



Carbon Disclosure Project 2009



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General Information

As a leader in the North American rail industry, CN recognizes its responsibilities with respect to Greenhouse Gas (GHG) emissions and the impact on global warming. As part of that responsibility, the Company has made emissions reduction an integral part of its day-to-day activities, focusing on service and efficiency improvements while offering the most energy efficient transportation choice.

With ecological concerns, and particularly climate change, reaching a crisis threshold, we believe that rail can be an integral part of the solution. Compared to air or truck modes of transportation, rail is the most efficient method of moving freight, requiring only a fraction of the fuel. Less fuel means less GHG emissions. Rail also relieves traffic congestion, improves mobility through urban areas, and helps remove stress from our crumbling infrastructure, by taking the transportation of goods off our overcrowded roads and highways. Indeed, no land transportation mode can outperform the fuel and GHG emission efficiencies that rail provides, particularly for the hauling of large volumes of high-density freight over long distances. These efficiencies are especially important when you consider that fuel represents a major operating expense for the Company, creating an added economic incentive towards greater efficiencies.

With the powerful environmental and economic advantages of rail, we have embraced our responsibility in the fight against global warming with a sense of optimism. Efficiency has always been a fundamental part of how we have run our business for a long time, and we remain committed to continuously improving our performance. Over the past decade, CN has been carrying a lot more freight more efficiently with positive environmental impacts. For instance, despite an increase in Gross Ton Miles (GTM) from 1990 to 2007, we have reduced our GHG emission intensity (kg CO₂e/1000 GTM) by 34 percent in the same period.

“With ecological concerns, and particularly climate change, reaching a crisis threshold, we believe that rail can be an integral part of the solution.”

2008 Performance	2009 Performance Focus
<ul style="list-style-type: none"> » We continued our climate change commitment through the renewal of our Memorandum of Understanding with the Canadian government, which we intend to achieve through an internal GHG intensity reduction objective (tCO₂e/GTM) of 5 percent by 2010, based on 2007 levels. <p>Note: The focus of this objective applies specifically to the diesel consumption of our rail locomotives, which makes up the majority of our emissions.</p> <ul style="list-style-type: none"> » We successfully reduced our GHG intensity emissions (tCO₂e/GTM) by 1 percent based on 2007 levels, and are on track to meeting our long-term objective in 2010. 	<ul style="list-style-type: none"> » We will further our commitment towards the fight against climate change, with our recently established fuel improvement target of 2.5 percent. This target applies to the fuel consumed throughout our operations, including locomotives, trucks and cars. » In order to ensure success, we will continue to improve our precision railroad model to enhance our operational effectiveness, and expect to acquire additional new locomotives as we continue our locomotive renewal program, which includes upgrading our fleet with more energy efficient units. » We also expect to advance the approval of a modal shift quantification protocol so that it can be used by our customers to gain carbon credits for switching from truck to rail (the first of its kind in North America). » Finally, we will be working towards compiling GHG data that includes other facets of the business to gain a more comprehensive understanding of our carbon footprint.

We will continue to focus on managing our business responsibly by running a safe and efficient railroad. As we look forward, we see many opportunities ahead from gaining intermodal share, exploring new cleaner energy markets, and increasing rail efficiencies. All of this would not be possible if it were not for our most valuable asset, our employees, who have time and time again proven to be the best railroaders in the industry.

“As we look forward, we see many opportunities ahead from gaining intermodal share, exploring new cleaner energy markets and increasing rail efficiencies.”

CN – Canadian National Railway Company and its operating railway subsidiaries – spans Canada and mid-America, from the Atlantic and Pacific oceans to the Gulf of Mexico, serving the ports of Vancouver, Prince Rupert, B.C., Montreal, Halifax, New Orleans, and Mobile, Ala., and the key metropolitan areas of Toronto, Buffalo, Chicago, Detroit, Duluth, Minn./Superior, Wis., Green Bay, Wis., Minneapolis/St. Paul, Memphis, and Jackson, Miss., with connections to all points in North America. For more information on CN, visit the company's website at www.cn.ca. Information on delivering responsibly, including climate change is available at: <http://www.cn.com>



Risks and Opportunities



Risks and Opportunities

1. Regulatory Risks

In reviewing the risks and opportunities below, it is important to note that certain information may be “forward-looking statements”. As such, CN cautions, that by their nature, forward-looking statements involve risks, uncertainties and assumptions. 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 outlook or any future results or performance implied by such statements.

1.1 Exposure to regulatory risks related to climate change.

Yes. The Company is exposed to regulatory risks related to climate change.

The process for identifying risk and assessing the affect on the business.

The Company has comprehensive risk management processes and procedures in place that include the identification and assessment of the regulatory risks associated with climate change. Exposure to climate change regulatory risk is typically identified by our Corporate Environment Department. Among its diverse responsibilities, the Department is tasked with ensuring that our climate change risks are properly identified and managed in the context of CN's environmental policy. In doing so, the Department plays an integral role in not only understanding climate change regulatory requirements and associated business implications, but also monitoring CN's performance to ensure that we meet or exceed our requirements. As part of this role, the Department engaged a third party in 2008 to conduct a regulatory analysis on the risks and opportunities of existing and emerging regulatory regimes within North America. The regulatory risks and opportunities that could impact our business are described in greater detail in the sections below.

Regulatory exposures (risks and opportunities) that could be significant to the Company are communicated by the Environment Department to the Board Environment, Safety and Security Committee during quarterly meetings. Once communicated, decisions are made regarding risk prevention and management. The Environment Department then works with various internal groups to quantify the impacts on our business, including any capital implications. This information is generally discussed at meetings of the Executive Committee. Relevant information is also presented to the Board of Directors.

The following section describes the current and anticipated regulatory risks to which our operations are/or have the potential to be significantly exposed.

Risks and Opportunities

1. Regulatory Risks *(cont)*

1.1 The current and/or anticipated risks, affect on the business, actions to manage the risks and views in the past twelve months.

Risks / Impacts	Risk Management	Views of Risks
Current Regulatory Risks		
Canadian Memorandum of Understanding (MOU) on Rail Emissions		
<p>On May 15, 2007, in conjunction with the Railway Association of Canada (RAC), CN renegotiated a voluntary agreement MOU with Environment Canada and Transport Canada. Through the MOU, which was originally signed in 1995, CN is part of a Canadian industry-wide effort to reduce air pollution, improve railway fuel efficiency and reduce GHG emission intensity levels. As such, each category of railway operation (i.e. Class I Freight, Regional and Short Lines, Intercity Passenger and Commuter Rail) has been allocated GHG emission intensity reduction targets to be achieved by 2010.</p> <p>Through the MOU, the Class I Freight Railways have committed to:</p> <ul style="list-style-type: none"> » Acquire only new and freshly manufactured locomotives that meet applicable EPA emission standards; » Retire from service 130 medium-horsepower locomotives built between 1973 and 1999; » Upgrade, upon remanufacturing, all high-horse-power locomotives to EPA emission standards; and, <p>Upgrade to Tier 0, upon remanufacturing, all medium horsepower locomotives built after 1972 beginning in 2010.</p>	<p>The Company applies a scenario analysis model based on varying traffic growth rates to project our acquisition, retirement and upgrade requirements. In 2008, we made progress in meeting our commitments under the MOU:</p> <ul style="list-style-type: none"> » <u>Locomotive Acquisition:</u> In 2008, CN invested approximately CDN\$ 200 Million in equipment, which included the acquisition of 20 new fuel-efficient locomotives. In December 2008, we also announced plans to purchase 40 additional, even more efficient, electro-motive diesel (EMD) locomotives. The 40 EMD SD70M-2 locomotives are scheduled for delivery in early 2010. We also have an option for 50 more of the 4,300 horsepower locomotives by 2011. The new EMD locomotives are expected to be up to 20 percent more fuel-efficient than the ones they replace and comply fully with the latest regulatory requirements for reduced locomotive emissions. In addition, the units will be equipped with distributed power ('DP') capability. DP enables remote control of a locomotive(s) throughout a train from the lead control locomotive. This optimization of power and braking control over the entire length of a train can yield additional fuel efficiencies. Since the Company's privatization in 1995, we have acquired 631 new locomotives under our regular fleet renewal program. In 2008, the Company operated with an active locomotive fleet of approximately 1800. » <u>Retirement:</u> In 2008, we retired approximately 135 locomotives, of which 15 were built prior to 1973. Prior to 2008, we retired approximately 300 locomotives of which 36 were built prior to 1973. » <u>Upgrade/Remanufacture:</u> In 2008, approximately 12 locomotives were upgraded to Tier 0 levels upon remanufacture. Since 2002, over 300 of our core fleet of diesel locomotives have been remanufactured when we initiated a program to remanufacture a portion of our fleet. Remanufacturing our older locomotive in order to meet our operational and investment needs under the MOU, increases reliability and ensures the locomotives meet U.S. Environmental Protection Agency (EPA) Tier 0 Regulations for NOx emission reductions. <p>On an annual basis, our GHG emission data and performance is reported to the RAC, for compilation in an industry-wide report.</p>	<p>Over the past 12 months, our views on the risks related to the MOU have not changed, and we remain committed to enhancing our fleet and operations to meet our objectives.</p> <p>In 2009, we expect to invest approximately CDN\$ 200 Million to enhance our fleet, which will include the acquisition of up to 25 locomotives.</p>

