUS ORE CONCENTRATE

Canada is well known for its rich deposits of non-ferrous metals like copper, zinc and nickel. These deposits are mostly found in northern Canada, often right along our network, making CN the preferred rail transportation provider for this important industry.

## IRON ORE

CN's iron ore franchise is a unique example of an end-to-end supply chain, bringing the iron ore directly from the mine to the steel mill. CN controls the entire move:

- By rail from the mine to the dock

- Loading the ships at the dock
- The marine portion of the journey using a fleet of nine vessels
  - By rail to the steel mill

Through tight co-ordination, CN handled 47 million tons of iron ore in 2014. This strong performance was the result of many factors: trains arriving on time, swapping trains from one dock to another to ensure timely vessel loads, vessels arriving on schedule, swapping vessels when necessary to ensure efficient loading/unloading, excellent operations management by the docks and our end-to-end perspective.

## OUTLOOK

The improving U.S. economy is expected to continue to drive demand for finished steel used in vehicles and consumer durables. Steel for road and bridge infrastructure projects, as well as large diameter pipe for pipeline projects, will also support demand. New tank car production to replace DOT-111 tank cars will benefit sheet steel production.

Expanding use of aluminum in industrial production, such as in Ford's F-150 pickup truck, is creating new markets for the low-cost aluminum producers on CN's network.

CN is well positioned as one of the largest carriers of frac sand to Western Canada shale plays. An eventual improvement in crude oil prices, coupled with "super fracking," could provide some upside to our frac sand shipments as well as to shipments of drilling pipe and other commodities tied to oil and gas drilling.

CN's well-diversified book of business of metals and minerals products positions us to capitalize on growth opportunities. Our Sell One CN program is expected to continue to benefit our customers as they take advantage of our intermodal service to complement our carload service.



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“CN is North America’s largest carrier of forest products and, through our network of 21 transload facilities, we offer the continent’s first truly integrated solution.”

Doug MacDonald

Vice-President

Industrial Products

**FOREST PRODUCTS** The Forest Products group includes various types of lumber, panels, paper, wood pulp and other fibres such as logs, recycled paper, wood chips and wood pellets. CN has extensive rail access to the western and eastern Canadian fibre-producing regions, which are among the largest fibre source areas in North America. In the U.S., CN is strategically located to serve both the mid-west and southern U.S. forest products end markets as well as other regions with interline connections to other Class I railroads.

The key drivers for the various forest products are:

- For lumber and panels: housing construction and renovation activities, primarily in the U.S.; especially single-family homes, which require significantly more lumber than multi-family dwellings.
- For newsprint: advertising lineage, non-print media and overall economic conditions, primarily in the U.S.

- For fibres: the consumption of paper, pulpboard and tissue in North American and offshore markets as well as lumber production, which both generates and requires fibres.

In preparing to take advantage of an improving U.S. housing market, CN added 950 new railcars in 2014 and another 325 in 2015 to what was already one of the largest fleets of high-capacity railcars. In addition, through our Sell One CN integrated service, we provide customers the flexibility of using our intermodal service to get wood products to destination.

## LUMBER AND PANELS

CN's lumber and panel shipments originate mainly in Western Canada and are destined for various points in North America and offshore. The U.S. is the primary destination, accounting for over 70 per cent of the segment's carloads over the past three years.

The U.S. housing market has been slowly recovering and is expected to continue to improve, with 2014 housing starts reaching one million for the first time since 2007, up eight per cent over 2013. CN is well positioned to benefit from this recovery.

The 2009 recession-related downturn in U.S. demand provided opportunities for Canadian producers to diversify the market for Canadian lumber. Lumber shipments to Asia, particularly to China, have increased substantially over the last five years and now represent the second-largest market after the U.S. for CN lumber. The rise in shipments to China reflects increased use of wood for framing purposes. Even with the U.S. recovery, these producers are likely to continue to capitalize on overseas opportunities and maintain a presence in Asia.

### U.S. HOUSING RECOVERY

In a positive 2015 home buying season, new home sales have been steadily increasing, reflecting buyer confidence and providing some much-needed release to built-up demand accumulated in

recent years. Housing starts have improved since the recession of 2009, reaching one million units in 2014 and are expected to continue to increase over the next few years.

CN's strong franchise in North America and our leadership position in the movement of forest products will allow us to continue to benefit from the U.S. housing recovery. Our focus on balancing Operational and Service Excellence, combined with our extensive network, provide us with the capacity to ship increasing volumes of lumber, panels and other housing-related products. Close to 10 per cent of CN's revenues are tied to the housing market, including not only lumber and panels, but also



the furniture and electronics needed to equip a new house, the metals needed for the home's plumbing and appliances, and even the roofing shingles needed to cover it. If it's on, in or around a new house, CN probably had a hand in getting it there.

**CN LUMBER AND PANEL VOLUMES TO THE U.S.**

	<b>2006</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Lumber <sup>(1)</sup>	122	60	61	65	74	79
Panels <sup>(1)</sup>	65	25	27	30	33	36
U.S. housing starts <sup>(2)</sup>	1,801	1,587	1,609	1,781	1,925	1,003

*(1) Thousands of carloads*

*(2) Thousands of units – Source: U.S. Census Bureau*

**PULP AND PAPER**

Wood pulp is used predominantly as a major component in the manufacture of paper, paperboard, tissue, diapers and other personal care products. The majority of CN-served pulp producers are located in Western Canada, with most consumers located overseas, mainly in Asia. Canada is currently the second-largest pulp producer in the world, surpassed only by Brazil.

North American demand for most paper grades is shrinking, with the newsprint sector being the hardest hit. North American newsprint demand fell nine per cent to 6.5 million tonnes in 2014, marking the 15th consecutive year it has decreased. The decline in newsprint consumption is driven largely by increased competition from alternate media sources, including 24-hour television news channels, the Internet and several other new technologies.

A rise in the global trade of forest products is also changing supply and demand flows. Increasing worldwide consumption of pulpboard and tissue products, especially in India, has led to an increase in overseas production capacity. Manufacturers in developing markets, notably China, have been

forced to import a significant amount of raw materials, primarily wood pulp and recycled paper, from Russia, North America and other fibre-rich regions because of scarce domestic wood-fibre supply.

#### WOOD PELLETS

Wood pellets are made from compacted sawdust and wood chip residue from the milling of lumber. They can be used as fuel for power generation, commercial or residential heating, and cooking. Wood pellets have a very high combustion efficiency and the EPA in the U.S. has endorsed wood pellet heat as one of the cleanest-burning, most renewable energy sources on earth.

A significant portion of the world's wood pellet production comes from Canada – and much of that from British Columbia. CN ships about 1.6 million tons annually, or more than 15,000 carloads, helping these producers get their pellets to customers in the United Kingdom, Italy and other countries around the world.

## OUTLOOK

While there are always cyclical fluctuations in the demand for forest products, CN's geographical advantages, product diversity and international customer base help to reduce the impact of these market changes. CN's continued drive to improve our end-to-end service enhances our competitive position in the transportation industry.

CN has a strong western Canadian franchise to supply a diverse end-customer base. Additionally, we are driving asset utilization to maximize profitability. The housing market recovery is also creating a spill-over effect, driving growth in intermodal containers with housing consumables (such as furniture, TVs, and patio sets), metals (such as steel, copper and zinc), roofing materials, appliances and other commodities.

CN continues to develop and diversify its product offerings, such as car reload programs and intermodal options, as well as expand its presence in developing markets for wood pellets, lumber, wood pulp and recycled paper.

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“CN continues to work closely with its coal customers, helping them compete in an ever-evolving global coal market.”

Andy Gonta

Vice-President

Bulk

COAL

Coal is an important commodity for CN. We have direct access to 12 coal mines and seven petroleum coke facilities in Canada and the U.S.

The Coal group consists of thermal grades of bituminous coal, metallurgical coal and petroleum coke. Canadian thermal and metallurgical coal are largely exported via terminals on the west coast of Canada to offshore markets. In the U.S., thermal coal is transported from mines we serve in Illinois, or from western U.S. mines via interchange with other railroads, to major utilities in the midwestern and southern U.S., as well as offshore markets via terminals in the Gulf of Mexico.

The key drivers impacting coal production are:

- Worldwide supply and demand for thermal and metallurgical coal

- Mining and environmental regulations
  
- Seasonality (cold winters and hot summers increase demand for electricity)

CN has developed a comprehensive end-to-end coal supply chain approach with the ultimate goal of helping our customers gain market share in a very competitive commodity market. We've signed innovative agreements with customers and coal terminal operators, and developed an exclusive information system to better manage the flow of coal from mine to ship. Clear metrics highlight coal inventories at mines and ports, the arrival date of vessels, the amount of coal being shipped from mines, as well as the number of trains in transit to and from the mines. We measure the amount of coal on hand, on the trains and at the ports, and adapt our train schedule and frequency to a specific vessel schedule, as required. CN optimizes the supply chain by helping to drive better synchronization between producers, terminals and vessels,

thereby generating greater productivity and fluidity across the entire supply chain.

#### CANADIAN METALLURGICAL COAL

CN's Canadian metallurgical coal business originates in Western Canada and is destined primarily for Asian markets (mainly Japan, Korea, India and China) for steel making. CN has access to two export terminals in Vancouver, BC (Westshore and Neptune), and an export terminal in Prince Rupert, BC (Ridley). Canada produces proven quality coal. This quality, combined with CN's end-to-end supply chain approach and collaboration with key stakeholders (i.e., coal companies and terminal operators) presents a compelling and competitive proposition to Asian customers.

#### CANADIAN THERMAL COAL

CN's Canadian thermal coal business originates from one mine in Alberta and is exported through Prince Rupert to Asia for use in electricity production. Thermal coal is a crucial fuel for electricity generation in many parts of the world. China and India generate more than 70 per cent of their electricity using coal-fired plants.

## THE RISE OF ILLINOIS BASIN COAL

Demand for coal from the Illinois Basin (IBC) has climbed to its highest level since 1990 as sales of nearby Appalachian coal dipped and consumption of U.S. Powder River Basin (PRB) coal from Wyoming grew at a slower pace. IBC is sought after, despite its greater sulfur content, by utilities that have installed scrubbers on their power plants because of its higher heat content and lower cost. IBC's share of U.S. production is expected to continue to climb through 2040 according to the U.S. Energy Information Administration.

CN is in the heart of coal country and well positioned to take advantage of the shift towards IBC with shorter hauls to power plants in the Midwest and Southeast.

## U.S. THERMAL COAL

U.S. thermal coal is destined for both domestic and export markets.

Domestic thermal coal is transported from mines we serve in southern Illinois, or from western U.S. mines through interchange with other railroads, to major utilities in the Midwest and southern U.S. for electricity production. CN is in a good position to deliver to these utilities as they transition from Central Appalachian Coal to hotter-burning, lower-cost Illinois Basin Coal.

CN's U.S. thermal coal business to offshore markets is exported mainly through the Gulf Coast, where CN has access to two export terminals (Convent, LA, and Mobile, AL). Traffic is destined mainly for Europe, but also for Asia.

## PETROLEUM COKE

Petroleum coke (or pet coke) is used for many different applications, based on the quality of the product, including as a fuel or in the manufacture of dry cells and electrodes. Most of CN's pet coke traffic originates in the Alberta oil sands where pet coke is a by-product of the upgrading process. The product is mainly exported to Asia through Prince Rupert (Ridley). CN also ships pet coke domestically from refineries in Western Canada to serve cement plants and aluminum smelters in Eastern Canada. Opportunities are improving for U.S. cokers as more refineries switch over to heavier crude and produce more pet coke.

## OUTLOOK

Coal market conditions remain soft, whether it is metallurgical coal exports to Asia or thermal coal exports to Europe. Although it is expected that coal-fired power plants will maintain a leading role in the Asia-Pacific region's power sector over the coming years, state policy favoring "greener" sources of power generation, especially in China and Japan, will likely slow down the growth of coal demand.

CN's strong collaboration with our coal customers and terminal operators, our access to proven high-quality coal reserves in Canada and the U.S. Midwest, and extensive port capacity on the Canadian West Coast and U.S. Gulf Coast could provide CN with good opportunities if international demand improves. The transition of U.S. utilities towards Illinois Basin Coal is also expected to benefit CN in the coming years.

Asia's energy-hungry industry increases the demand for petroleum coke and is expected to be the primary driver of export growth for North American pet coke.

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66%

GRAIN TRAFFIC

ORIGINATING IN

CANADA

% of 2014 CN grain  
revenues

•

74%

REGULATED  
CANADIAN

GRAIN TRAFFIC

% of 2014 CN

Canadian-originating

grain revenues

GRAIN &  
FERTILIZERS

The Grain and Fertilizers group transports primarily crops grown and fertilizers processed in Western Canada and the U.S. Midwest.

GRAIN

The grain segment consists of three primary product groups:

- Food grains (mainly wheat, oats and malting barley)
- Feed grains and feed-grain products (including feed barley, feed wheat, peas, corn, ethanol and dried distillers grains)
- Oilseeds and oilseed products (primarily canola seed, oil and meal as well as soybeans)

Production of grain varies considerably from year to year, affected primarily by weather conditions, seeded and harvested acreage, the mix of grains produced and crop yields. Grain exports are sensitive to the size and quality of the crop produced, international market conditions and foreign government policies.