Risks and Opportunities

1. Regulatory Risks *(cont)*

1.1 The current and/or anticipated risks, affect on the business, actions to manage the risks and views in the past twelve months. *(cont)*

Risks / Impacts	Risk Management	Views of Risks
Current Regulatory Risks		
United States Environmental Protection Agency (US EPA) Smart Way Agreement		
<p>CN is a signatory to the U.S. Smart Way Agreement, a voluntary program between the U.S.EPA and the rail industry to increase energy efficiency and reduce air pollution and GHG emissions.</p> <p>The goal of the program is to eliminate between 33-60 million metric tonnes of CO2 emissions and up to 200,000 tonnes of NOx emissions per year in the U.S. by 2012.</p>	<p>From an operational perspective, the principles of Smart Way align closely with the Company's 'Precision Railroading' model and ongoing emission reduction programs. The program therefore fits directly with our operational efficiency objectives and does not present additional risks to the Company.</p> <p>We developed a Smart Way action plan outlining our environmental performance improvement projects, including the installation of top of rail lubricant systems, employee awareness on fuel conservation, improved train handling procedures, and reduced engine idling.</p>	<p>Over the past 12 months, our views on the risks related to the Smart Way Agreement have remained unchanged.</p> <p>We are however, awaiting the next version of the Smart Way Agreement to determine the extent of future voluntary obligations.</p>
USEPA Emission Regulations for Locomotives and Locomotive Engines		
<p>In the US, CN's locomotive emissions are regulated by the US EPA, which sets emission standards for newly manufactured and re-manufactured locomotive engines, covering Nitrogen Oxides (NOx), Hydrocarbons (HCs), Particulate Matter (PM), and Carbon Monoxide (CO). The EPA standards can be accessed at www.epa.com.</p> <p>In 2008, the EPA adopted even more stringent locomotive Tier 4 emission standards on PM and NOx, with an additional requirement that mandates the application of idle emission controls on newly manufactured and remanufactured locomotives. These more stringent standards could expose the Company to greater compliance costs.</p>	<p>In order to address these risks, CN has set out to purchase only tier-compliant locomotives. Since new locomotives are also much more fuel efficient than older generation models, the regulations provide the added benefit of yielding sizeable reductions in CO2.</p> <p>As already discussed, we acquired 20 new locomotives in 2008 and announced plans to acquire 40 additional, even more efficient, electro-motive diesel (EMD) locomotives, in 2009. The new EMD locomotives will be up to 20 percent more fuel-efficient than the ones they replace and comply fully with the latest regulatory requirements for reduced locomotive emissions.</p> <p>Since the Company's privatization in 1995, we have acquired 631 new locomotives under our regular fleet renewal program. In 2008, the Company operated with an active locomotive fleet of approximately 1800. Our locomotive retirement and remanufacture program also meets EPA emission standards.</p>	<p>Over the past 12 months, our risks related to the EPA Regulations have slightly altered with the adoption of the long-term Tier 4 emission standards in 2008, which are expected to phase-in beginning in 2015.</p> <p>To meet these more stringent standards, the application of high-efficiency catalytic after-treatment technologies will be necessary, which have not always proved operationally feasible. We are working with our manufacturers in the development of new engine technologies that can effectively lower fuel consumption and emissions. For instance, in 2008, CN partnered with General Electric and Sustainable Development Technology of Canada in the advancement of the next generation of locomotives for GHG reduction and will invest over CDN\$ 1 Million in 'in kind' labour and one locomotive for a 3-year period (2009, 2010, and 2011).</p> <p>Looking forward, we will continue to monitor ongoing research to advance technologies related to hydrogen injection, GenSet, and alternative fuels.</p>

Risks and Opportunities

1. Regulatory Risks *(cont)*

1.1 The current and/or anticipated risks, affect on the business, actions to manage the risks and views in the past twelve months. *(cont)*

Risks / Impacts	Risk Management	Views of Risks
Current Regulatory Risks		
Renewable Fuel Content Federal Policy and Provincial Regulations		
<p>There has been a national movement throughout Canada to increase the percentage of renewable content in diesel fuel at both the federal and provincial levels of government. Since fuel consumption represents a significant operating expense, requirements on renewable content in diesel fuel could expose the Company to increases in our operating costs, particularly when renewable content is in limited supply.</p>	<p>In order to manage these risks, we are in discussion with the respective governments on potential renewable content supply issues, the potential implications on our business, and possible remedies.</p>	<p>During the past 12 months, our views on these risks have remained the same. We will continue to monitor developments regarding these potential regulations as well as the environmental, social and economic costs of applying biodiesel as an alternative fuel.</p> <p>Furthermore, we remain committed to assessing alternative fuel sources and are tracking regulatory and technological developments as they relate to renewable fuel content.</p>
British Columbia – Bill 37 Carbon Tax Act		
<p>On July 1st, 2008, Bill 37 - the Carbon Tax Act, took effect in the province of British Columbia. The new Bill has been designed to tax GHGs emitted from the use of virtually all fossil fuels, including diesel. The taxation rate was established at \$10 per tonne, and is expected to increase by \$5 per year for the next four years.</p> <p>Our customers shipping freight within the Province of B.C. have assumed the direct impact of this tax. As a result, our customers are now obligated to pay a carbon surcharge to cover the carbon taxation costs for freight shipped within the Province of B.C.</p>	<p>For CN, the introduction of the tax has prompted us to enhance our fuel data management system to ensure greater data accuracy.</p> <p>To this end, we have increased our capital investments in the installation of new meters at fuel reception points, fuel tanks, and locomotive delivery areas.</p>	<p>Since the introduction of Bill 37 in July 2008, our risks related to the Bill have not changed.</p>
EU Aviation Directive		
<p>On July 8, 2008, the European Parliament voted for the inclusion of aviation into the European Union Emission Trading Scheme (EU ETS). The EU Council later formalized this inclusion on February 2nd, 2009 when the EU Aviation Directive officially entered into force. The inclusion of aviation with the EU ETS will apply to all flights to, from, and within the EU starting in 2012.</p> <p>Since CN operates a corporate aircraft that occasionally flies into the EU, we have been targeted for inclusion in the new Directive, which could expose the Company to additional compliance costs.</p>	<p>In order to determine whether we meet the criteria set out in the Directive, we are in the process of compiling and submitting our 2004 to 2006 emission data for our corporate aircraft to the respective administrative authority.</p> <p>Once reviewed, we will be in a better position to establish our approach in responding to the Directive.</p>	<p>Our views on the Directive have remained the same over the past 12 months.</p> <p>At the same time, we will be closely monitoring consultations and dialogues as we await finalization of the rules and requirements of the Directive during 2009.</p>

Risks and Opportunities

1. Regulatory Risks *(cont)*

1.1 The current and/or anticipated risks, affect on the business, actions to manage the risks and views in the past twelve months. *(cont)*

Risks / Impacts	Risk Management	Views of Risks
Anticipated Regulatory Risks		
Proposed Canadian Federal Emission Standards		
<p>Once the MOU with the RAC expires in 2010, the Canadian government has expressed its intention to put in place emission standards similar to those established under the US EPA.</p> <p>As a company that operates a cross border freight transportation and logistics service, we are already working aggressively to meet the EPA emission standards for all our locomotives. As a result, we do not expect future emission standards to pose a significant risk to the Company.</p>	<p>Through our role as the Chair of the RAC MOU Management Committee, which provides a forum for discussion between the RAC members and the Canadian government regarding future emission standards, we will continue to engage with the Canadian regulatory authorities and monitor developments respecting future emission standards.</p>	<p>Over the past 12 months, our views on these risks have remained unchanged</p>
Canadian Climate Change Regulations		
<p>In April 2007, the Canadian government announced its Regulatory Framework on Air Emissions to control GHGs. The framework will require regulated entities throughout Canada to reduce emissions by 18 percent from 2006 levels, starting in 2010, with additional reductions of 2 percent annually after 2010.</p> <p>According to the March 2008 'Turning the Corner: Regulatory Framework for Industrial Greenhouse Gas Emissions' publication, the government is in the process of establishing three compliance mechanisms as follows: an offset system, a technology fund; and, inter-firm trading. The regulations are still in draft stage, and are expected to be published in 2009, and come into force in January 2010.</p> <p>Since our sector has not been targeted, the proposed legislation is not expected to impact our operations in the short-term.</p>	<p>We continue to actively monitor the legislation to clearly understand the implications on our customers as well as the long-term impacts on our business.</p>	<p>Over the past 12 months, our views on these regulations have slightly changed. Given the recent government and policy changes within the US, we expect delays in the formalization of the Canadian regulatory framework.</p> <p>The Canadian government has already expressed its intention to work with the U.S government on a North American-wide climate change pact. We are continuing to monitor developments regarding federal legislation; especially given our interest in working towards a North American approved modal shift quantification protocol.</p>

Risks and Opportunities

1. Regulatory Risks *(cont)*

1.1 The current and/or anticipated risks, affect on the business, actions to manage the risks and views in the past twelve months. *(cont)*

Risks / Impacts	Risk Management	Views of Risks
Anticipated Regulatory Risks		
Western Climate Initiative (WCI)		
<p>The WCI is a regional GHG cap and trade system, which includes Arizona, California, New Mexico, Oregon, Washington, Utah, British Columbia, Ontario, Manitoba and Quebec.</p> <p>While still in a design phase, the WCI recently came out with recommendations suggesting that the states and provinces will cap GHG emissions from designated sectors that emit a cumulative total of over 25000 tCO₂e per year within participating states / provinces. In addition, the designated sectors are required to commence reporting with annual emissions equal to or greater than 10000 tCO₂e. Inclusions of transport emissions are expected from 2015 onwards.</p> <p>With the inclusion of the transport sector as a long-term objective, we do not anticipate the WCI to present an immediate risk to our business.</p>	<p>We will be continuing to work at reducing our GHG emissions under our voluntary agreements with the Canadian and US governments to ensure a proactive approach to addressing such future risks.</p> <p>Furthermore, we will continue to advance the application of our modal shift protocol so as to gain approval in the various carbon markets.</p> <p>By expanding the application of the modal shift protocol throughout North America, its use could help other industries comply with the WCI requirements (see Section 6: Other Opportunities: Carbon Credits).</p>	<p>Over the past 12 months, our risks related to the WCI have remained unchanged.</p>
Emerging Canadian and US Federal, Provincial, State and Regional Regulatory Regimes		
<p>Through our external analysis on climate change regulatory regimes over the past year, there is a growing indication that the regulatory environment is shaping up to include a variety of state, provincial, federal and regional initiatives, requirements and rules. Many of these initiatives and requirements are in various stages of development, and the implications are still unclear.</p> <p>As a company that deals in multiple jurisdictions, a fragmented approach to climate change regulatory and trading regimes could present additional risks to our business in having to deal with differing jurisdictional and regional requirements, as well as customers interested in benefiting from modal shift freight solutions that include numerous jurisdictions.</p> <p>Furthermore, multiple regulatory programs also present increasing compliance-related administrative costs for the Company, as well as our customers, in having to develop and maintain compliance processes.</p>	<p>In order to address these risks, we continue to monitor US and Canadian developments to clearly understand the potential implications on our business.</p> <p>We also engage with various levels of regulatory authorities to position the carbon benefits of rail freight transportation. In 2008, we obtained approval for the first ever 'Quantification Protocol for Freight Modal Shifting', by the Alberta Government.</p> <p>We are now working with other policy makers to position the protocol for freight modal shift throughout North America.</p>	<p>Over the past year, the risks have altered slightly with the recent administration change in Washington. The new administration has already hinted at a mandatory, economy-wide cap-and-trade program to reduce GHG emissions. In fact, in November 2008 at the Lake Louise World Cup Business Forum, the Canadian government publically expressed its interest in developing a North American cap and trade system.</p> <p>A more unified coordinated approach would be highly favourable to a company such as CN with cross border and multi-jurisdictional operations, as well as customers interested in capitalizing on the carbon credit opportunities associated with freight modal shift solutions.</p> <p>We are therefore monitoring emerging climate change regulatory regimes with great interest.</p>

2. Physical Risks

2.1 Exposure to physical risks related to climate change.

Yes. The Company is exposed to physical risks related to climate change.

The process for identifying risk and assessing the affect on the business.

At CN, we recognize that climate change, including the impacts of global warming, could increase the frequency of adverse weather events. Severe weather and natural disasters, such as extreme cold and extreme heat, flooding, drought, and hurricanes, can disrupt operations and service for the railroad, affecting the performance of locomotives, rolling stock, and the physical plant, as well as disrupting operations for the Company's customers.

Our three main operating departments, (mechanical, engineering and transportation) play an important role in the detection and prevention of operational-related issues, including those caused by changing weather patterns. The mechanical department ensures the proper and safe functioning of all rolling stock-locomotives and railcars, with a focus on early detection and preventative maintenance; the engineering department is responsible for the maintenance of CN's physical plant, such as rail, signals, communications and bridges; and, the transportation group manages the movement of cars, loaded and empty, to and from customers across the network.

In order to address operational and productivity challenges, CN maintains a Safety Management System (SMS), which is a proactive, comprehensive program designed to minimize risk, including those caused by changing weather patterns. The key CN groups (mechanical, engineering and transportation) develop detailed risk management action plans, which include maintenance schedules and auditing protocols. Once risks are identified, mitigation and adaptation plans are implemented, and response procedures integrated into the Company's emergency response plan. Any additional capital projects are prioritized accordingly to ensure risks are adequately addressed.

Strategic risk management projects are presented to the Environment, Safety and Security Committee as well as various internal groups. Once approved, projects are consolidated within the Company's business plan, and material issues are communicated to CN's Executive Committee during regular monthly business performance meetings.

The following section provides an overview of climate change related physical risks that are impacting, or have the potential to impact CN's operations, and the actions taken to manage these risks.