## CANADA

Key offshore markets for western Canadian grain include the Pacific Rim and the Middle East. The grain is moved from a network of high-throughput elevators, well positioned along CN's lines in the grain-growing areas of northeastern British Columbia, Alberta, Saskatchewan and Manitoba, to port terminal elevators that load vessels in Vancouver and Prince Rupert, BC, as well as Thunder Bay, ON. CN also moves western Canadian grain and processed products to eastern Canadian and U.S. Gulf ports for export, as well as to a variety of domestic receivers in North America.

CN moves significant volumes of grain and processed products with our domestic and international intermodal container service, using Sell One CN to meet the complex needs of the global grain supply chain. CN's Scheduled

Grain Service Plan for Western Canada applies Precision Railroad® principles to grain car deliveries so that cars arrive at specific elevators on scheduled days every week, resulting in a fundamental improvement in system reliability.

CN works closely with partner ocean carriers to provide “match-back” of their containers. Match-backs occur when import marine containers, 20-foot or 40-foot boxes, are reloaded with export products such as grain or specialty crops. Match-backs enable ocean carriers to cover the cost of shipping otherwise-empty containers back to their home port, thus improving round-trip economics. For grain traders, containerization provides key benefits, including added capacity, faster transit times, and the ability to identify the grain and trace it back to its origin. Also, containerization enables buyers in specific geographic markets to purchase smaller quantities of grain and minimize both working capital and storage costs at destination. CN CargoFlo® is our network of 21 bulk distribution terminals that transfer grain and grain products from railcars to trucks and outbound ocean containers. CN also operates two grain facilities in Chicago and Joliet, IL, and one in Chippewa Falls, WI, and works with independent transloaders located at the ports of Vancouver and Montreal.

Certain rail movements from Western Canada are subject to “revenue cap” regulation under Canadian legislation. This includes CN’s grain shipments to the ports of Vancouver, Prince Rupert and Thunder Bay, but excludes grain exported to the U.S. Regulated western grain shipments are subject to a maximum revenue entitlement that a railway may earn during a given crop year. Railway companies are free to set freight rates for western grain shipments, but total revenue is limited during a given crop year to an amount determined annually by the Canadian Transportation Agency (CTA). This amount is based on a statutory formula that takes into account the volume and length of haul of grain movements in that crop year and a CTA-determined railway input

price index. In 2014, grain traffic subject to the revenue cap accounted for approximately 74 per cent of CN's Canadian-originating grain revenues.

## UNITED STATES

In the U.S., the CN rail system is well positioned in the heart of an important grain-producing territory. Four states where CN originates grain traffic – Illinois, Iowa, Michigan and Wisconsin – produce, on average, about 40 per cent of the corn and soybeans grown in the U.S. CN's domestic grain movements include corn and soybeans from these states to large grain processors in Illinois, Iowa, Tennessee and Mississippi. Other domestic grain movements are to the poultry-feeder markets in the southeastern U.S., which rely on corn for feed. CN also moves grain and grain products to major export facilities on the Mississippi River and in Louisiana on the Gulf of Mexico.

## PROCESSED GRAIN PRODUCTS

CN participates in the movement of processed grain products. Some of the leading global agribusinesses have grain- and oilseed-processing plants located on CN lines in Canada and the U.S.

CN is an important contributor in the delivery to North American markets of vegetable oil and meal produced by Canadian oilseed processors. The Canadian canola-crushing industry has expanded capacity in response to increased demand for biodiesel fuels and low-trans-fat edible oils. The seven oilseed crushing plants served by CN in Canada operate more than three quarters of the country's production capacity and account for over half of all global trade in canola seed, meal and oil.

According to the Canola Council of Canada, canola is one of the world's healthiest vegetable oils. The oil content of canola seed is roughly 44 per cent oil, which is more than double the oil content of soybeans. Canola oil also contains the least amount of saturated fat of any common edible oil. As a result, demand for canola has been steadily increasing.

Refined canola oil is primarily exported to the U.S. to be used in food processing. Canola oils are commonly used in cooking oil and sprays, as well as an ingredient in salad dressings, margarines and shortenings, baked goods, coffee creamers and for deep frying.

## CN ACHIEVED RECORD VOLUMES DURING THE 2013/14 CROP SEASON

For more than 20 years, deregulation in the Canadian rail industry has allowed CN and the overall rail industry to embark on a strong revival. Unfortunately, in 2014, the Canadian government took a step backward on the regulatory front by imposing minimum grain volume requirements on the two main railways, extending interswitching limits in three Western provinces, and reinforcing a finger-pointing mentality that undermined collaboration.

In the face of a historic grain crop (2013/14) and a brutal 2014 winter, none of this government action was warranted. Once the cold abated, CN, as promised, bounced back, posting a record performance in the 2013/14 crop year – our movement of western Canadian grain was a full 25 per cent greater than past averages and the current grain supply chain is fully in sync.

We believe that a stable commercial and regulatory framework is essential for an effective, well-functioning rail transportation marketplace.

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Canola meal is an ingredient in livestock rations. The U.S. consumes 96 per cent of total Canadian canola meal exports, with California accounting for 40 per cent of U.S. imports.

CN directly serves 22 ethanol production facilities in the U.S. and Canada with efficient access to key consumers in the U.S. Midwest. These plants have an estimated annual production capacity of 2.3 billion gallons. CN also has access to an additional 700 million gallons of ethanol production capacity through U.S. short lines. CN's ethanol traffic reached close to 33,000 carloads in 2014. Ethanol moves exclusively in private rail equipment.

Soybean and corn gluten feed, barley malt, corn syrup and starches are among the other processed grain products moved by CN. These products move mostly in private rail equipment and containers.

## FERTILIZERS

Canada is the largest producer of potash in the world and CN serves, or has access to, all the major potash mines in Saskatchewan, the centre for western Canadian production. The majority of Canadian potash moves by rail to markets in the U.S. or to ports for export to overseas markets. CN's train design is highly efficient, using DP locomotives pulling up to 170-car trains.

In the U.S., CN serves producers and consumers of various types of fertilizers, including nitrogen solutions, ammonium nitrate, urea and phosphate fertilizers. North American fertilizer production is heavily affected by the price of natural gas – a main raw material for most fertilizer production. These products move in a mix of private and CN rail equipment.



## OUTLOOK

The 2014/15 Canadian grain crop represented a significant reduction toward the historical trend line while the U.S. grain crop was above trend. CN assumes that the 2015/16 grain crop in Canada will be below the five-year average and that the U.S. crop will be above the five-year average.

CN believes that the strength of its network, supply chain focus and execution capabilities position it as an important player in the grain supply chains of its customers. Our Sell One CN principle and our “match-back” of ocean carrier containers to ship grain internationally allow CN to make the most efficient use of assets. In the U.S., the key CN-served states of Illinois, Iowa, Michigan and Wisconsin will continue to play a major role in supplying the demand for corn and soybeans in domestic and international markets. In Canada, CN’s extensive grain-gathering network and export connections, including unique access to two West Coast ports, are a competitive advantage that we believe will allow us to maintain our position in the Canadian grain industry.

Potash demand continues to grow and Canada has a strong competitive position in world markets. The world’s growing population and limited arable land mean that crop yield improvements will play a critical role in meeting the increasing demand for food, underscoring solid demand for fertilizers. CN is well positioned to benefit from an increase in demand through our broad North American franchise and connections to key ports.

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## INTERMODAL

CN's intermodal terminals are located near ports and large urban centres, allowing goods to access major markets in North America and overseas. The Intermodal group includes rail and trucking services and is comprised of two segments: international and domestic.

## INTERNATIONAL

CN Intermodal's international segment handles import and export container traffic on behalf of ocean carrier companies, directly serving the major ports of Vancouver, Prince Rupert, Montreal, Halifax and New Orleans. The international segment is driven by world and North American economic and trade conditions. On the West Coast, CN serves the ports of Vancouver and Prince Rupert, key trade gateways between North America and Asia. CN's route to and from the West Coast benefits from the lowest grades through the Rockies, leading to fuel efficiency and quick speed to market. The Port of Prince Rupert, the closest port to Asia, coupled with the speed and reliability of CN's network, offers a key supply chain advantage to the Asian market over other West Coast ports. On the East Coast, CN serves the ports of Montreal and Halifax, providing key trade links between North America and Europe.

CN's supply chain approach has been a key growth driver for the international segment through innovative collaboration agreements with all major ports and terminal operators in Canada, developed with real-time performance metrics and a proactive approach. In addition, CN's extensive network of intermodal terminals provides our customers the ability to discharge more of their traffic at CN-served ports.

CN intends to continue increasing our intermodal footprint. In early 2015, we announced a plan to build a \$250-million intermodal and logistics facility in Milton, ON, to help us efficiently handle growing intermodal traffic in the Greater Toronto and Hamilton Area. The new hub will benefit our customers and the regional economy by improving Central Canada's access to the key transborder market as well as the Pacific and Atlantic coast trade gateways we serve, generating new supply chain efficiencies and creating well-paying local jobs. This project will be submitted for review to the Canadian Environmental Assessment Agency.

CN has developed a strong network of logistics parks strategically located in, or adjacent to, our intermodal rail yards in Calgary, Chicago, Memphis, Montreal and Toronto. Our logistics parks are multi-functional facilities connecting rail with trucks, vessels and barges, as well as offering warehousing and distribution services.

Ocean carriers need export traffic to balance their shipments and cover the cost of bringing equipment back to the overseas origins. CN has invested in an extensive network of transload facilities to assist ocean carriers in securing export commodity traffic and helping them with their round-trip economics. In line with our Sell One CN approach, we work closely with ocean carriers to develop a multitude of export opportunities in all our core service offerings, such as grain in the U.S. Midwest and Canadian Prairies, forest products and pork in Western Canada, and many others.

## DOMESTIC

CN's domestic intermodal segment transports consumer products, manufactured goods and natural resources, within and between Canada, the U.S. and Mexico. The domestic segment is divided into wholesale and

retail services and is driven by North American consumer markets. Growth is generally tied to the economy and competition from trucks.

In our door-to-door retail service, CN provides all the required equipment along with in-house CNTL trucking services. CNTL is one of Canada's largest trucking companies operating with more than 1,000 independent drivers and a fleet of 8,000 chassis and 8,500 containers (including dry, heated and refrigerated 53-foot containers and insulated 40-foot containers), giving our customers access to a large portion of the North American population.

Our wholesale offering provides terminal-to-terminal train service to motor carriers, intermodal marketing companies, third-party logistics companies, couriers and other transportation intermediaries in conjunction with CN partners. Wholesale customers provide all required trucks, containers and other value-added services.

CN's 40-foot EcoTherm<sup>®</sup> temperature-controlled containers do not require fuel to prevent the contents from freezing, thus making them a greener transportation solution. CN also has access to 20-foot and 40-foot containers from its ocean carrier customers to market to its domestic customers. These containers would otherwise be returned empty from the U.S. or Canada to ports.

The domestic market headhaul lanes are often the backhaul (export) lanes for ocean carriers. The use of these one-way containers in CN's Domestic Repositioning Program (DRP) provides low-cost capacity to domestic shippers and reduces inland costs for ocean carriers. CN continues to expand the DRP service, which is now also offered in the U.S. This enables CN to increase our share of international containers as we help to improve ocean carriers' round-trip economics. Today, close to 20 per cent of CN-handled 40-foot container imports through the West Coast are used in our DRP.



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## THE COOLEST TREND IN TRANSBORDER SERVICE

CN's CargoCoo® service provides a fast, convenient, cost-competitive and eco-friendly approach to moving temperature-sensitive goods like fresh produce and frozen meat in corridors such as California – Ontario, Alberta – Texas and Chicago – Western Canada.

### KEY FEATURES OF CARGOCOOL®

- Some of the fastest transit times in the industry, along with an on-time arrival rate of over 90 per cent
- Recently purchased over 200 next-generation 53' reefer containers
- A state-of-the-art monitoring system and dedicated team
- A superior cold chain exception management process enhances food security

CN's domestic service is also benefiting from new product offerings such as transborder refrigerated container (reefer), U.S. northbound less-than-truckload (LTL) services and specialized equipment to enter new markets (e.g., trays for steel products as well as flexitanks for liquids).

## OUTLOOK

The international segment will continue to benefit from CN's supply-chain approach. CN is making strategic investments at key terminals across the network in anticipation of announced expansions at CN-served ports. This, combined with innovative service offerings, positions CN to benefit from expected global trade growth.

The domestic segment also has growth potential in light of the service advantages rail can offer over other transportation modes. Additionally, CN's innovative approach, complemented with new services and products, provides optimal shipping solutions for customers.

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**AUTOMOTIVE**

As a transportation leader in the automotive industry with connections to ports on three coasts, CN handles over 2.2 million vehicles annually in North America and over 60 per cent of the cars produced in Canada.

Through our extensive network of 17 automotive distribution facilities, CN moves both finished vehicles and parts throughout North America, providing rail access to 16 vehicle assembly plants in Ontario, Michigan and Mississippi. We also serve vehicle distribution facilities in Canada and the U.S., as well as parts production facilities in Michigan and Ontario. CN serves shippers of import vehicles via the ports of Halifax and Vancouver, and through interchange with other railroads. CN's automotive revenues are closely correlated to automotive production and sales in North America.

CN's north-south positioning – with rail connections to all Class I carriers at major gateways including Chicago, IL, Detroit, MI, and Buffalo, NY – offers automotive customers routing alternatives between Canadian, U.S. and Mexican locations. CN also offers service beyond the Chicago gateway, extending its automotive reach to a variety of interchange locations including Salem, IL, and Memphis, TN.

CN Autoport<sup>®</sup>, a subsidiary company, offers the industry's most comprehensive range of value-added services through processing and distribution centres across Canada and the U.S.

Customers such as Ford, GM and Chrysler, as well as European, Japanese and Korean manufacturers, rely on CN Autoport® services

#### AUTO-DESK FOR CONTAINERIZED SHIPMENTS

CN's Auto-Desk service is staffed by CN employees to provide dedicated customer service for time-sensitive, high-value automotive parts shipped in containers. Auto-Desk staff engage with automotive customers, steamship lines and other partners to track 800 to 1,000 individual shipments per week en route to North America, in the port, on the truck, on the train, right to the auto plant door. This high level of supply chain management is appreciated by automobile manufacturers whose "just-in-time" inventory management practices require close monitoring of parts shipments.

These services include:

- Original equipment manufacturer (OEM) vehicle inventory management
- Quality assurance and pre-delivery inspections
- Railcar loading and off-loading
- Vehicle release to haul-away carriers

Autoport<sup>®</sup> also provides vehicle preparation services, including:

- Mechanical, paint and body-shop work
- Battery, accessory and air conditioning installation
- Wrap guard

Each component of the comprehensive Autoport<sup>®</sup> service is an integral part of the finished vehicle supply chain.

## OUTLOOK

Vehicle sales in Canada are expected to remain on a general upward trend. In the U.S., the improving economy, low borrowing costs and an aging fleet of vehicles, are expected to provide continued growth in vehicle sales. CN is also well positioned to take advantage of new production coming online in Mexico by focusing on destination markets for those vehicles.



CN is well placed to handle this growth, serving automotive production and import facilities that provide vehicles for the North American market. We will continue to work with our automotive customers to develop new supply chain opportunities that will optimize our rail network and assets for domestic and global distribution of vehicles and automotive parts.

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## CN-SERVED ASSEMBLY PLANTS

<b>Manufacturer Plants</b>		<b>Production Nameplate*</b>	<b>2014 Production*</b>	
Fiat Chrysler Automobiles (FCA)	Brampton	300	59,959	
		Challenger	58,983	
	Windsor	Charger	105,101	
		Caravan	196,782	
Ford	Oakville	Cargo Van	12,801	
		Town & Country	163,721	
		Edge	163,199	
		Flex	24,371	
	Dearborn Truck	MKT	5,466	
		MKX	32,260	
	Flat Rock	F-150	85,708	
		F-150 SuperCrew	190,243	
	General Motors Ingersoll	Flat Rock	Fusion	45,679
			Mustang	95,231
Oshawa		Equinox	197,991	
		Terrain	118,526	
		Camaro	85,305	
		Impala	67,065	
Detroit-Hamtramck		Regal	21,971	
		XTS	20,448	
		Equinox	25,006	
		Impala	55,000	
Flint Truck	Ampera	331		
	ELR	1,944		
	Impala	18,116		
	Malibu	5,930		
Lansing Delta Township	Volt	20,728		
	Sierra HD	52,132		
	Silverado	6,155		
Lansing Grand River	Silverado HD	105,955		
	Acadia	96,850		
	Enclave	66,512		
Orion	Traverse	110,315		
	ATS	38,800		
	CTS	27,059		
	CTS Coupe	4,019		
	CTS Sport Wagon	316		
	Sonic	105,364		

		Verano	46,226
Honda	Alliston	Civic	194,054
		CR-V	198,953
Nissan	Canton	Armada	13,199
		Frontier	91,106
		Murano	7,221
		NV-Series	15,098
		Titan	12,360
		Xterra	19,786
		Altima	135,569
		Sentra	4,948
Toyota	Cambridge	Corolla	242,465
		Matrix	4,913
		RX	104,248
	Woodstock	RAV4	227,785

\* Source: IMS Automotive Global Insight

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At CN, we work to improve customer service and operational efficiency through a mindset that focuses on the entire movement of goods through the complete supply chain, not just on how CN handles its portion of the process. We are increasingly connected in every step of the way, galvanizing all supply chain players to improve how products and material get from true origin to ultimate destination. This approach is driving solid results. With some of the best transit times in the industry and a strong focus on first-mile/last-mile service, CN is helping our customers win in their marketplace.

CN's extensive network of distribution centres includes strategically positioned transfer, warehousing and reload facilities that provide a number of services to both rail- and non-rail-served shippers and receivers. This allows us to extend the market reach of existing rail shippers and enables non-rail-served shippers and receivers to benefit from rail transportation's cost and environmental advantages. For CN customers, our network offers many value-added services:

•Supplies state-of-the-art transfer and transportation services

•Positions products for just-in-time deliveries to markets outside their existing service areas

•Provides seamless integration to CN's rail network for non-rail-served customers

•Lowers customers' capital expenditures and corporate risk

•Reduces or eliminates customers' need for on-site storage

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**Port access:** CN directly serves six port facilities on three coasts, providing easy access to a large portion of the North American population. We also ship bulk commodities like iron ore, limestone and coal to and from four ports on the Great Lakes.

**Automotive distribution facilities:** Through our extensive network of 17 automotive distribution facilities, CN moves finished vehicles and parts for dealers and assembly plants from origin to destination across North America. We also provide gateway services through the ports of Halifax and Vancouver for vehicles imported from Europe, Japan and Korea.

**Forest products transload facilities:** CN is the largest rail carrier of forest products in North America and we offer the industry's first truly integrated solution. Our network of 21 forest products transload centres consists of strategically positioned, state-of-the-art transfer, warehousing and reload facilities that extend our customers' reach and reduce their costs.

**CargoFlo® bulk handling facilities:** CN has a network of 21 CargoFlo® bulk distribution terminals. These strategically located transload facilities are designed to handle our customers' liquid and solid bulk commodities such as specialty grains – quickly, safely and contaminant-free.

**Metals distribution centres:** Through our network of 16 metals and minerals distribution centres, CN is working closely with customers to develop innovative transportation solutions to make the entire supply chain more efficient.

**Intermodal terminals:** CN's 21 intermodal terminals are located near major urban centres and port facilities, allowing goods to enter virtually every market in North America and overseas. Our intermodal service transports containerized consumer products, manufactured goods and natural resources both domestically via train and truck and internationally via train and ship.

**Warehousing:** Enhancing CN's position as a supply chain enabler, we have 1.3 million square feet of indoor storage space and 850 acres of exterior storage in more than 80 strategically located warehouses across Canada and the U.S.

**Logistics parks:** Located in Calgary, Chicago, Memphis, Montreal and Toronto, CN's logistics parks are multi-functional facilities connecting rail with trucks, vessels and barges, as well as offering warehousing and distribution services.

**Freight forwarding:** CN's freight forwarding services simplify our customers' international importing and exporting activities – which can involve many different carriers as well as multiple layers of administrative and legal red tape. Working in conjunction with our ocean partners, CN moves our customers' products quickly and smoothly along optimal supply chain routes.

**Customs brokerage:** Our customs brokerage service communicates with agencies and governments throughout the shipping process, making sure that all proper procedures have been followed. Through this supply chain enhancement service, CN ensures that customers' shipments moving in and out of the U.S., Canada and Mexico are cleared and managed efficiently.



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2015 CN INVESTOR FACT BOOK 105

What differentiates us from our competition isn't our locomotives or our tracks, but rather our people. Our 25,000 railroaders bring essential skills and all play important roles in keeping CN's operations running smoothly.

CN is devoting significant resources to onboarding and training a new generation of railroaders across our network. The imperative for the investment is clear: since 2010 CN has hired 14,000 people to replace retiring or departing employees and to accommodate growth in freight traffic. In 2014 alone, CN onboarded more than 3,900 new employees. This seismic shift in CN's workforce is evidenced by the fact that Generation Y – people in their 20s and 30s – now accounts for 40 per cent of our workforce, the largest segment of our employee population.

CN's Talent Management Strategy is an integrated approach composed of four main elements: Attract, Onboard, Connect and Develop. The strategy is designed to ensure CN has an engaged workforce with the right people in the right place at the right time.

DEVELOPING  
THE NEXT  
GENERATION  
OF  
RAILROADERS

#### ATTRACT

As our retiring employees exit the workforce, we are proud so many younger people are choosing CN. We are more than ready for this demographic shift and continue to focus on workforce planning and recruitment.

To support our hiring efforts, we have a multi-channel recruitment process:

- Our **workforce planning model** provides a solid forecast so we can hire in advance of attrition, where needed

- **CN job fairs** provide candidates with opportunities in even the most remote CN locations
- **Online assessments** help us ensure we hire people who are the right fit for the job
- A prominent presence on **social media** extends our reach to potential candidates
- CN railroaders act as **ambassadors** by spreading the word about CN and our career opportunities
- **Partnerships** with academic, professional and diversity associations help us find ideal candidates

## ONBOARD

Once hired, we make sure our newcomers are brought on board in a structured fashion and feel like part of the team. Spanning the first 18 to 24 months of their careers, CN's unique Onboarding Program provides consistent training for our new railroaders.

The program's success lies in its multi-faceted approach:

- **Instilling** new railroaders with a strong safety culture
- **Informing** them about what is expected of them
- **Providing** them with all the necessary tools to do their job
- **Familiarizing** them about the HR programs applicable to them
- **Connecting** them with other CN railroaders

CN offers competitive compensation and comprehensive benefits to retain our people and help them lead healthy lives.

## CONNECT

To foster a culture of employee engagement, we are focused on strengthening our connection with our entire workforce. These efforts include:

- Fostering **collaborative relationships** with our union partners
- Providing more predictable work schedules for our U.S. train crews with innovative **Hourly Rate Agreements**
  - Enabling real-time tracking of issues with our ground-breaking **Grievance Tracking System**
  - Keeping employees informed about all things CN with a number of **communication tools**:
    - *A Note from Claude* – Claude Mongeau writes periodic notes to all employees
    - *CN Spotlight* – Bi-monthly e-newsletter celebrating employee achievements and milestones
    - *CN People* – Quarterly print magazine highlighting employees, customers and company news
    - *Looking Out for Each Other* – Series of videos and other initiatives to reinforce CN’s safety culture
  - Celebrating our people’s achievements with **recognition programs** like our President’s Awards for Excellence
- Recognizing the importance of family in our 24/7 business, CN supports **Family Day** events throughout the year
  - Keeping our finger on the pulse of issues that matter most to employees using **surveys**

- Providing **sponsorship programs** for employees to give back to the communities they serve

We are building on successes like these and continue to work with our partners to help address challenges as they surface.

## DEVELOP

At CN, developing the best railroaders in the industry is a priority. Our people are our strength and training is critical to having a skilled, safe and engaged workforce. This is especially important in light of the major workforce renewal underway at CN. Our training programs are focused on instilling a strong safety culture in new employees and reinforcing it among current employees who are learning new skills or upgrading existing ones.

To advance this objective, CN opened two new training facilities in Winnipeg, MB, and Homewood, IL, in 2014 at a combined cost of \$55 million. These centres of learning are revitalizing and modernizing the way we teach, providing a consistent level of training across our network and bringing people together.

The Winnipeg Centre can host an average of 350 students per week from across Canada, while the facility in suburban Chicago can accommodate an average of 250 students from all over our U.S. network. Both centres offer skilled instructors and a modern curriculum for jobs ranging from conductor to car mechanic, from track supervisor to signal maintainer. Employees receive hands-on training in indoor learning laboratories with equipment such as locomotive simulators and dispatcher stations. Outdoor labs with dedicated rolling stock and other equipment for field training are also a key focus.

Employees learn about the valuable role peer-to-peer communications, coaching and mentoring all play in safe railroading. Structured and tracked on-the-job learning as well as knowledge transfer from seasoned railroaders ensures greater mastery of technical and management skills.

Experienced **Peer Conductor Trainers** help ensure safe environments for student conductors, evaluating and guiding them during their progress towards full conductor qualification.

Our **LEAD** program helps build managers' skill sets to better lead, develop and coach their team members. This creates a more positive work environment where people are engaged and bring their best to the table.

- **LINK** is our advanced program designed to help accelerate knowledge transfer and business leadership skills development to high-potential managers. It deepens their understanding of the multi-faceted world of railroading and helps them connect the dots between our business agenda, what we stand for and various initiatives across the Company.

Our Employee Performance Scorecard (EPS) is a tool to align employee performance objectives with our business agenda. This helps recognize individual contributions and supports our people's career advancement by setting objectives and development plans.

## FOSTERING A SAFE, SUPPORTIVE AND COLLABORATIVE WORK PLACE

Critical to our success is making sure we provide a healthy workplace to all our railroaders. Fostering collaborative relationships with our union partners is an important way we connect with our employees, given that 76 per cent of CN's workforce is unionized. Such efforts help us manage and adapt to changing times, and we have seen great co-operative initiatives result from our positive union relationships.

## EMPLOYMENT EQUITY AND DIVERSITY

Inclusion, diversity and tolerance are important at CN. They produce better business outcomes by tapping into each person's unique talents and perspectives to improve service, efficiency and the bottom line. They also make CN a better place to work.

We invest significant efforts in attracting and hiring a diverse workforce. In 2014, close to 40 per cent of our candidates voluntarily self-declared as belonging to a designated diversity group allowing us to continuously strengthen our workforce diversity. We extend our philosophy on diversity to many other facets of our business through, for example:

- CN's **sponsorship, scholarship and internship programs**, which help promote and develop diverse talent
- Our **Women in Operations program**, which offers women at CN career opportunities in non-traditional roles



- **Aboriginal engagement training**, which introduces CN employees to Aboriginal culture and history, and strengthens our ties with their communities
  
- **Celebration of key events** such as Black History Month, International Women’s Day, Aboriginal Day, and the International Day for Persons with Disabilities

## HUMAN RIGHTS

Upholding the human rights of our employees and the public at large is simply the right thing to do. While CN is not a signatory to the United Nations Global Compact (UNGC), our approach to sustainability is aligned with the ten UNGC principles in the areas of human rights, labor, environment, and anti-corruption. Human rights are the basic rights and freedoms that belong to every person, regardless of age, race, colour, religion, disability, gender and sexual orientation – and they are embodied in our Code of Business Conduct by which every CN employee must abide.