Risks and Opportunities

2. Physical Risks (cont)

2.1 The risks, affect on the business, actions to manage the risks and views in the past twelve months.

Risk / Impact	Risk Management	Views of Risk
<p>Temperature Extremes</p> <p>Extreme temperatures, especially hot and cold temperatures, can present a significant risk to our network infrastructure. For instance, if a rail heats more than 33oC above its neutral temperature, rail misalignments and track buckling are possible from thermal rail expansions. On the other hand, extreme cold temperatures can also present potential risks from track freezing, which result in greater frequencies of broken rails, frozen switches, and high rates of wheel replacements.</p> <p>Extreme cold temperatures are particularly frequent in the northern Canada regions, while extreme hot temperatures are particularly common in the southern parts of the U.S as well as parts of the Canadian prairies. Wild fires also present a risk to our transportation infrastructure.</p> <p>In terms of impacts to CN, extreme cold temperatures are currently a much greater concern for our operations than extreme hot temperatures. In fact, in 2008 we experienced a period of such severe cold temperatures that we took the unprecedented step of shutting down a significant portion of our network for close to 48 hours.</p>	<p>In order to address these risks, CN has put in place summer and winter readiness plans, which include procedures for train speed, train length and weight, inspections, rail replacements, de-stressing, and fire-prevention and response.</p> <p>In 2008, our engineering team initiated a forecasting model based on historical trend data of temperature fluctuations and extremes to detect geographical locations on our network that have a higher risk of being impacted by extreme temperatures. Based on the results of the model, our field teams adjust their work activities to minimize and where possible prevent network disruptions.</p> <p>In addition, our engineering department has been actively involved in various activities to ensure the productivity and fluidity of the network, including: continued testing of our tracks; additions of ultrasonic rail flaw detectors; increased sightline and surface inspections, and computerized track inspection logs.</p> <p>We also installed weather stations on all switch warmers on our main line between Winnipeg and Montreal to monitor outside temperatures and humidity. When conditions for snow or freezing rain are predicted, the units automatically warm the switches.</p>	<p>Over the past 12 months, our views of these risks have increased following two consecutive years of unusually difficult winter operating conditions, including above average snowfall and extreme cold.</p> <p>In order to better deal with the challenging winter operating conditions, and as part of our normal capital program, we have increased our investments to improve train productivity through the use of locomotives equipped with 'distributed power', allowing the Company to run longer and heavier trains in extreme cold weather conditions. In fact, in December 2008, CN ordered 40 additional high-horsepower locomotives for early delivery in 2010, which are equipped with distributed power. Distributed power significantly reduces the time requirement to charge a train's air brake system, a major benefit in cold weather conditions that can slow the rate at which air brakes are charged.</p> <p>By the end of 2010, we expect to have roughly 270 locomotives equipped with distributed power technology.</p>

Risks and Opportunities

2. Physical Risks *(cont)*

2.1 The risks, affect on the business, actions to manage the risks and views in the past twelve months. *(cont)*

Risk / Impact	Risk Management	Views of Risk
<p>Increases in Hurricane Activity</p> <p>Our sites and networks are located within the Tornado Belt, making us vulnerable to increases in tornado occurrences and intensity. This is particularly the case throughout the Midwest and the New Orleans area.</p> <p>For instance, during hurricane Katrina, we were particularly subjected to disruptions in our operations. Not only were we unable to access our fuelling stations, but we also experienced damage to infrastructure and property.</p> <p>However, our risk management processes and procedures have enabled us to be amongst the fastest to recover and our operations were back in service within a week following the hurricane.</p>	<p>We continue to enhance our emergency response planning procedures to address extreme weather patterns, including hurricanes.</p> <p>We have also redesigned fuelling station locations to ensure ready access during emergency situations. CN's field forces have ready access to a 24-hour weather forecasting and advisory service using the Smartrad weather warning service, which enables our team to effectively prepare for emergency response.</p>	<p>Over the past 12 months our views on hurricane intensity have remained unchanged.</p>
<p>Increases in Intense Precipitation Events</p> <p>We have experienced increases in intense precipitation, leading to more pronounced episodes of flooding, landslides in unstable mountainous regions, and mud slides. Such episodes can be disruptive to our operations.</p> <p>Flooding can be damaging to rail bed support structures and cause overflows onto tracks, and landslides and mud slides can be especially damaging to the rail tracks.</p> <p>In 2008, severe flooding in Eastern Canada, as well as in the Chicago Illinois area, was particularly disruptive to our infrastructure resulting in service interference. Meanwhile, extensive winter rain with accompanying mud slides led to the closure of some of our networks in the Western Canadian region.</p>	<p>As part of our risk management program, we have well-established winter, summer and spring plans. Through these plans, our engineering department conduct ongoing rail inspections to check for obstructed waterways, water pooling near roadbeds, evidence of roadbed or bank erosion, unusually high and/or turbulent water adjacent to the track, and changes in normal draining patterns. Extra track patrols are initiated when high-risk conditions are detected, and senior geotechnical engineers are dispatched for problem resolution.</p> <p>We have also installed natural hazard warning systems to detect and report on slides or track hazards in known sensitive areas, such as in the corridors of British Columbia. For example, we constructed slide fences that activate alarms if rock or debris fall on the track, warning approaching trains of a hazard.</p> <p>We also built tip-over posts to detect larger movement of debris such as those from mud slides.</p>	<p>Over the past 12 months, our views on intense precipitation have remained the same.</p>

Risks and Opportunities

2. Physical Risks *(cont)*

2.1 The risks, affect on the business, actions to manage the risks and views in the past twelve months. *(cont)*

Risk / Impact	Risk Management	Views of Risk
<p>General Warming Trends</p> <p>The International Panel on Climate Change (IPCC) projections suggest that over the next century further warming will occur. Such projections for increasing warming trends could impact our infrastructure (as described above) as well as adversely impacts our business in terms of the types and volumes of products that we currently ship.</p> <p>For example, in 2002-2003, severe drought conditions in western Canada significantly reduced the quantity and quality of the grain crop and agricultural products, which impacted CN's volumes and associated revenues.</p> <p>Since then, warming trends have had a more general impact on our business. For example, in 2008, an increase in precipitation during the early spring season combined with an above average snow pack, led to significant flooding in Illinois and Iowa. The flooding delayed spring planting, which ultimately resulted in a later crop harvest. As such, the normal timing our commodity shipments was impacted.</p>	<p>The Company maintains a diversified portfolio of commodities and customers. This, along with a strong transportation service offering, can help to mitigate any potential negative impact of climate change on our overall revenue performance.</p>	<p>Over the past year, our views on warming trends have remained the same.</p> <p>We continue to monitor these trends and the impact on our business and product shipments.</p>
<p>Sea Level Rise</p> <p>The IPCC projections suggest that average global sea level is expected to rise with considerable regional variations. Based on studies by Natural Resources Canada, higher mean sea levels, coupled with high tides and storm surges could severely impact transportation infrastructure, resulting in service disruptions.</p> <p>CN has a number of port locations that could be vulnerable to rising sea levels, including our operations at Halifax, Prince Rupert, Vancouver and New Orleans.</p> <p>Furthermore, rising sea levels could result in more frequent flooding of railroads near estuaries during high tides and storms, which could disrupt operations and service.</p> <p>We do not expect sea level rises to have an immediate impact on our business, as these risks are more likely to occur well into the future.</p>	<p>In order to manage this risk, we have well-developed spring and summer readiness plan, which include established procedures for flooding and storm activity.</p>	<p>Over the past year, our views related to the risks associated with sea level rises have remained the same.</p> <p>We continue to monitor sea level rising trends and remain committed to ensuring that network updates take these risks into consideration.</p>

3. Other Risks

3.1 Exposure to other risks related to climate change.

Yes. The Company is exposed to other risks related to climate change.

The process for identifying risk and assessing the affect on the business.

In the normal course of business, the Company is exposed to various other climate change risks, which are identified through the annual risk management process. Through this process, each department identifies its key risks and the potential impacts on the business. CN's Corporate Environment Department plays an integral role in identifying other climate change risks through the results of operational and maintenance programs, as well as ongoing environmental audits.

Once a risk profile has been developed, capital and operational investment improvements are internally identified and approved. To address these risks, the Company follows a risk management framework that allows significant risks to be effectively managed, monitored and approved by the Company's Audit Committee. Risks that are considered significant to the business are itemized and addressed at monthly Executive Committee meetings and communicated annually to the Board, where appropriate.

The following section provides an overview of other climate change risks that could impact our business.