We do not tolerate harassment or discrimination in any form and we hold all CN leaders responsible for the enforcement of these policies and guidelines – every day. These principles also protect our customers, suppliers and contractors. Furthermore, we respond promptly to complaints and work to ensure they are resolved quickly, confidentially and without retaliation.

## HEALTH AND WELLNESS

Health and safety are things we take very seriously at CN. Our health and wellness program – CN Traction – supports good health habits and active living. The program is supported by Wellness Champions – volunteers who help get the word out regarding good health by encouraging their fellow railroaders to participate in wellness activities at work and at home.

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As part of our ongoing commitment to keep our people healthy, safe and protected, we have zero tolerance for violence in the workplace, as stated in CN's Workplace Violence Prevention Policy, applicable in both Canada and the U.S. We also have zero tolerance for drug and alcohol impairment in the workplace.

## LABOR RELATIONS

Maintaining positive working relationships with our unions and membership is of critical importance to CN given that our labor relations are governed by over 75 different collective agreements in the U.S. and Canada. It is to the benefit of all parties that negotiations to renew these agreements are conducted honestly and in good faith.

### CANADA

As at the end of 2014, CN employed a total of 17,732 employees in Canada, of which 13,335 were unionized.

### UNITED STATES

As at the end of 2014, CN employed a total of 7,798 employees in the U.S., of which 6,137 were unionized.

### Unionized employees – Canada and U.S.

*As at December 31, 2014*

<b>Canada</b>	<b>Number</b>	<b>Expiration</b>
Conductors & Yard Co-ordinators	3,565	22/07/2016
Track Forces	2,910	31/12/2018
Shopcraft	2,118	31/12/2018
Locomotive Engineers	1,917	31/12/2017
Clerical & Intermodal	1,864	31/03/2019
Signals & Communications	684	31/12/2016
Rail Traffic Controllers	192	31/12/2018
Special Agents	68	31/12/2017
Other	17	

### United States

Enginemen, Conductors & Yard Co-ordinators 1,722

Track Forces	1,322
Locomotive Engineers	1,070
Shopcraft	1,067
Signals & Communications	406
Clerks	349
Other	201

*The Railway Labor Act (RLA) governs labor relations for U.S. railroads and their employees and was enacted to prevent railway labor disputes. Under the RLA, and unlike in most other industries, railway collective bargaining agreements do not terminate on a specified date. Rather, the agreements typically set forth a date upon which the parties agree to begin renewal negotiations and discuss changes to wages and working conditions. Negotiations continue until an agreement is reached or the parties have been released by the National Mediation Board after exhausting all of the various mechanisms in the law designed to allow the parties to reach a settlement.*

**CN workforce**                      **Canada U.S. Total**  
*As at December 31, 2014*

<b>All employees</b>	<b>17,732</b>	<b>7,798</b>	<b>25,530</b>
Unionized employees	13,335	6,137	19,472
Non-unionized employees	4,397	1,661	6,058

## PUTTING SAFETY FIRST

We believe that safety is key to outstanding railroading. Our vision is to be the safest railroad in North America by establishing an uncompromising safety culture. Each year we invest in safety training, technology and infrastructure to ensure a safe and secure working environment and to deliver our customers' shipments damage-free.

Our Safety Management System (SMS) is a proactive, comprehensive program designed to minimize risk and continually reduce injuries and accidents. The SMS is our roadmap to managing and improving safety at CN. It ensures that we are focusing our efforts on the key areas of our operation, and managing risk through actionable items that strengthen our safety performance. We describe the *People* and *Process* components of the SMS in the following paragraphs. The *Technology* and *Investment* components are covered in the next section: Improving the Safety and Fluidity of the Network (p. 118).

## SPEAKING UP, FOR EVERYONE'S SAKE

Looking out for each other is an integral part of CN's industry-leading safety culture. Starting in the fall of 2015, a new phase is being launched with training for thousands of Operations employees on keeping each other safe. The joint union-management initiative will emphasize the importance of constant vigilance of one's surroundings and of speaking up to a colleague if unsafe acts are observed. The goal is simple: we all go home safe at the end of the day.

## PEOPLE

Building a strong safety culture is a key building block for us. We work hard to create a safe workplace by fostering a robust safety awareness mindset. To strengthen this safety mindset and culture, we invest continually in training, coaching, recognition and employee involvement initiatives. Employees are

required to take a variety of safety training specific to their job functions. They are encouraged to participate in a number of safety-related initiatives, including Looking Out For Each Other, Safety Summits, peer-to-peer communications, intensive field training, weekly safety leadership conference calls and annual SMS conferences.

CN is the only railroad in North America to measure its safety culture on an ongoing basis. We accomplish this through employee participation surveys and integrated audits aligned with guidelines provided by Transport Canada.

CN supports more than 100 joint union-management Health & Safety Committees through training, risk assessments and assistance in developing annual action plans to address the top causes of accidents.

## PROCESS

Our **Safety Policy** defines what our values are towards safety, starting with the CEO and permeating throughout the entire company, and outlines our key measures for ensuring a safe and secure working environment.

**Risk Assessments** allow CN employees to understand the potential safety hazards of railroad activities and take action to reduce risks.

Our **Safety Integration Plans** safely integrate newly acquired assets and properties into the CN system. These comprehensive safety reviews ensure that additions or changes to CN's network are thoroughly reviewed and safely integrated into CN's culture.

**Safety Audits** monitor the effectiveness of our SMS and identify opportunities for us to get even better. We aren't satisfied allowing things to remain static – SMS is all about continuous improvement.

## TRANSPORTATION OF DANGEROUS GOODS

When CN transports dangerous goods, we do everything we can to ensure the health and safety of our employees and the public as well as protect the environment. Dangerous goods shipments range from industrial chemicals to manufactured goods and are indispensable to our modern way of life. Dangerous goods shipments account for approximately 10 per cent of our total traffic volume.

Transport Canada and the U.S. Department of Transportation require railroads to meet strict standards for these shipments. CN has developed its own policies and procedures, such as performing internal compliance audits, which go above and beyond those standards. CN's Emergency Response Plan is a model for the emergency response community and is often used by other agencies as a reference for their plans.

CN is committed to running a safe railway, complies fully with federal government regulations governing the transportation of dangerous goods, and employs a robust SMS to ensure that safety is incorporated into daily operations. CN has proactively taken steps to reduce the speed of dangerous goods trains in high-population areas and to conduct corridor risk assessments.

CN has strongly supported the retrofitting or phase-out of the older DOT-111 model tank cars used to transport flammable liquids. CN welcomes the new tank car standards unveiled on May 1, 2015, including the added thickness of tank car steel walls and other protection features. The new standards represent a clear advance in tank car safety, the last line of defense in the event of an incident. The vast majority of tank cars are owned by customers or railcar leasing companies.

We believe that the rail industry can enhance safety by working more closely with communities. Toward that end, we have been reaching out to a large number of municipal officials and their emergency responders all along our rail network to review our comprehensive safety programs, share information on dangerous goods traffic, and discuss emergency response planning and training. This outreach program involves almost 1,100 communities in Canada and some 870 communities and counties in the U.S.

An important component of our work is supporting TransCAER® (Transportation Community Awareness and Emergency Response), an outreach effort to train emergency personnel in communities situated near rail lines where dangerous goods are transported. In 2014, CN conducted 300 TransCAER® events in communities all along our network, bringing critical training to 6,800 participants.

MOBILE APP  
PROVIDES  
REAL-TIME  
DANGEROUS  
GOODS  
INFORMATION

CN is giving emergency responders across North America another tool to use in responding to a railway incident: the AskRail app. Developed in conjunction with the Association of American Railroads, AskRail's mobile interface allows responders to identify the contents of a railcar in real-time through a simple search, view railway emergency contact information and reference resources to support incident response.

CN has provided access to AskRail to over 4,100 responders across its network in Canada and the U.S., further enhancing their ability to protect communities in a rail emergency.



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## SECURITY

Through considerable investment and partnerships with government law enforcement agencies, we aim high when it comes to security for our assets and shipments. The engine that drives our security strategy is our comprehensive Security Management Plan, a structured risk-based approach to managing network security at CN. This enables us to earmark vital resources to the protection of critical assets. The plan's key components include:

- Threat and vulnerability assessments
  - Security alerts
  - Countermeasures
  - Tight border security
- Dedicated CN Police officers

For many years, the duties of CN Police officers in the U.S. and Canada have been to:

- Protect customer shipments
- Prevent and investigate crimes on CN property
- Ensure the safety and integrity of CN facilities, equipment and property
- Participate in rail safety education initiatives in communities across the network

## SAFETY PERFORMANCE

There's safety in numbers. CN measures our safety performance on a daily basis at all levels of the organization. We use a variety of modern technologies including focused mapping, interconnected data systems and trend analysis to assess our safety performance.

## TRAIN ACCIDENT RATIOS

CN's 2014 train accident ratios were adversely affected by the most severe winter on record as well as by a rapid and significant increase in volumes on our secondary main track in Western Canada. To achieve our 2015 target, we are:

- Implementing the recommendations of CN's Safety Task Force, which was established to reduce accidents and injuries
- Having each division of the railroad continue to focus on critical safety rules, which account for the majority of non-main track accidents
- Issuing "Expectations for Safety Leaders," which clarifies the proactive measures for safety that are expected of general managers, superintendents and functional leaders
- Continuing Corridor Risk Assessments focused on CN's secondary main track and implementation of technologies and processes to further enhance derailment prevention
- Increasing capital investment and focus on areas impacting safety
- Maintaining the focus on rules compliance and safety culture
- Continuing the work of the CN Technology Working Group, a multi-functional team that looks at safety data to drive improvement

*\*In the U.S., the Federal Railroad Administration (FRA) ratio includes only accidents with a cost in excess of US\$10,500 (2015 threshold).*

*In Canada, since 2013, the ratio reflects a change in Transportation Safety Board (TSB) reporting criteria under \*\*which all derailments and collisions are now deemed reportable. Previously, only those involving dangerous goods and passenger trains or resulting in damage that affected safe operations were reportable.*

## PERSONAL INJURY RATIO

Severe winter weather brought challenges to CN's personal injury performance in 2014, particularly with respect to slips, trips and falls. To achieve our 2015 target, we are:

- Continuing to address top injury causes at the local level
- Strengthening on-the-job training
- Continuing to enhance CN's safety culture through peer engagement programs, Safety Summits, peer-to-peer communications, education and cause-finding
- Continuing the work of CN's Safety Task Force, which develops initiatives to address top safety issues such as slips, trips and falls, as well as injuries related to entraining and detraining

## IMPROVING THE SAFETY AND

## FLUIDITY OF THE NETWORK

CN leverages a wide range of state-of-the-art technologies to minimize risks and run a safe railroad. In 2014, CN invested \$2.3 billion in its capital program and \$1.25 billion of this went towards track infrastructure to maintain a safe and fluid railway network. CN invests approximately 18 to 20 per cent of annual revenues on total capital expenditures and the plan for 2015 is \$2.7 billion.

## IN ENGINEERING

**Ultrasonic Rail Flaw Detectors (RFD)** are designed to catch internal rail defects that cannot be seen with the naked eye and could potentially lead to broken rails. CN uses 20 to 40 RFD vehicles throughout the year based on seasonality. CN tests approximately 200,000 miles of track annually. This represents testing our entire network an average of 10 times every year. CN tests subdivisions throughout the network between one and 18 times per year, which is well above regulatory requirements. CN uses careful analysis which considers track usage, the volume of dangerous goods being transported on the track, track quality and other factors to determine testing frequency.

**Track Geometry (TEST) Cars** are a powerful tool for detecting wear and irregularities in track gauge, curvature, alignment and cross-level. CN owns two TEST cars and 22 high-rail vehicles equipped with geometry testing systems.

Our newest TEST car features innovative joint bar inspection technology that inspects rail joint bars at track speed. In 2014, CN added eight geometry units to engineering vehicles in order to increase testing frequency. CN tests well over 60,000 miles of track annually. We also plan to add an unmanned geometry inspection vehicle to our fleet in 2015 as well as six additional geometry systems to the current fleet of high-rail units and two high-rail units equipped with track geometry and joint bar inspection systems. CN protects the network's integrity and operational safety by testing rail lines between one and seven times per year, which is well above regulatory requirements.

**Tie Rating Technology (TRT)** has been installed on one of CN's TEST cars in 2015. New to CN, TRT includes a 3D measurement system to more accurately and objectively assess the condition of track ties.

**Optical Track Inspection System:** State-of-the-art technology to capture detailed images of the track from a TEST car. The images facilitate the review of track components such as tie plates, tie fasteners, joint bars and bolts as well as the ballast profile to identify locations that may require additional lateral support. The system has been installed on one of CN's TEST cars in 2015.

**Tamping Units:** CN continues to upgrade its rail surfacing fleet with the purchase of new tamping units. The units, which will be able to surface more track, are expected to improve safety by reducing the risk of a track buckle.