Risks and Opportunities

3. Other Risks *(cont)*

3.1 The risks, affect on the business, actions to manage the risks and views in the past twelve months.

Risk / Impacts	Risk Management	Views of Risk
<p>Competition from Other Railroad Carriers</p> <p>Given the advantage that rail freight provides over other modes of transport, the Company could face competition from other rail carriers that effectively market and differentiate themselves as the lowest carbon freight service offering.</p> <p>Competition from other railroad carriers could impact volumes, revenues and profit margins.</p>	<p>In order to address this risk, we have been actively working with our customers not only to demonstrate the carbon benefits of rail freight, but to also differentiate ourselves in the marketplace. Our efforts have been well-recognized, and were recently documented in the CIBC World Markets Investors Analyst Report: Carbon and The Rails, which recognized CN as the most fuel-efficient rail operation with an industry-low operating ratio.</p> <p>Our ability to maintain this industry standing is the result of various company-wide initiatives, from the way we operate the railroad through 'Precision Railroading' to the adoption of a number of programs that advance railroad efficiency and promote emission reduction. With 'Precision Railroading' in particular, fewer railcars and locomotives are needed to ship the same amount of freight in a tight, effective and efficient operation. 'Precision Railroading' means greater reliability for customers and less impact on the environment.</p> <p>To further communicate the carbon benefits of rail to our customers, we introduced a GHG emissions calculator in 2008 that allows shippers to measure emission savings for shipments using CN rail versus other modes of transport. Please refer to Http://www.cn.ca/environment-rail-locomotive-greenhouse-gas-calculator.htm.</p> <p>In the next year, we expect to advance the calculator and will be actively working with our stakeholders, including regulatory and carbon market regimes, and customers, to provide a CO2 credit evaluation for shippers exploring modal shift. Please see Section 4: Regulatory Opportunities Section. As a result of these initiatives, CN is well placed amongst its peers to offer the most carbon efficient and innovative transport alternative.</p>	<p>Over the past 12 months, we have started to see a number of railroad companies in North America increase their visibility through targeted marketing campaigns that promote the carbon benefits of rail.</p> <p>We continue to monitor our competitors with great interest and are always keen to learn from the successful application of technologies that could be applied to CN operations.</p>

Risks and Opportunities

3. Other Risks *(cont)*

3.1 The risks, affect on the business, actions to manage the risks and views in the past twelve months. *(cont)*

Risk / Impacts	Risk Management	Views of Risk
<p>Changing Customer Demands</p> <p>With growing awareness and concern for climate change, consumer demands for low carbon products are growing throughout Europe and North America. With these demands have come increasing pressures on our customers to demonstrate the carbon impacts of their products, including aspects of their distribution networks.</p> <p>In fact, some large multinational retailers and manufacturers are already starting to pre-select their suppliers based on environmental criteria that include carbon criteria within the distribution network.</p> <p>Like other railroads, CN is susceptible to changes in market pressures on the industries and geographic areas that produce and consume the freight we transport or the supplies required for our operation. Any such changes in demand, including a focus on low carbon solutions, could adversely affect the volumes.</p>	<p>We are well positioned to address this risk given our diversified portfolio of business, both in terms of the commodities that we ship and the customers that we service, as well as our broad geographic scope.</p> <p>Additionally, we continue to demonstrate to customers the carbon benefits of rail freight transportation.</p> <p>We have also increased our participation in markets driven by the climate change agenda, including: ethanol; recycled and new forest products; wood pellets; eucalyptus pulp; wind turbines; and biodiesel. (See Section 6: Other Opportunities).</p>	<p>In the past 12 months, our opinion regarding customer demands for low-carbon products and distribution services has continued to evolve.</p> <p>With the recent release of the Carbon Disclosure Project Supply Chain Questionnaire, we expect these types of demands to increase even more. We remain committed to meeting and exceeding our customer expectations and will continue to monitor customer trends.</p>
<p>Increasing Fuel Costs</p> <p>Supply disruptions, biodiesel shortages and blending requirements could make the Company susceptible to the volatility of fuel prices. Rising fuel prices could adversely affect the Company's expenses.</p>	<p>To address fuel cost increases, CN has implemented a fuel surcharge program that effectively offsets the impact of rising fuel prices.</p> <p>Furthermore, we are engaging with regulatory provincial authorities to present the implications of renewable content specifications on the business.</p>	<p>Over the past year, our views on the risks related to increasing fuel costs have not changed.</p>
<p>Dependence on Diesel Fuel as an Energy Source</p> <p>The Company's operations, and in particular the running of our locomotives, are currently dependent on the availability of diesel.</p> <p>Declining oil reserves, which may impact the available supply of diesel fuel, could pose a risk on the Company's ability to operate.</p>	<p>While we do not consider this risk to materialize in the short- to medium-term, we are monitoring developments on alternative fuel sources with interest. For instance, the Company participates on an ongoing basis with partners in industry, government and academia, to support and monitor research initiatives towards cleaner alternative energy sources, including electrification, fuel cell power and bio-diesel fuels.</p> <p>Research in these areas, however, has continued to present a number of challenges for the industry. For example, bio-diesel fuel usage is not always conducive to the colder winter periods experienced in Canada, fuel cell power is not yet technically feasible, and electrification has proved costly for North American applications.</p>	<p>To date, our views on these risks have not changed.</p>

Risks and Opportunities

3. Other Risks *(cont)*

3.1 The risks, affect on the business, actions to manage the risks and views in the past twelve months. *(cont)*

Risk / Impacts	Risk Management	Views of Risk
Reputation Associated with the Shipment of Carbon Intensive Goods		
With increasing public concern for the environment, the Company may be exposed to reputational risks from stakeholders that hold the Company accountable for carbon intensive products that we may transport.	<p>As a rail common carrier, we have a duty to carry all freight, as long as there are no reasonable grounds to refuse to do so. Therefore, railroads cannot generally refuse to transport a commodity based on its specific characteristics.</p> <p>The Company is committed to being a good corporate citizen, and providing carbon efficient transport and logistic services to our customers in a way that ensures safety and respect for the environment. We are continuing our efforts to demonstrate to our customers the environmental benefits of rail versus other modes of transport.</p>	<p>Over the past 12 months, our views of reputational risks have remained the same.</p> <p>We do not expect these risks to materialize in the near future, but continue to monitor public perception and the potential impacts on the business.</p>
Economic Conditions		
<p>The Company, like other railroads, is susceptible to changes in the economic activity of the industries and geographic areas that produce and consume the freight it transports or the supplies it requires to operate.</p> <p>As such, negative change in North America and global economic conditions, resulting in a prolonged recession or more severe economic or industrial restructuring, could have a material adverse effect on the volume of rail shipments carried by the Company. Within the context of declining economic conditions, we have identified two risks to which the company could be exposed.</p> <p>First, the Company may be forced to reduce capital investment commitments that support carbon efficiency, including locomotive acquisitions and upgrades.</p> <p>Second, less traffic could impact our fuel efficiency ratios at times when we are forced to run our locomotives at sub-optimal levels.</p>	<p>With the North American economy in a deep recession and a global economy that is likely to contract during 2009, most of the Company's commodity groups have been significantly impacted. The Company is making necessary changes to reflect the reduced volumes by redeploying assets and reducing costs.</p> <p>The Company's focus during these volatile times is to continue to pursue its long-term business plan, maintain a high level of service to customers, operate safely and efficiently, and meet short- and long-term financial commitments. Therefore, despite turbulent economic conditions, the Company plans to continue to invest in capital programs to maintain a safe and fuel-efficient railway.</p> <p>In 2009, CN plans to invest close to CDN\$800 million towards track infrastructure to continue to improve the productivity and fluidity of the network, including the acquisition of new locomotives. Furthermore, to address concerns regarding fuel efficiency during low traffic periods, we have a consistent operating plan regardless of business conditions, to effectively respond to lower volumes in the current environment.</p>	<p>The Company will continue to set priorities on its use of available funds to continue to operate a safe and reliable railway while maintaining its long-term contractual obligations and returning value to shareholders.</p>

4. Regulatory Opportunities

4.1 Exposure to regulatory opportunities related to climate change.

Yes. The Company is exposed to regulatory opportunities related to climate change.