**Rail Grinding** helps maintain the rail's profile and controls defects. Rail grinding is performed by self-propelled vehicles that travel throughout the network. CN grinds close to 20,000 miles of rail annually. There is currently no regulatory requirement to grind rail, but CN has determined that rail grinding enhances operational safety.

**Vehicle Track Interaction Units (V/TI)** reduce the risk of main track accidents by identifying unusual locomotive movements or accelerations. Potential track geometry or rail joint issues are located by GPS and inspected to assess the condition and required action. Even though there is no regulatory requirement to do so, CN has 21 locomotives equipped with V/TI.

**Bridge Testing System (BTS):** A mobile laboratory on wheels that uses advanced instrumentation to test, monitor and analyze various components of a bridge span in real time under static and dynamic loading. CN has one BTS unit that operates throughout our network.

**Roadbed Stability Detection:** CN monitors for geological hazards such as rock falls, landslides, high water levels and roadbed instability and warns approaching trains to prevent derailments. CN has 71 geo-hazard detection locations across its network, including some sites with multiple detectors.

**Electronic Track Occupancy Permits (eTOPs)** allow engineering employees to request and receive permission from rail traffic controllers to enter a track location to perform maintenance or repairs. eTOPs improve safety by eliminating data transcription errors. In 2014, there were 270,000 eTOPs issued on CN's system in Canada.

## IN MECHANICAL

**Alternating Current (AC) Locomotives:** In 2014, CN added 60 new AC locomotives to its fleet, continuing a multi-year locomotive renewal program aimed at continuously increasing fuel efficiency and improving service reliability for customers. The AC motors provide significantly better rail adhesion for pulling heavier and longer trains.

**Liquefied Natural Gas (LNG) Fuel:** CN continues to test the feasibility of powering locomotives with LNG for improved environmental emissions and fuel efficiency. In 2014, CN successfully converted two high-horsepower mainline locomotives to LNG. Four special tender cars to carry the LNG were also constructed. The program has been invaluable in understanding the basic processes of refuelling, storage and management of LNG, as well as enhancing CN's understanding of using natural gas as an alternative to diesel. Testing with LNG is expected to continue in 2015 as CN assesses the value of this fuel technology to daily operations.

**Wayside Inspection System (WIS):** CN's WIS is the most advanced in North America. Our hot bearing detectors (HBD) help prevent derailments by sensing unsafe wheel bearing temperature levels on moving cars or locomotives. In 2014, we added 48 new WIS locations and upgraded 16 locations across our network. By the end of 2014, we had 865 WIS detectors on our system, working towards our industry-leading standard of 12- to 15-mile intervals on core routes, far exceeding Transport Canada's mandate of an HBD every 40 to 60 miles. In 2015, CN's program includes 26 new HBDs on key routes



and branch lines. We are also upgrading over 30 existing locations to the latest detector technology. CN has integrated these detectors into a central computer system, which allows for proactive monitoring of “warm” bearings and ensures their removal prior to a problem. This forward-thinking use of the technology has allowed us to reduce HBD alarms by two thirds since 1996. Derailments caused by overheated bearings have dropped by 64 per cent since the late 1990s. Also in 2014, CN installed 33 new dragging equipment detectors (DED) system-wide. In total, CN has 398 stand-alone DEDs in addition to those integrated in our WIS units. In 2015, we plan to install an additional 21 DEDs to protect key structures and waterways.

**Hot and Cold Wheel Detectors (HWD & CWD)** are used to monitor the temperature of railcar wheels. A hot wheel is normally an indicator of a stuck hand or air brake. A cold wheel, especially at the bottom of long grades, indicates inadequate brake shoe force. CN has added more than 100 HWDs in the past five years, bringing the total to 593 by the end of 2014 with spacing of 20 to 25 miles on our core network. We also have five strategically placed CWDs. In 2015, CN plans to retrofit five WIS locations on the Yazoo Subdivision in Mississippi to include HWDs. In 2014, CN performed over 49,000 single air brake tests to diagnose air brake problems.

**Wheel Impact Load Detectors (WILDs)** detect wheels that have surface flat spots and other imperfections that can lead to broken wheels or broken rails. CN uses the information provided by WILD sites to help assess wheel replacement or maintenance needs. CN installed a new WILD on the Chicago-to-Winnipeg corridor in 2014. With 40 WILDs on its system, CN continues to have the largest and most dense network in North America. In 2015, CN plans to install one new WILD on the Fulton Subdivision in Kentucky. CN changes about 80,000 wheel sets (pairs of wheels) per year for all reasons, including sets with defects found by WILDs.

**Truck Hunting Detectors (THD)** prevent excessive rail and truck wear as well as derailments by looking for dynamic behaviour (hunting) on the track. In 2014, CN added four THDs at three locations. CN now has six THDs in four locations.

**Wheel Dimension and Profile Detectors (WDPD)** are based on a new technology that uses laser and strobe video to capture wheel profile information as a train passes over the site at speeds of up to 65 mph in order to identify wheels that need replacement. CN has established three WDPD sites on its network.

**Image Detection System** is designed to assess railcar components and track safety conditions. The system can find a missing bolt on a train moving at track speed. The system transmits an image of any defect in real time, 24 hours a day. In 2015, CN installed this state-of-the-art system on the York Subdivision, just east of Toronto, ON. We plan to install a second module at this location later in 2015.

## IN TRANSPORTATION

**Trip Optimizer (TO)** is an intelligent cruise control system that automatically determines optimal throttle settings on locomotives, improving train handling and fuel economy. TO controls throttle adjustments to reduce in-train forces, minimizing the potential for train separations or damage to our customers' goods. In 2014, TO was operational on 314 CN locomotives. We plan to add TO on the 90 new locomotive purchases in 2015.

**Locomotive Simulators** provide computer-based simulation of train driving and rail transport operations. They are valuable tools in locomotive engineer training as well as operational standards and policy development.

**Positive Train Control (PTC)** is a system for monitoring and controlling train movements to automatically stop or slow a train to prevent incidents. The U.S. Rail Safety Improvement Act of 2008 requires Class I railroads to install PTC systems on tracks that carry passengers or toxic-by-inhalation (TIH) materials by the end of 2015. PTC is one of the most technologically complex initiatives the railway industry has ever undertaken. The PTC deployment initiative in the U.S. has been affected by significant delays in the development of several key technologies and components, as well as in the permitting processes for radio towers. As a result, the U.S. rail industry, including CN, has formally declared it will not be able to achieve the 2015 year-end deadline for complete implementation of PTC despite its best efforts to do so. The industry says it will not be in a position to implement the technology before 2018, with a further two years of testing required to ensure full interoperability.

CN's total implementation costs associated with PTC are estimated to be US\$550 million, of which approximately US\$100 million was spent at the end of 2014. In total, CN will be installing PTC on approximately 3,800 miles of track in the U.S.

**Distributed Power (DP)** allows powered locomotives to be located "remotely" on a train other than at the head. Using DP, locomotives placed in a mid-train and/or tail-end position are controlled from the lead locomotive. DP provides more uniform tractive effort, lower in-train forces and more effective braking, thus reducing the potential of separations and/or derailments. At the end of 2014, CN had 590 locomotives equipped with DP in our fleet. In 2015, we plan to add 90 new AC locomotives to our DP fleet. In January 2015, CN also added 10 new Distributed Braking cars to assist in providing efficient and safe air brake operations, especially in winter.

## BUILDING FOR A SUSTAINABLE FUTURE

Like you, we're thinking about tomorrow, today. For us, a sustainable future means thinking and acting in the interest of generations to come. We recognize the important responsibility we have to do all we can to minimize the environmental impacts of our operations, while providing cleaner, more sustainable transportation services to our customers.

Environmental sustainability is an integral part of our approach to Delivering Responsibly. Our strategy is focused on emissions and energy efficiency, waste management as well as biodiversity and land management. To execute our strategy, we've developed a Sustainability Action Plan, comprising multiple projects across our organization. The plan is overseen by our executive team and supported by our Sustainability Committee.

## ENVIRONMENTAL STRATEGY

Reducing our impact on the world around us takes real action. Our environmental strategy includes:

Improving our emissions and energy efficiency through Operational and Service Excellence. Today, we lead the North American rail industry in fuel efficiency, consuming 15 per cent less fuel per gross ton mile overall than the industry average.

- Reducing waste at source by pursuing greener procurement options.

Improving waste management at our facilities and across our network through comprehensive re-use and recycling programs.

Conducting our operations in a way that protects the environment where we operate and minimizes our disturbance of the natural ecosystems around our network.

## ECOCONNEXIONS® LIVING OUR ENVIRONMENTAL VALUES

Our EcoConnexions® program is the engine that drives our success towards achieving our environmental objectives. What started as an employee engagement program has expanded to programs that also connect with our customers and communities to build a more sustainable future.

### ECOCONNEXIONS® – EMPLOYEE ENGAGEMENT PROGRAM

We launched the employee program in 2011, through a five-year partnership with Earth Day Canada, with the goals of conserving energy, reducing waste and improving housekeeping at CN yards and offices across North America. Investments for these initiatives are supported by our \$5 million CN EcoFund, which reinvests the significant cost savings generated by our EcoChampion initiatives into new capital projects that generate energy conservation and waste reduction.

### ECOCONNEXIONS® – FROM THE GROUND UP PROGRAM

Our community program provides funding of up to \$25,000 for the greening of municipal properties across Canada and the U.S., especially in communities along our rail lines. With our partners, Tree Canada®, Communities in Bloom® and America in Bloom® we have helped 131 municipalities establish tree planting initiatives in a sustainable, environmentally responsible manner since 2012. In conjunction with our mass reforestation program, over one million trees have been planted across Canada and the U.S.

### ECOCONNEXIONS® – CUSTOMER PARTNERSHIP PROGRAM

Under this program, CN customers pledge to work to reduce their carbon emissions and increase energy efficiency. In May 2014, we recognized 10 of our top intermodal customers for their commitment to sustainable business practices and planted 110,000 trees for these customers in the spring of 2015.

## EMISSIONS AND ENERGY EFFICIENCY

We believe an integral part of our success depends on our ability to mitigate the impact of, and adapt our business to, changing climatic conditions. Our carbon footprint covers our rail locomotive fleet, non-rail vehicle and vessel fleet, and buildings and yards. With 85 per cent of our GHG emissions generated by rail operations, emissions reduction in this area is an ongoing priority. From 2005 to 2014, we have reduced our rail locomotive GHG emission intensity (measured as tonnes of CO<sub>2</sub> equivalent per million GTMs) by 17 per cent. The following policies and initiatives are helping us to improve our emissions and energy efficiency:

**Precision Railroad®:** Our unique asset-lean business model allows us to use fewer railcars and locomotives to ship more freight in a tight, reliable and efficient operation.

**Locomotive fleet acquisitions and upgrades:** We continue to acquire new, fuel-efficient locomotives and upgrade our existing fleet. These new locomotives enable us to meet stringent U.S. EPA Tier 4 emissions standards which are intended to reduce emissions of diesel particulate matter and nitrogen oxide.

**Leading edge technologies:** We maintain a longstanding commitment to reducing emissions by investing in innovative fuel efficiency technologies such as Trip Optimizer and Wi-Tronix®. Trip Optimizer calculates the locomotive's ideal speed to minimize braking and increase fuel efficiency. Wi-Tronix® is a real-time wireless data acquisition system that collects operational and performance data

on locomotives, and distributes this information to a central location where data analysis can be completed to assess a train's operations and fuel efficiency.

**Yard efficiencies:** Our innovative SmartYard system makes traditional switching practices at our largest switching yards more efficient by providing our yardmasters with timely, reliable data for better decision making.

**Fuel conservation practices:** Our crews are trained on fuel conservation practices, including locomotive shutdowns in our yards, streamlined railcar handling, train pacing, coasting and braking strategies.

**Routing protocols:** We reduce rail-freight costs industry-wide by placing traffic on the most efficient routing, regardless of track ownership. We currently have routing protocol agreements in place with all Class I railroads.

**Supply chain initiatives:** In addition to routing protocols and co-production arrangements, we are collaborating from end-to-end with ports, terminal operators and customers through agreements that focus on improving dwell times and driving efficiency, further enabling us to reduce GHGs and ensure better service for our customers.

**Upgrading our yards and buildings:** We are committed to improving the use of energy in our existing buildings and yards, while integrating more sustainable designs into new buildings.

**Research and development:** We are currently investing with manufacturers and research centres to support the development of next-generation locomotives and alternative fuels.

## WASTE MANAGEMENT

We are focused on doing more with less, while preventing and reducing our waste production. Responsible material stewardship and better waste management strategies enable us to realize cost efficiencies, lessen our environmental impact, increase productivity, and give our employees a sense of pride for being part of a company that cares about the future.

**Reducing waste at source:** Preventing the generation of waste at source is an important part of our waste management strategy. Over the past few years, we continued to establish a more robust waste inventory, enabling us to target resource materials that generate significant quantities of waste. With a clear focus, we partner with our suppliers to promote more sustainable materials, reduce packaging and increase recycling and reuse.

**Reusing materials:** We continue to reuse materials from our buildings and yards, including used oil, concrete ties and engine coolants. For example, we use wastewater from treatment plants to wash our locomotives.

**Recycling waste:** Through our EcoConnexions® program, we are engaging our employees and strengthening our culture of waste management. We continue to increase awareness of waste sorting and recycling opportunities, while sharing best practices across the network. Our recycling initiatives include paper and cardboard, plastic, batteries, electronic waste, scrap metals, rail, railcars and rail ties.

## BIODIVERSITY AND LAND MANAGEMENT

Protecting natural ecosystems remains a constant priority for us. As our network extends to three North American coasts, it passes through a wide range of habitats, including national parks, forests, prairies and wetlands. These habitats are home to rich and diverse species that provide essential ecosystem and social benefits to the surrounding communities. We are committed to improving the environment where we operate and conducting our activities and operations in a way that minimizes our disturbance of these ecosystems.

**Conducting impact assessments:** As part of our project approval process, we conduct detailed environmental and social impact assessments to understand risks and identify mitigation measures. These assessments typically involve studies of ecosystems and habitats at risk, as well as stakeholder engagement activities to better understand impacts on local communities.

**Preserving and restoring ecosystems:** We have in place a broad range of programs to protect sensitive habitats and prevent and correct ecosystem impacts, particularly on aquatic life and wildlife. We continue to build fish culvert passages where railway track projects are located near water courses, and have a wildlife management program, which includes mapping areas of high wildlife collision rates and strategies to prevent them.

**Cleaning up and remediating sites:** Contaminated sites can result from railroad activities or accidental spills and releases. We are committed to clean-up and remediation related to present and past ownership, operation or control of real property and continue to proactively manage and reduce our risks.



At CN, we recognize our responsibility to the communities in which we operate – not only in our commitment to safety, but also in helping make communities better places to live and work. This spirit of caring is expressed in the CN Stronger Communities Fund, a community investment program that focuses on five core areas:

## CARING AND SOLIDARITY

We believe that one of the best ways to build stronger communities is to actively contribute to organizations, programs and initiatives that promote caring and solidarity. Examples include:

**CN Miracle Match** encourages individuals and corporations to make charitable donations in support of children’s hospitals by matching funds raised through the fundraising campaigns of three selected hospitals each year. CN has helped raise close to \$12 million for pediatric care since the program was launched in 2006. Through Miracle Match, CN enables children’s hospitals to purchase much-needed equipment, expand their programs and facilities and continue to make an important difference to families and communities. The following three foundations were selected in 2014 to each receive CN-matched contributions of up to \$300,000:

HELPING  
BUILD  
STRONGER  
COMMUNITIES

- Le Bonheur Children’s Hospital, Memphis, TN
- The Children’s Hospital Foundation of Saskatchewan, Saskatoon, SK
- The Milton District Hospital Foundation, Milton, ON

**United Way:** CN donated over \$1.2 million to the United Way in 2014 to support communities all along our network, in both Canada and the U.S.

## **SAFETY AND SUSTAINABILITY**

We are focused on conducting our operations safely and in a manner that protects the natural environment. Examples of our efforts include:

**All Aboard for Safety®** is our flagship community education program to help prevent accidents on or near railroad property. We promote safety to children using our safety train, Little Obie, and host safety blitzes and Safe Crossing weeks. These events actively engage CN Police and our employees in promoting safety, and involve partnerships with like-minded community groups such as Operation Lifesaver® and Parachute®.

**CN EcoConnexions®** is our premier program to encourage environmental values and initiatives among our employees, communities and customers. For our employees, the focus is on conserving energy, reducing waste and improving housekeeping practices throughout our operations. We also promote the greening of municipalities through which we operate by supporting community-based projects and mass reforestation programs. Most recently, we have begun to work with our customers to help them reduce their carbon emissions and increase energy efficiency.

**FCM/RAC Proximity Initiative:** CN works with the Federation of Canadian Municipalities (FCM) and the Railway Association of Canada (RAC) to prevent and resolve issues that may arise when people live and work in close proximity to railway operations. By developing proximity guidelines, improving stakeholder awareness and promoting a dispute resolution protocol, the Initiative aims to address railway-community issues concerning noise, vibration and safety.

## DIVERSITY

Creating a workplace that reflects the diversity of the wider world in which we operate just makes good sense. It's the best way we know to use our people's unique talents and perspectives to effectively serve our diverse customer base. CN's policy of inclusion, diversity and tolerance provides support to organizations that promote the advancement of women, Aboriginal communities and other groups through the CN Stronger Communities Fund and other programs.

**Inspiring Women to Explore Non-traditional Careers:** Since 2012, an innovative CN program called ASPIRE has reached thousands of female high school students across North America and inspired them to explore non-traditional careers. ASPIRE, which is run by CN's Society of Women in Engineering, introduces girls to science, engineering and the railroad. This year, the ASPIRE team in Ontario participated in more than a dozen events, speaking to groups of high school guidance counsellors, teachers and students about CN and our exciting opportunities for young women. ASPIRE also invited groups of female students to visit MacMillan Yard in Vaughan, ON, where participants toured the facilities and heard from CN women in management and other non-traditional roles, such as shift supervisor and trainmaster, who spoke about career opportunities for women at CN.

## TRANSPORTATION EDUCATION

By supporting transportation education, CN is inspiring and helping today's youth to become tomorrow's railroaders – and leaders. We promote and support transportation-related education in the following areas: trade and apprenticeship programs, college and university programs, as well as scholarship and bursary programs. Examples include:

**CN Generation Scholarship** program offers grants to support the post-secondary pursuits of the children of CN employees and pensioners. Eligible candidates are selected on the basis of their academic standing, references and extracurricular activities and must be enrolled in programs relevant to CN's core business, including Transportation, Mechanical, Engineering, Logistics and IT.

**CN Campus:** A cornerstone of our workforce renewal program is CN's \$55-million investment in two state-of-the-art training centres in Winnipeg, MB, and Homewood, IL. CN Campus delivers our enhanced railroader training program focused on instilling a strong safety culture in new employees and reinforcing it among current employees who are learning new skills or upgrading existing ones. The facilities feature a modern training curriculum, key equipment such as locomotive simulators, outside training grounds and dedicated rolling stock to effectively provide hundreds of students a week from across the network with hands-on training for all key railway jobs.

## **CN RAILROADERS IN THE COMMUNITY**

We are proud of our employees, retirees and their families who volunteer their time to make their communities stronger and better places to live and work. The CN Railroaders in the Community program recognizes these acts of kindness by providing grants to the community-based charitable organizations they choose to support through their volunteer efforts.

## CANADA

### ECONOMIC REGULATIONS

CN's rail operations in Canada are subject to economic regulation by the Canadian Transportation Agency (CTA). The CTA provides rate and service remedies, competitive line rates and compulsory interswitching. The CTA also regulates the maximum rates for the movement of grain, ancillary charges and noise-related disputes. In addition, certain business transactions must gain prior regulatory approval.

### RAIL SAFETY REGULATIONS

The primary source of rail safety regulation in Canada is the Canadian Railway Safety Act, which is administered by Transport Canada. Transport Canada also conducts research and development in support of improved rail safety and works closely with the railway industry setting track, equipment and hazardous material transportation standards. The safety of railroad employees is also subject to the regulations of Human Resources & Skills Development Canada.

A ROBUST  
REGULATORY  
ENVIRONMENT

### OPERATING RULES

Every CN employee operating trains or engines is trained and tested (every three years) on the Canadian Rail Operating Rules to ensure the operating rules are followed 100 per cent of the time.

### WORK/REST RULES

For CN operating employees (train crews), the Canadian Work/Rest Rules define the requirements for hours of work and rest to ensure they remain alert on duty. CN's Fatigue Management Plan provides strategies and a framework to address employee fatigue in the workplace.

## UNITED STATES

### ECONOMIC REGULATIONS

CN's rail operations in the U.S. are subject to economic regulation by the Surface Transportation Board (STB). The STB has jurisdiction over railroad rate and service issues and rail restructuring transactions such as mergers, line sales, line construction and line abandonments.

### RAIL SAFETY REGULATIONS

Rail safety regulation in the U.S. is enforced by the Federal Railroad Administration (FRA), primarily through the Federal Rail Safety Act. The FRA works closely with the railroad industry on various safety issues through its Rail Safety Advisory Committee.

### OPERATING RULES

Every CN employee operating trains or engines is trained and tested (every three years) on the U.S. Operating Rules to ensure the operating rules are followed 100 per cent of the time.

### WORK/REST RULES

For employees such as locomotive engineers, train conductors and dispatchers, the Federal Hours of Service Law (which is enforced by the FRA) sets specific limits on the number of hours they can work per day and provides guidelines for periods of required rest. CN's Hourly Rate Agreements with its operating unions (which are unique in the rail industry) provide employees with sufficient rest and an improved quality of life.

CN is committed to adherence to the highest standards of ethical business conduct in our governance practices. This commitment to good governance is reflected by our focus on continuously improving our policies and practices and on strengthening our culture of integrity and ethical business conduct. We have adopted numerous leading governance structures and process innovations as we strive to be among North America's leaders in corporate governance, including:

- A comprehensive Corporate Governance Manual publicly available on our website
- 10 (out of 11) independent Board members and an independent Chair
- Early voluntary compliance with the requirements of the U.S. Sarbanes-Oxley Act of 2002
- Director-majority voting policy on the Board
- Share ownership requirements for directors and the CEO beyond Board tenure
- Thorough director and Chair performance evaluation procedures
- A diversity policy that includes a target of a minimum of one-third representation of women on the Board by 2017
- A competency matrix for Board member selection purposes

COMMITTED TO  
GOOD

CORPORATE  
GOVERNANCE

Channels for employees and other parties to confidentially report any concerns related to accounting, auditing or corporate ethics

- A Code of Business Conduct that governs and establishes standards for employee behaviour

Respected corporate governance authorities and experts recognize CN as a leader in the field. CN is listed on several Canadian and global social responsibility indexes reflecting our strong performance across a broad range of environmental, social and governance (ESG) practices. CN was selected for excellence in our environmental initiatives, impact on local communities, treatment of employees and supply chain management, among others. CN also demonstrates strong public disclosure of ESG management and performance. Today's investors recognize that CN's long-term success is closely linked to our contributions to a sustainable future.

CN's focus is to create a corporate governance framework that is cohesive and integrated while encouraging an innovative spirit among our employees and management. We are very proud of our record of good corporate governance, as well as of the awards and recognition we have received in this field.

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2015 CN INVESTOR FACT BOOK 138

2015 CN INVESTOR FACT BOOK 139

## CANADIAN NATIONAL RAILWAY COMPANY

## QUARTERLY CONSOLIDATED STATEMENT OF INCOME

2013-2014

*unaudited, except annual data**\$ millions, except per share data*

	2013					2014				
	Q1	Q2	Q3	Q4	Year	Q1	Q2	Q3	Q4	Year
<b>Revenues</b>	<b>2,466</b>	<b>2,666</b>	<b>2,698</b>	<b>2,745</b>	<b>10,575</b>	<b>2,693</b>	<b>3,116</b>	<b>3,118</b>	<b>3,207</b>	<b>12,134</b>
<b>Operating expenses</b>										
Labor and fringe benefits	569	498	521	594	2,182	587	560	580	592	2,319
Purchased services and material	328	341	318	364	1,351	388	390	378	442	1,598
Fuel	405	402	390	422	1,619	468	484	446	448	1,846
Depreciation and amortization	235	250	241	254	980	256	257	258	279	1,050
Equipment rents	68	68	68	71	275	77	84	83	85	329
Casualty and other	81	65	76	73	295	97	83	87	101	368
<b>Total operating expenses</b>	<b>1,686</b>	<b>1,624</b>	<b>1,614</b>	<b>1,778</b>	<b>6,702</b>	<b>1,873</b>	<b>1,858</b>	<b>1,832</b>	<b>1,947</b>	<b>7,510</b>
<b>Operating income</b>	<b>780</b>	<b>1,042</b>	<b>1,084</b>	<b>967</b>	<b>3,873</b>	<b>820</b>	<b>1,258</b>	<b>1,286</b>	<b>1,260</b>	<b>4,624</b>
Interest expense	(89)	(88)	(89)	(91)	(357)	(92)	(91)	(94)	(94)	(371)
Other income	42	28	5	(2)	73	94	2	(2)	13	107
<b>Income before income taxes</b>	<b>733</b>	<b>982</b>	<b>1,000</b>	<b>874</b>	<b>3,589</b>	<b>822</b>	<b>1,169</b>	<b>1,190</b>	<b>1,179</b>	<b>4,360</b>
Income tax expense	(178)	(265)	(295)	(239)	(977)	(199)	(322)	(337)	(335)	(1,193)



CANADIAN NATIONAL RAILWAY COMPANY  
 QUARTERLY CONSOLIDATED BALANCE SHEET

2013-2014

*unaudited*

*\$ millions*

	2013				2014			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<b>Assets</b>								
<b>Current assets</b>								
Cash and cash equivalents	128	87	182	214	198	127	176	52
Restricted cash and cash equivalents	512	497	529	448	471	468	467	463
Accounts receivable	900	876	868	815	899	925	939	928
Material and supplies	289	330	317	274	331	355	372	335
Deferred and receivable income taxes	75	34	74	137	162	74	72	163
Other	95	81	67	89	117	93	82	125
<b>Total current assets</b>	<b>1,999</b>	<b>1,905</b>	<b>2,037</b>	<b>1,977</b>	<b>2,178</b>	<b>2,042</b>	<b>2,108</b>	<b>2,066</b>
Properties	24,733	25,305	25,383	26,227	26,643	26,478	27,410	28,514
Pension asset <sup>(1)</sup>	5	79	123	1,662	1,784	1,827	1,867	882
Intangible and other assets <sup>(1)</sup>	255	256	254	297	288	287	288	330
<b>Total assets</b>	<b>26,992</b>	<b>27,545</b>	<b>27,797</b>	<b>30,163</b>	<b>30,893</b>	<b>30,634</b>	<b>31,673</b>	<b>31,792</b>
<b>Liabilities and shareholders' equity</b>								
<b>Current liabilities</b>								
Accounts payable and other	1,332	1,469	1,499	1,477	1,547	1,601	1,718	1,657
Current portion of long-term debt	1,466	1,322	1,488	1,021	912	621	485	544