The process for identifying risk and assessing the affect on the business.

Regulatory opportunities related to climate change are typically identified through our work with regulatory authorities, various stakeholders, and third-party reviews.

Once opportunities are identified, the Environment Department works closely with the finance, planning and marketing teams to understand the implications on our business.

Opportunities that could have an impact on the Company are discussed at the monthly executive committee meetings and at the Board level of the company, where appropriate. CN has identified the following regulatory opportunities.

Risks and Opportunities

4. Regulatory Opportunities (cont)

4.1 The opportunities, affect on the business, actions to taken to exploit the opportunities and views in the past twelve months.

Opportunity / Impacts	Exploiting Opportunities	Views of Opportunities
Operational Efficiency / Fuel / Cost Savings		
As part of our ongoing voluntary commitments under the Canadian MOU and the US Smart Way Agreement, opportunities exist to realize long-term economic efficiencies through our locomotive fleet management strategy.	<p>Through this strategy we have been able to generate significant fuel savings. To date, the fuel consumed per revenue ton mile is approximately 70 percent of that in 1991. A significant portion of these savings has been driven by the acquisition of a large number of new high horsepower, fuel-efficient locomotives.</p> <p>Since the Company's privatization in 1995, new locomotive acquisitions totalled more than 630. In 2008, CN's active locomotive fleet was approximately 1800. Other contributing factors include fuel efficiency measures, including, improved train handling, the inherent improvements in diesel engine thermal efficiency, reduced 'parasitic' losses in the locomotive auxiliaries, high horse power capacities allowing bigger trains, train operation with Dynamic Brakes, and increasingly, the recent train consolidations facilitated by 'Distributed Power'.</p> <p>With the acquisition of more fuel-efficient locomotives in our fleet, we have been able to realize 15-20 percent less fuel than older models.</p>	<p>Over the past 12 months, our views of the opportunities have remained positive. In fact, recent estimates of the potential savings from the U.S. Smart Way Agreement in the rail industry are projected at 150 million barrels of oil per year – an equivalent saving of \$U.S. 7.5 billion (based on estimations of U.S. \$50 a barrel).</p> <p>We look forward to continuing to enhance our fleet and operations to leverage the operational efficiencies and savings associated with the MOU and Smart Way Agreement.</p>
Enhanced Positioning of Rail Freight Transportation		
With increasing support for low carbon transportation and logistic services from North American governments, opportunities exist to enhance the positioning of CN's rail freight transportation as the 'greener choice'. In fact, data from a study conducted by Natural Resources Canada confirms that railroads are much more energy-efficient than trucks, emitting six times less GHGs than heavy trucks.	In order to maximize this opportunity, we have been increasing customer awareness of government incentive programs, including those offered by the Quebec government that support rail freight solutions.	<p>Over the past 12 months, our views on this opportunity have grown stronger with the increasing support from the provinces of Quebec, Alberta, and New Brunswick and states of Illinois, Minnesota, and Wisconsin.</p> <p>Over the next year we will continue to monitor government incentives and policies on rail freight transportation and modal shift solutions.</p>

Risks and Opportunities

4. Regulatory Opportunities *(cont)*

4.1 The opportunities, affect on the business, actions to taken to exploit the opportunities and views in the past twelve months. *(cont)*

Opportunity / Impacts	Exploiting Opportunities	Views of Opportunities
Enhanced Fuel Consumption Data Management		
<p>On July 1st, 2008, Bill 37, the Carbon Tax Act, took effect in the province of British Columbia, and was designed to tax GHG emitted from the use of virtually all fossil fuels, including diesel.</p> <p>For CN, the introduction of the tax has created an opportunity for us to enhance our fuel data management system to ensure greater accuracy of our data.</p>	<p>To this end, we have implemented a fuel data management system and increased our capital investments by installing new meters at fuel reception points, fuel tanks, and locomotive delivery areas.</p> <p>Through these investments, we have realized greater accuracy on our fuel measurements.</p>	<p>Over the past 12 months, our views of the opportunities related to enhanced fuel data management has remained positive.</p> <p>Over the next year, we expect to continue to invest in new meters to enhance accuracy measurements.</p>
Carbon Credits		
<p>In July 2007, Alberta became the first jurisdiction in North America to regulate GHGs under the Specified Gas Emitters Regulation, and establish a project offset compliance mechanism.</p>	<p>In order to leverage the opportunities under the offset program, CN worked with the Alberta government to develop a first ever carbon credit quantification protocol for switching truck freight to rail.</p> <p>In 2007, the protocol was approved, presenting an important opportunity for the Company to improve the carbon footprint of our customers and increase revenues through modal shift</p> <p>We have also been exploring opportunities to monetize accumulated carbon credits from the carbon reductions achieved from the replacement of our older locomotives with more fuel-efficient models (For more information refer to section 22.5 and 22.6).</p>	<p>Over the past 12 months, our views on the opportunities have remained positive, and we are committed to advancing the application of the modal shift protocol throughout North America in two key ways.</p> <p>First, we are actively working with our customers to enhance the quantification methodology so that it more accurately reflects the particulars of our customers. Second, we are working with various policy makers to obtain approval for the use of the protocol across jurisdictions. This is particularly important, since the true carbon benefits of rail freight are best achieved over long haul transportation.</p> <p>In general, we remain cautiously optimistic regarding the opportunities, given the current uncertainty in the emerging North American climate change regulatory framework.</p>

Risks and Opportunities

4. Regulatory Opportunities *(cont)*

4.1 The opportunities, affect on the business, actions to taken to exploit the opportunities and views in the past twelve months. *(cont)*

Opportunity / Impacts	Exploiting Opportunities	Views of Opportunities
Government Research and Development Support		
<p>The recent USEPA Tier 4 locomotive emission standard updates will require even more advanced technologies, which could present an important opportunity for the Company, and indeed the industry, to work together with our manufacturers in the development of cleaner next generation locomotives.</p>	<p>In order to maximize the opportunities, the Company actively participates in a number of government funded research and development projects. For example, over the past few years, CN participated in the Freight Technology Demonstration Fund provided by Transport Canada to fund the take-up of technologies and best practices that reduce GHG emissions from freight transport.</p> <p>As part of the project, CN invested in research into the effectiveness of top of rail lubrication; the results of which demonstrated positive savings. Currently, 60 percent of our locomotives are equipped with lubrication systems, which enable us to create greater fuel efficiencies from the reduction of surface friction between our rail and freight cars.</p> <p>Furthermore, in 2007 and 2008, we worked on a study to reduce engine idling as part of Transport Canada's Freight Sustainability Demonstration Program. CN looked at two types of stop/start systems and two types of layover systems that would allow the idling locomotives to automatically shutdown or start up. The layover systems were comprised of a small diesel system on board the locomotives versus an electric wayside power system. The final report of the study was submitted in February 2008, concluding that diesel-powered systems provide greater flexibility to meet CN's operational needs compared to the electric system. We therefore did not implement the electric system.</p>	<p>Over the past 12 months, our views of these opportunities have remained optimistic. In 2008, CN partnered with GE and the Sustainable Development Technology of Canada in the development of the next generation of locomotives. Through this partnership, CN will invest over \$CDN 1 Million of 'in kind' labour and one locomotive for a 3 year period (2009, 2010, and 2011).</p> <p>We have also been in consultation with Rail Power to understand GENSET locomotives and the additional advantages for fuel savings.</p> <p>On a more general level, we continue to monitor research initiatives for new engine technologies, including hydrogen injection, GENSET, and alternative fuels.</p>

5. Physical Opportunities

5.1 Exposure to physical opportunities related to climate change.

Yes. The Company is exposed to physical opportunities related to climate change.

The process for identifying risk and assessing the affect on the business.

At CN, we also recognize that while physical changes resulting from climate change could pose risks to our business, there are some important opportunities that could impact our business positively. The Sales and Marketing Department typically identifies opportunities to grow revenues, while various departments throughout the Company typically identify opportunities for cost savings.

Opportunities that could present significant benefits to the Company are included in our regular planning process and are generally discussed at the regular meetings of the Executive Committee. The following section provides an overview of physical opportunities that are or could impact CN's operations.

Risks and Opportunities

5. Physical Opportunities *(cont)*

5.1 The opportunities, affect on the business, actions to taken to exploit the opportunities and views in the past twelve months.

Opportunity / Impacts	Exploiting Opportunities	Views of Opportunities
Warming Climate Increases Agricultural and Forest Feedstock in the Prairie and Northern Regions		
A warmer climate could lengthen growing seasons and increase the availability of agricultural and forest feedstock.	These opportunities could be especially important to CN traffic within the prairie regions of Canada, lengthening growing seasons and increasing crop production in northern regions where suitable soils exist.	Over the past 12 months, our views on these opportunities have remained the same. We continue to monitor warming trends and the impact on agriculture and forest feedstock revenues.
Declining Navigational Waters Resulting in Competitive Advantages against Barge Competition		
Warming temperatures could result in significant declines in navigational waters, particularly along the St. Lawrence-Great Lakes Seaway, Gulf Coast, and the Mississippi River. These declines could impact barge traffic and present a competitive advantage for our operations, particularly in terms of coal and grain. Essentially, barge competition and barge rates can be adversely affected by navigational interruptions from ice, floods, and droughts, which can cause widely fluctuating barge rates.	We continue to monitor warming temperatures and their impact on navigational waters, and maximize opportunities to increase our traffic volumes when shipping alternatives are not possible due to climatic changes.	Over the past 12 months, our views on these opportunities have remained the same.
Warming Temperatures Results in Volume Growth from Lumber in the Pine Beetle affected Area		
Since 1994, as a result of mild winters, hot dry summers and the large quantity of mature lodge pole pine trees, B.C. has been subjected to the most extensive mountain pine beetle infestation in the provinces' recorded history. In 2006, the pine beetle infestation spread into north-western Alberta. Like their B.C. counterparts, forest companies in Alberta are increasingly focused on harvesting those areas already affected as well as those susceptible to infestation, thereby increasing traffic volumes.	With a track in the heart of the pine beetle-affected area, CN has taken advantage of important opportunities for volume growth.	Over the last 12 months, our views on this opportunity remained the same.
Energy Savings from Warming Winters		
Warmer winters could result in decreased fuel consumption needs for our locomotives during the winter months. In addition, reduced energy needs within our yards and business operations, could also provide reduced heating costs and ultimately fewer GHG emissions.	The positive impact of warming trends on fuel and energy consumption is not expected in the immediate short-term. However, we continue to monitor warming trends.	Over the past year, our views on warming trends and the impact on energy consumption has remained unchanged.

6. Other Opportunities

6.1 Exposure to other opportunities related to climate change.

Yes. The Company is exposed to other opportunities related to climate change.

The process for identifying risk and assessing the affect on the business.

Other opportunities related to climate change are typically identified by a variety of internal departments. Business opportunities that are considered significant to the business are itemized and addressed at the regular meetings of the Executive Committee, as well as at the annual board meetings, as considered relevant.

The following section provides an overview of other climate change opportunities that could impact our business.

Risks and Opportunities

6. Other Opportunities *(cont)*

6.1 The opportunities, affect on the business, actions to taken to exploit the opportunities and views in the past twelve months.

Opportunity / Impacts	Exploiting Opportunities	Views of Opportunities
<p>Fuel Cost Increases</p> <p>Increases in fuel costs due to disruptions in supply caused by climatic changes could provide a competitive advantage to railroad carriers, especially in relation to long distance trucking companies.</p> <p>Competition from trucking companies is typically intense in Eastern Canada where there is an extensive highway network with population centres located relatively close to one another.</p>	<p>With increases in fuel costs, CN could have a competitive advantage since fuel cost is an important variable affecting our competitive positioning. This is especially the case when you consider that railroads are three to four times more fuel-efficient than trucks.</p>	<p>Over the past year, our views on the opportunities associated with fuel cost increases have remained the same.</p>
<p>Technological Developments</p> <p>With increasing pressures to reduce our reliance on non-renewable sources of energy, opportunities exist to explore alternative more sustainable fuels, particularly within rail freight transportation.</p> <p>Doing so will enable us to further reduce our GHG emissions as well as meet regulatory compliance obligations.</p>	<p>To this end, CN has been committed to working with manufacturers and research centres to support the development of cleaner rail technologies.</p> <p>For example, CN is currently monitoring research and development of the next generation locomotives, including hydrogen injection, GENSET, and alternative fuels.</p>	<p>Over the past 12 months, our views on these opportunities have improved, and over the past year our investments in research and development reached almost CDN\$ 2 million.</p> <p>Through these investments we have been actively supporting research and educational advancements in rail through university sponsorships.</p> <p>For example, at the end of last year we supported the University of Memphis initiative to build a new faculty for rail intermodal studies and we are currently exploring opportunities to support research in the area of railroad engineering improvements at the University of Illinois at Urbana-Champaign.</p>
<p>Clean Technology Markets</p> <p>As the issue of climate change and the need for renewable energy sources reaches a critical point, the wind energy market is rapidly expanding.</p> <p>In many places in North America, new legislation is being introduced to encourage the development of wind farms.</p>	<p>In order to tap into this opportunity, CN has been working with wind turbine companies like Vestas and GE Energy to provide transportation solutions for wind farm projects throughout North America.</p> <p>Revenue growth from clean technology markets has the potential of presenting a considerable long-term growth initiative for CN.</p>	<p>Over the past year, our views on wind energy as well as other clean technologies has grown more positive.</p> <p>We are continuing to explore opportunities for growth in this market.</p>

Risks and Opportunities

6. Other Opportunities *(cont)*

6.1 The opportunities, affect on the business, actions to taken to exploit the opportunities and views in the past twelve months. *(cont)*

Opportunity / Impacts	Exploiting Opportunities	Views of Opportunities
<p>Product Innovation and New Markets</p> <p>With growing concerns related to climate change, there has been a corresponding increase in new technologies, products and services, which could present significant opportunities for growth in our business.</p>	<p>In order to optimize the opportunities, we have been actively tapping into new growth markets in three key ways.</p> <p>First, we established an alternative fuel strategy to explore traffic growth opportunities in alternative fuels. Within this strategy, we have started to grow our revenues from a number of markets including ethanol, biodiesel and biomass fuel from mountain pine beetle-killed lodge-pole pine. For the year ended December 31, 2008, our ethanol volumes were up 55 per cent and our volumes of alternative fuels were up over 70% versus 2007.</p> <p>Second, with increasing globalization of traffic flows and emergent product markets, CN is looking beyond the traditional forest product segments to new opportunities, including recycled paper. Over the last few years, environmental concerns regarding forest degradation and their carbon storage capacities has grown, as well as landfill maintenance and development costs. As a result, the market demand for recycled paper has been growing, especially in developing countries. With our strong network in the U.S. Midwest and access to ports on the West, East and Gulf coast, CN is ideally placed to move this traffic.</p> <p>Finally, saw dust and wood chip residue has now found its way into a new heat and energy source through wood pellets. Demand and production are driven by pressure for bio-energy solutions and GHG reductions. A significant portion of the world's increasing wood pellet production comes from Canada – and much of that from British Columbia facilities. CN is playing a key role in helping producers get their pellets to markets around the world.</p>	<p>Within the last 12 months, our views regarding new markets as a result of climate change has remained positive.</p> <p>We will continue to monitor and grow our revenues from new markets.</p>

Risks and Opportunities

6. Other Opportunities *(cont)*

6.1 The opportunities, affect on the business, actions to taken to exploit the opportunities and views in the past twelve months. *(cont)*