<b>Total current liabilities</b>	<b>2,798</b>	<b>2,791</b>	<b>2,987</b>	<b>2,498</b>	<b>2,459</b>	<b>2,222</b>	<b>2,203</b>	<b>2,201</b>
Deferred income taxes	5,700	5,867	5,884	6,537	6,748	6,709	6,920	6,902
Other liabilities and deferred credits	778	767	760	815	757	776	893	704
Pension and other post-retirement benefits	659	594	589	541	546	544	554	650
Long-term debt	5,945	6,141	6,010	6,819	7,287	7,040	7,356	7,865
<b>Shareholders' equity</b>								
Common shares <sup>(2)</sup>	3,872	3,847	3,818	3,795	3,773	3,752	3,740	3,718
Additional paid-in capital <sup>(2)</sup>	216	216	218	220	221	223	225	439
Accumulated other comprehensive loss	(3,187)	(3,094)	(3,080)	(1,850)	(1,768)	(1,806)	(1,699)	(2,427)
Retained earnings	10,211	10,416	10,611	10,788	10,870	11,174	11,481	11,740
Total shareholders' equity	11,112	11,385	11,567	12,953	13,096	13,343	13,747	13,470
<b>Total liabilities and shareholders' equity</b>	<b>26,992</b>	<b>27,545</b>	<b>27,797</b>	<b>30,163</b>	<b>30,893</b>	<b>30,634</b>	<b>31,673</b>	<b>31,792</b>

(1) *The Company reclassified certain balances from Intangible and other assets to Pension asset to conform with the 2014 annual presentation.*

(2) *The Company reclassified certain balances from Common shares to Additional paid-in capital in both 2013 and 2014 to conform with the 2014 annual presentation (for more information, consult our 2015 interim reports at [www.cn.ca/en/investors](http://www.cn.ca/en/investors)).*

## CANADIAN NATIONAL RAILWAY COMPANY

## QUARTERLY CONSOLIDATED STATEMENT OF CASH FLOWS

2013-2014

*unaudited, except annual data**\$ millions*

	2013					2014				
	Q1	Q2	Q3	Q4	Year	Q1	Q2	Q3	Q4	Year
<b>Operating activities</b>										
Net income	555	717	705	635	2,612	623	847	853	844	3,167
Adjustments to reconcile net income to net cash provided from operating activities:										
Depreciation and amortization	235	250	241	254	980	256	257	258	279	1,050
Deferred income taxes	83	73	13	162	331	95	53	67	201	416
Gain on disposal of property	(40)	(29)	–	–	(69)	(80)	–	–	–	(80)
Changes in operating assets and liabilities:										
Accounts receivable	(59)	39	(3)	55	32	(52)	(47)	26	14	(59)
Material and supplies	(57)	(38)	11	46	(38)	(54)	(27)	(11)	41	(51)
Accounts payable and other	(321)	118	57	(99)	(245)	(47)	143	100	(196)	–
Other current assets	(3)	14	17	(15)	13	(13)	24	13	(19)	5
Pensions and other, net	(72)	(81)	25	60	(68)	(83)	23	22	(29)	(67)
<b>Net cash provided by operating activities</b>	<b>321</b>	<b>1,063</b>	<b>1,066</b>	<b>1,098</b>	<b>3,548</b>	<b>645</b>	<b>1,273</b>	<b>1,328</b>	<b>1,135</b>	<b>4,381</b>

**Investing activities**

Property additions	(228)	(418)	(539)	(788)	(1,973)	(248)	(482)	(620)	(947)	(2,297)
Disposal of property	52	-	-	-	52	97	-	76	-	173
Change in restricted cash and cash equivalents	9	15	(32)	81	73	(23)	3	1	4	(15)
Other, net	6	(8)	(8)	6	(4)	-	(15)	(9)	(13)	(37)
<b>Net cash used in investing activities</b>	<b>(161)</b>	<b>(411)</b>	<b>(579)</b>	<b>(701)</b>	<b>(1,852)</b>	<b>(174)</b>	<b>(494)</b>	<b>(552)</b>	<b>(956)</b>	<b>(2,176)</b>



## CANADIAN NATIONAL RAILWAY COMPANY

## QUARTERLY CONSOLIDATED STATEMENT OF CASH FLOWS

(CONTINUED)

2013-2014

*unaudited, except annual data**\$ millions*

	2013					2014				
	Q1	Q2	Q3	Q4	Year	Q1	Q2	Q3	Q4	Year
<b>Financing activities</b>										
Issuance of debt	505	–	210	867	1,582	347	–	–	675	1,022
Repayment of debt	(740)	(156)	(104)	(413)	(1,413)	(456)	(117)	(222)	(27)	(822)
Net issuance (repayment) of commercial paper	566	(15)	58	(341)	268	189	(180)	64	(350)	(277)
Issuance of common shares due to exercise of stock options and related excess tax benefits realized	14	9	5	3	31	7	6	11	6	30
Repurchase of common shares	(361)	(351)	(383)	(305)	(1,400)	(365)	(347)	(383)	(410)	(1,505)
Dividends paid	(183)	(182)	(180)	(179)	(724)	(206)	(206)	(204)	(202)	(818)
<b>Net cash used in financing activities</b>	<b>(199)</b>	<b>(695)</b>	<b>(394)</b>	<b>(368)</b>	<b>(1,656)</b>	<b>(484)</b>	<b>(844)</b>	<b>(734)</b>	<b>(308)</b>	<b>(2,370)</b>
Effect of foreign exchange fluctuations on US dollar-denominated cash and cash equivalents	12	2	2	3	19	(3)	(6)	7	5	3

<b>Net increase (decrease) in cash and cash equivalents</b>	<b>(27)</b>	<b>(41)</b>	<b>95</b>	<b>32</b>	<b>59</b>	<b>(16)</b>	<b>(71)</b>	<b>49</b>	<b>(124)</b>	<b>(162)</b>
Cash and cash equivalents, beginning of period	155	128	87	182	155	214	198	127	176	214
<b>Cash and cash equivalents, end of period</b>	<b>128</b>	<b>87</b>	<b>182</b>	<b>214</b>	<b>214</b>	<b>198</b>	<b>127</b>	<b>176</b>	<b>52</b>	<b>52</b>
<b>Supplemental cash flow information</b>										
Net cash receipts from customers and other	2,509	2,656	2,633	2,842	10,640	2,672	3,060	3,213	3,084	12,029
Net cash payments for:										
Employee services, suppliers and other expenses	(1,672)	(1,241)	(1,256)	(1,389)	(5,558)	(1,684)	(1,512)	(1,561)	(1,576)	(6,333)
Interest	(90)	(84)	(85)	(85)	(344)	(105)	(105)	(87)	(112)	(409)
Personal injury and other claims	(14)	(14)	(16)	(17)	(61)	(13)	(11)	(14)	(19)	(57)
Pensions	(101)	(109)	(11)	(18)	(239)	(93)	(7)	(6)	(21)	(127)
Income taxes	(311)	(145)	(199)	(235)	(890)	(132)	(152)	(217)	(221)	(722)
<b>Net cash provided by operating activities</b>	<b>321</b>	<b>1,063</b>	<b>1,066</b>	<b>1,098</b>	<b>3,548</b>	<b>645</b>	<b>1,273</b>	<b>1,328</b>	<b>1,135</b>	<b>4,381</b>

CANADIAN NATIONAL RAILWAY COMPANY  
 QUARTERLY FINANCIAL & STATISTICAL DATA

2013-2014

*unaudited*

	Q1	Q2	2013			Q1	Q2	2014		
	Q1	Q2	Q3	Q4	Year	Q1	Q2	Q3	Q4	Year
<b>Revenues (\$ millions) <sup>(1)</sup></b>										
Petroleum and chemicals	461	481	489	521	1,952	568	564	594	628	2,354
Metals and minerals	288	309	332	311	1,240	308	370	388	418	1,484
Forest products	338	361	365	360	1,424	339	393	393	398	1,523
Coal	170	192	191	160	713	182	201	185	172	740
Grain and fertilizers	408	391	363	476	1,638	431	526	469	560	1,986
Intermodal	556	610	642	621	2,429	621	716	731	680	2,748
Automotive	134	149	137	135	555	129	172	160	159	620
<b>Total rail freight revenues</b>	<b>2,355</b>	<b>2,493</b>	<b>2,519</b>	<b>2,584</b>	<b>9,951</b>	<b>2,578</b>	<b>2,942</b>	<b>2,920</b>	<b>3,015</b>	<b>11,455</b>
Other revenues	111	173	179	161	624	115	174	198	192	679
<b>Total revenues</b>	<b>2,466</b>	<b>2,666</b>	<b>2,698</b>	<b>2,745</b>	<b>10,575</b>	<b>2,693</b>	<b>3,116</b>	<b>3,118</b>	<b>3,207</b>	<b>12,134</b>

**Statistical operating data**

Gross ton miles (GTMs) (millions)	96,301	101,547	100,321	103,221	401,390	101,476	116,243	115,348	115,698	448,765
Revenue ton miles (RTMs) (millions)	50,576	52,702	52,188	54,667	210,133	53,334	60,081	58,946	59,777	232,138
Carloads (thousands)	1,231	1,316	1,333	1,310	5,190	1,239	1,463	1,475	1,448	5,625
Route miles (includes Canada and the U.S.)	20,100	20,000	19,900	20,000	20,000	19,800	19,800	19,600	19,600	19,600
Employees (end of period)	23,624	23,925	23,664	23,721	23,721	23,992	24,875	25,032	25,530	25,530
Employees (average for the period)	23,435	23,926	23,756	23,703	23,705	23,756	24,565	24,915	25,304	24,635

*In 2014, certain Other revenues were reclassified to the commodity groups within rail freight revenues. This (1) change has no impact on the Company's previously reported results of operations as Total revenues remain unchanged. The 2013 comparative figures have been reclassified in order to be consistent with the 2014 presentation.*

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## CANADIAN NATIONAL RAILWAY COMPANY

## QUARTERLY FINANCIAL &amp; STATISTICAL DATA (CONTINUED)

2013-2014

*unaudited*

	2013					2014				
	Q1	Q2	Q3	Q4	Year	Q1	Q2	Q3	Q4	Year
<b>Productivity</b>										
Operating ratio (%)	68.4	60.9	59.8	64.8	63.4	69.6	59.6	58.8	60.7	61.9
Rail freight revenue per RTM ( <i>cents</i> ) <sup>(1)</sup>	4.66	4.73	4.83	4.73	4.74	4.83	4.90	4.95	5.04	4.93
Rail freight revenue per carload (\$) <sup>(1)</sup>	1,913	1,894	1,890	1,973	1,917	2,081	2,011	1,980	2,082	2,036
GTMs per average number of employees ( <i>thousands</i> )	4,109	4,244	4,223	4,335	16,933	4,272	4,732	4,630	4,572	18,217
Operating expenses per GTM ( <i>cents</i> )	1.75	1.60	1.61	1.72	1.67	1.85	1.60	1.59	1.68	1.67
Labor and fringe benefits expense per GTM ( <i>cents</i> )	0.59	0.49	0.52	0.58	0.54	0.58	0.48	0.50	0.51	0.52
Diesel fuel consumed ( <i>US gallons in millions</i> )	101.7	103.5	96.8	101.7	403.7	106.9	112.3	108.1	113.2	440.5
Average fuel price (\$ <i>per US gallon</i> )	3.61	3.43	3.52	3.65	3.55	3.95	3.84	3.62	3.48	3.72
GTMs per US gallon of fuel consumed	947	981	1,036	1,015	994	949	1,035	1,067	1,022	1,019
Terminal dwell ( <i>hours</i> )	17.8	15.0	14.4	16.1	15.8	19.8	15.4	16.0	16.9	16.9
Train velocity ( <i>miles per hour</i> )	25.2	27.3	27.8	26.1	26.6	24.0	26.2	26.3	26.1	25.7
<b>Safety indicators</b>										
Injury frequency rate ( <i>per 200,000 person hours</i> ) <sup>(2)</sup>	1.43	1.43	1.72	2.21	1.69	2.09	1.47	2.15	1.55	1.81
Accident rate ( <i>per million train miles</i> ) <sup>(2)</sup>	2.41	2.38	1.37	2.31	2.11	2.39	2.42	3.24	2.83	2.73

(1) In 2014, certain Other revenues were reclassified to the commodity groups within rail freight revenues. This change has no impact on the Company's previously reported results of operations as Total revenues remain

*unchanged. The 2013 comparative figures have been reclassified in order to be consistent with the 2014 presentation.*

*(2)Based on Federal Railroad Administration (FRA) reporting criteria.*

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CANADIAN NATIONAL RAILWAY COMPANY  
 RECONCILIATION OF NON-GAAP MEASURES

2010-2014

*unaudited*

*\$ millions, except per share data*

<b>Adjusted performance measures</b>	<i>Year ended December 31, 2010 2011 2012 2013 2014</i>				
Net income as reported	2,104	2,457	2,680	2,612	3,167
<b>Adjustments:</b>					
Other income	(152)	(348)	(281)	(69)	(80)
Income tax expense	21	85	57	39	8
<b>Adjusted net income</b>	<b>1,973</b>	<b>2,194</b>	<b>2,456</b>	<b>2,582</b>	<b>3,095</b>
Basic earnings per share as reported	2.26	2.72	3.08	3.10	3.86
Impact of adjustments, per share	(0.14)	(0.29)	(0.26)	(0.03)	(0.09)
<b>Adjusted basic earnings per share</b>	<b>2.12</b>	<b>2.43</b>	<b>2.82</b>	<b>3.07</b>	<b>3.77</b>
Diluted earnings per share as reported	2.24	2.70	3.06	3.09	3.85

Impact of adjustments, per share	(0.14)	(0.29)	(0.25)	(0.03)	(0.09)
<b>Adjusted diluted earnings per share</b>	<b>2.10</b>	<b>2.41</b>	<b>2.81</b>	<b>3.06</b>	<b>3.76</b>

For the year ended December 31, 2010, the Company reported adjusted net income of \$1,973 million, or \$2.10 per diluted share. The adjusted figures for the year ended December 31, 2010, exclude a gain on disposal of the Oakville subdivision of \$152 million, or \$131 million after tax (\$0.14 per diluted share).

For the year ended December 31, 2011, the Company reported adjusted net income of \$2,194 million, or \$2.41 per diluted share. The adjusted figures for the year ended December 31, 2011, exclude a gain on disposal of a segment of the Kingston subdivision, together with the rail fixtures and certain passenger agreements, of \$288 million, or \$254 million after tax (\$0.28 per diluted share); and a gain on disposal of substantially all of the assets of IC RailMarine Terminal Company of \$60 million, or \$38 million after tax (\$0.04 per diluted share). The adjusted figures also exclude a net deferred income tax expense of \$40 million (\$0.04 per diluted share) resulting from the enactment of state corporate income tax rate changes and other legislated state tax revisions; and an income tax recovery of \$11 million (\$0.01 per diluted share) relating to certain fuel costs attributed to various wholly owned subsidiaries in prior periods.

For the year ended December 31, 2012, the Company reported adjusted net income of \$2,456 million, or \$2.81 per diluted share. The adjusted figures for the year ended December 31, 2012, exclude a gain on disposal of a segment of the Bala and a segment of the Oakville subdivisions, together with the rail fixtures and certain passenger agreements, of \$281 million, or \$252 million after tax (\$0.29 per basic share or \$0.28 per diluted share); and a net income tax expense of \$28 million (\$0.03 per diluted share) consisting of a \$35 million income tax expense resulting from the enactment of higher provincial corporate income tax rates that was partly offset by a \$7 million income tax recovery resulting from the recapitalization of a foreign investment.

For the year ended December 31, 2013, the Company reported adjusted net income of \$2,582 million, or \$3.06 per diluted share. The adjusted figures for the year ended December 31, 2013, exclude a gain on exchange of perpetual railroad operating easements including the track and roadway assets on specific rail lines, of \$29 million, or \$18 million after tax (\$0.02 per diluted share) and a gain on disposal of a segment of the Oakville subdivision, together with the rail fixtures and certain passenger agreements, of \$40 million, or \$36 million after tax (\$0.04 per diluted share). The adjusted figures also exclude a \$24 million (\$0.03 per diluted share) income tax expense from the enactment of higher provincial corporate income tax rates.

For the year ended December 31, 2014, the Company reported adjusted net income of \$3,095 million, or \$3.76 per diluted share. The adjusted figures for the year ended December 31, 2014, exclude a gain on disposal of the Deux-Montagnes subdivision, including the Mont-Royal tunnel, together with the rail fixtures, of \$80 million, or \$72 million after tax (\$0.09 per diluted share).



See cautionary statement on page 153 in respect of non-GAAP measures.

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## CANADIAN NATIONAL RAILWAY COMPANY

## RECONCILIATION OF NON-GAAP MEASURES (CONTINUED)

20103 – 2014

*unaudited***Free cash flow** (\$ millions)*Year ended December 31,*

	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Net cash provided by operating activities	2,999	2,976	3,060	3,548	4,381
Net cash used in investing activities	(1,383)	(1,729)	(1,421)	(1,852)	(2,176)
<b>Net cash provided before financing activities</b>	<b>1,616</b>	<b>1,247</b>	<b>1,639</b>	<b>1,696</b>	<b>2,205</b>

*Adjustments:*

Change in restricted cash and cash equivalents	–	499	22	(73)	15
Change in accounts receivable securitization	2	–	–	–	–
<b>Free cash flow</b>	<b>1,618</b>	<b>1,746</b>	<b>1,661</b>	<b>1,623</b>	<b>2,220</b>

**Adjusted debt-to-total capitalization ratio** (%)*December 31,*

	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Debt-to-total capitalization ratio <sup>(1)</sup>	35.0	38.1	38.5	37.7	38.4
<i>Add:</i> Impact of present value of operating lease commitments <sup>(2)</sup>	1.8	1.9	1.9	1.7	1.7
<b>Adjusted debt-to-total capitalization ratio</b>	<b>36.8</b>	<b>40.0</b>	<b>40.4</b>	<b>39.4</b>	<b>40.1</b>

**Adjusted debt-to-adjusted EBITDA multiple** (times)*Twelve months ended December 31,*

	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Debt	6,071	6,576	6,900	7,840	8,409
<i>Add:</i> Present value of operating lease commitments <sup>(2)</sup>	494	542	559	570	607
<b>Adjusted debt</b>	<b>6,565</b>	<b>7,118</b>	<b>7,459</b>	<b>8,410</b>	<b>9,016</b>

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Operating income	3,024	3,296	3,685	3,873	4,624
Add: Depreciation and amortization	834	884	924	980	1,050
EBITDA (excluding Other income)	3,858	4,180	4,609	4,853	5,674
Add: Deemed interest on operating leases	28	30	29	28	28
<b>Adjusted EBITDA</b>	<b>3,886</b>	<b>4,210</b>	<b>4,638</b>	<b>4,881</b>	<b>5,702</b>
<b>Adjusted debt-to-adjusted EBITDA multiple</b>	<b>1.69</b>	<b>1.69</b>	<b>1.61</b>	<b>1.72</b>	<b>1.58</b>

(1) *Debt-to-total capitalization is calculated as total Long-term debt plus Current portion of long-term debt, divided by the sum of Total debt plus total shareholders' equity.*

(2) *The operating lease commitments have been discounted using the Company's implicit interest rate for each of the periods presented.*

*See cautionary statement on page 153 in respect of non-GAAP measures.*

**Average Train Velocity**, expressed in miles per hour, is a measure of network fluidity and productivity, and reflects the line-haul movement between terminals. The average velocity is calculated by dividing train-miles by total hours operated, excluding yard and local trains, passenger trains, maintenance-of-way trains and terminal time.

**Car Velocity** measures the average miles per day travelled by loaded and empty active cars on line, including system, foreign and private cars – providing a gauge of network fluidity and efficiency.

**Cars per Yard Switching Hour** measures the number of cars that enter a terminal divided by the total crew hours worked at the terminal, providing an assessment of yard efficiency.

GL  
OS  
SA  
RY

**Class I:** A Class I railroad in the U.S., or a Class I railway (also Class I rail carrier) in Canada, is one of the largest freight railroads, as classified based on annual operating revenue. Smaller railroads are classified as Class II and Class III. The revenues required for each class are adjusted annually for inflation. The threshold for a Class I railroad in 2013 was US\$467 million (source: AAR).

**CN** is the trade name for Canadian National Railway Company (CNR) and its operating railroad subsidiaries.

**Dangerous Goods:** In Canada, the Canadian Transportation of Dangerous Goods Regulations, Section 1.4, defines dangerous goods as explosives, gases, flammable and combustible liquids, flammable solids, oxidizing substances, organic peroxides, poisonous (toxic) and infectious substances, nuclear substances, corrosives, or miscellaneous products, substances or organisms considered by the Governor in Council to be dangerous to life, health, property or the environment when handled, offered for transport or transported. In the United States, a dangerous good is defined by the U.S. Department of Transportation Hazardous Materials Regulations as a substance or material which has been determined by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety and property when transported in commerce, and which has been so designated.

**Energy Efficiency** refers to how effectively energy is being used for a given purpose. For example, providing a similar (or better) level of service with less energy consumption on a per unit basis is considered an improvement in energy efficiency. Energy efficiency is measured in units of energy such as British thermal units (BTU), gigajoules (GJ), megajoules (MJ), kilocalories (kcal), or kilowatt-hours (kWh).

**Energy Intensity** is the amount of energy used per unit of activity. Examples of activity measures are households, floor space, passenger-kilometres and tonne-kilometres.

**Environmental Remediation** deals with the removal of pollution or contaminants from the environment that have affected the soil, groundwater or surface water, for the general protection of human health and the environment.

**Fuel Efficiency** is the output obtained from a unit amount of fuel input such as miles per gallon (MPG) or litres per 100 kilometres (l/100 km) for an automobile or ton-miles of freight for rail.

**Grain Spotting Performance** measures the performance in supplying cars ordered by grain customers on the day promised.

**Greenhouse Gas Intensity** at CN refers to the number of tonnes of CO<sub>2</sub> equivalent per million GTMs.

**Gross Ton Mile (GTM):** A measure of the movement of one ton of freight or equipment over one mile.

**Gross Ton Miles per Total Horsepower** reflects the number of trailing gross ton miles handled on system trains per total horsepower. It is an important measure of the utilization of high-horsepower locomotives.

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**Gross Ton Miles per Train Mile** is used to monitor train efficiency/productivity and is calculated as the average trailing ton per system train.

**Heavy Truck:** A truck with a gross vehicle weight of 14,970 kg (33,001 lb) or more. The gross vehicle weight is the weight of the empty vehicle plus the maximum anticipated load weight.

**Interline** refers to shipments that involve more than one railroad as they move from origin to destination.

**Interswitching Limits:** One railway can quote a rate for a move originating on another railway's network within a specified distance from an interchange point. In 2014, the Government of Canada increased the interswitching limit to 160 kilometres in Alberta, Saskatchewan and Manitoba. The limit remains at 30 kilometres in the rest of the country.

**Short Lead Time Order** measures performance in meeting total merchandise customer demand for railcars outside the normal order cycle.

**Switch Window Compliance** measures performance in switching equipment to the customer within the proper time window.

**Terminal Dwell Time** is a measure of yard throughput, calculated as the average time a car resides at the specified terminal location expressed in hours. The measurement begins with a customer release, received interchange, or train arrival event and ends with a customer placement (actual or constructive), delivered or offered in interchange, or train departure event. Cars that move through a terminal on a run-through train are excluded, as are stored, bad order and maintenance-of-way cars.

**TEST Car:** A TEST car is a refurbished passenger coach containing state-of-the-art technology that analyzes and monitors geometric imperfections of the track structure as well as rail wear using video cameras, lasers, electronic sensors, simulators and talking computers.

**Trip Plan:** A detailed transit plan for every shipment on CN and connecting lines, including the stations that the shipment is scheduled to pass through and the estimated time of arrival at destination.

**Truck Hunting** is a classic railway term describing the oscillating or swaying movement of railcar wheels across the width of the rails.

**Weekly Merchandise Car Order Fulfillment** measures performance in meeting total merchandise customer demand, based on the number of cars placed and available the week promised.



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The Company's objective is to provide meaningful and relevant information reflecting its financial condition and results of operations. In certain instances, the Company may make reference to certain non-GAAP measures that, from management's perspective, are useful measures of performance. In addition, certain statistical data are based on estimated data available at such time and are subject to change as more complete information becomes available. The reader is advised to read all information provided in this document in conjunction with the Company's Annual and Interim Consolidated Financial Statements, Notes thereto and Management's Discussion and Analysis.

The Company makes reference to non-GAAP measures in this document that do not have any standardized meaning prescribed by U.S. GAAP and, therefore, may not be comparable to similar measures presented by other companies and, as such, should not be considered in isolation. Management believes that non-GAAP measures such as adjusted net income and adjusted earnings per share data are useful measures of performance that can facilitate period-to-period comparisons, as they exclude items that do not necessarily arise as part of the normal day-to-day operations of the Company and could distort the analysis of trends in business performance. The exclusion of such items in adjusted net income and adjusted earnings per share does not, however, imply that such items are necessarily non-recurring. The Company believes that free cash flow is a useful measure of performance as it demonstrates the Company's ability to generate cash for debt obligations and for discretionary uses such as payment of dividends and strategic opportunities. Free cash flow does not have any standardized meaning prescribed by GAAP and, therefore, may not be comparable to similar measures presented by other companies. The Company defines its free cash flow measure as the difference between net cash provided by operating activities and net cash used in investing activities; adjusted for changes in restricted cash and cash equivalents and the impact of major acquisitions, if any. Free cash flow numbers for prior years have been restated for purposes of comparability. In addition, the Company believes that the adjusted debt-to-total capitalization ratio is a useful credit measure that aims to show the true leverage of the Company. Similarly, the adjusted debt-to-adjusted earnings before interest, income taxes, depreciation and amortization (EBITDA) multiple is another useful credit measure because it reflects the Company's ability to service its debt. The Company excludes Other income in the calculation of EBITDA. A reconciliation of the various non-GAAP measures presented in this document to their comparable U.S. GAAP measures is provided on pages 146-147 of this document.

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**SIGNATURES**

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

**Canadian National Railway Company**

Date: October 22, 2015 By: /s/ Cristina Circelli  
Name: Cristina Circelli  
Title: Deputy Corporate Secretary and General Counsel

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