Opportunity / Impacts	Exploiting Opportunities	Views Over Past 12 months
Enhanced Reputation in Sustainable Rail Freight Transportation		
<p>Environmental responsibility is becoming a top issue on corporate agendas, as companies grapple with the complexities associated with creating meaningful eco-efficient operations.</p> <p>As a result, there are growing pressures to not only manage the impacts controlled by the company but also those it influences through the supply chain network. For example, leading multinational and manufacturing companies are already setting environmental pre-selection criteria for their suppliers, which include specific criteria for carbon efficient operations.</p> <p>These pressures could present tremendous opportunities for the Company to enhance our reputation by demonstrating to our customers and other stakeholders the value of rail as a low carbon rail freight transportation solution.</p>	<p>With the development of a modal shift rail freight protocol, ongoing strategic partnerships and engagement with stakeholders (suppliers, customers, and governments), as well as our own operational efficiency focus, we have significantly improved our visibility and reputation as a leader in fuel efficiency.</p> <p>This reputation has already been well documented in the CIBC World Markets Investors Analyst 2009 Report: Carbon and The Rails, which clearly differentiates CN as the most fuel-efficient rail operation with an industry-low operating ratio.</p> <p>In addition, our reputation as a responsible railroad was recognized for the second consecutive year in the Corporate Knights rating scheme and we are now currently selected on the Jantzi Social Index.</p>	<p>Over the past year, our view on the opportunities for reputational management has improved.</p> <p>We remain committed to increasing our disclosure of carbon risks and opportunities, and to leveraging and enhancing our leadership position.</p> <p>Through our growing reputation as a responsible carbon conscious company, we expect to be able to tap into new opportunities to grow our market share and revenues with existing and new customers.</p>



GHG Emissions Accounting, Intensity, Energy and Trading



7. Reporting Year

7.1 The start date and end date of the year for GHG reporting.

The reporting of GHG emissions is based on the year starting January 1st, 2008 until December 31st, 2008.

8. Reporting Boundary

8.1 Category describing company, entities, or group for which GHG reporting.

The category that best describes the Company for which GHG emissions are reported is: Companies over which financial control is exercised – per consolidated audited financial statements.

8.2 Parts of the business or sources of GHG emissions excluded from the reporting boundary.

For the purposes of reporting, we have included only Scope 1 GHG emissions. Our Scope 1 GHG emissions specifically relate to the diesel consumption from our locomotive fleet only, which represents a significant proportion of our GHG emissions. Scope 2 and 3 GHG emissions are excluded from the report, since this data is not readily available. Over the next few years we will be working to develop a more comprehensive GHG data set that includes all other Scope 1, 2 and 3 emissions.

9. Methodology

9.1 Process used to calculate Scope 1 and Scope 2 GHG emissions.

The process used to calculate our Scope 1 GHG emission is based on the following components: fuel consumption, traffic data, and the associated emission factors.

- » Fuel consumption data – In order to measure our fuel consumption data, we rely on a combined approach of consumption data from invoices as well as fuel storage metered measurements. For our locations with a fuel storage metering system, the data is automatically fed into our Fuel Management System (FMS), which provides us with daily and monthly consumption data. For those locations that are not equipped with consumption measurement systems, we rely on invoices and weekly inventory reconciliations to compile the data. On a monthly basis, the fuel consumption data is compiled and a reconciliation is done to ensure all fuel purchased is accounted for either in inventory or consumed. In the next few years, we will be working to extend the fuel management system to all locations.
- » GHG emission factors – In calculating the GHGs associated with diesel fuel consumption, we apply the emission factors provided by Environment Canada's National Inventory Report. These factors are applied to the three most significant GHGs produced by locomotives: Carbon dioxide, Methane and Nitrous oxide. (See section 9.4 and 9.5 for the applied methodology).
- » Traffic Data – The traffic data is compiled through mileage readings at our various stations located throughout the railway infrastructure network. This data is compiled on an ongoing basis.

9. Methodology *(cont)*

9.2 Key assumptions

No assumptions have been made in the methodology.

9.3 Calculation tools

The calculations of fuel consumption data is based on a combination of mass balance and metered measurements. In order to obtain information through the measurement data, we use our fuel data management software. Once obtained, the data is received by the Environment Department, and the calculations are done through an internal excel spreadsheet tool. This process is not automated.

9.4 Global warming potentials

The global warming potentials we have applied are those based on the universally recognized data as published by the International Panel for Climate Change (IPCC) (1996). The following global warming potentials were applied to the data:

- » Carbon dioxide – 1
- » Methane – 21
- » N₂O – 310

The source data can be accessed through Environment Canada's National Inventory Report at www.ec.gc.ca/pdb/inventory_report/2006/s1_eng.cfm#t12_1_4

9.5 Emission factors

The emission factors have been obtained and developed from a number of studies conducted by Environment Canada, the U.S. Environmental Protection Agency (EPA), and other organizations, both domestic and international, on the carbon content of the fuel, and the fraction of the fuel oxidized. Essentially, we apply the emission factors provided by Environment Canada's National Inventory Report to calculate the GHG emissions from diesel locomotives. These factors are applied to the three most significant GHGs produced by locomotives: Carbon dioxide, Methane and Nitrous oxide, as follows:

- » Carbon dioxide – 2663
- » Methane – 0.15 (emissions of methane from fuel combustion are technologically-dependent. Emission factors for sectors have been developed based on technologies typically used in Canada. The factors were developed from a review of emission factors for an analysis of combustion technologies).
- » Nitrous oxide – 1.1 (emissions of nitrous oxides from fuel combustion are technologically-dependent. Emission factors for sectors have been developed based on technologies typically used in Canada. The factors were developed from a review of emission factors for an analysis of combustion technologies).

The source data can be accessed through Environment Canada's National Inventory Report at www.ec.gc.ca/pdb/inventory_report/2006/s1_eng.cfm#t12_1_4

Note: The Environment Canada National Inventory Report corresponds to the United Nations Framework Convention on Climate Change (UNFCCC) worldwide reporting guidelines.

GHG Emissions Accounting, Intensity, Energy and Trading

10. Scope 1 Direct GHG Emissions

10.1 Process used to calculate Scope 1 GHG emissions.

Total Gross Scope 1 GHG emissions in metric tonnes of CO2-e	2006	2007	2008
	4,565,547	4,458,409	4,330,945

10.2 Total Gross Scope 1 GHG emissions by country

Total Gross Scope 1 GHG emissions in metric tonnes of CO2-e	2006	2007	2008
Canada	3,332,480	3,236,167	3,184,653
US	1,233,067	1,222,242	1,146,292

10.3 Scope 1 breakdown by business division.

A breakdown by business division would not facilitate a better understanding of our business, given that our scope 1 emissions are mobile emissions that cover the movement of rail freight within North America.

10.4 Scope 1 breakdown by facility.

A breakdown by facility would not facilitate a better understanding of our business, given that our scope 1 emissions are mobile emissions that cover the movement of rail freight throughout North America.

10.5 Scope 1 breakdown by GHG type.

Total Gross Scope 1 GHG emissions in metric tonnes of CO2-e	2006	2007	2008
Carbon Dioxide (CO2)	4,043,048.00	3,948,172.00	3,835,295.00
Methane (CH4)	227.73	222.39	216.06
Nitrous Oxide (N2O)	1,670.05	1,630.86	1,584.24
Metric Tonnes of CO2	4,565,547.00	4,458,409.00	4,330,945.00

10.6 Reasons for not reporting on Scope 1 GHG emissions

Information on Scope 1 GHG emissions has been provided in the questions above. At the same time, however, we will be working in the next few years to develop a more comprehensive understanding of our GHG emissions so as to include other Scope 1 sources.

11. Scope 2 Indirect GHG Emissions

11.1 Total Gross Global Scope 2 GHG Emissions.

Scope 2 GHG emissions are not readily available at this time. We will be working on developing a robust data management system to capture these emissions in the next few years.

11.2 Total Gross Scope 2 GHG emissions by country

A breakdown of Scope 2 GHG emissions based on country or region is not readily available at this time. We will be working on developing a robust data management system to capture these emissions in the next few years.

11.3 Scope 2 breakdown by business division.

A breakdown of Scope 2 GHG emissions based on business division is not readily available at this time. We will be working on developing a robust data management system to capture these emissions in the next few years.

11.4 Scope 2 breakdown by facility

A breakdown of Scope 2 GHG emissions based on facility is not readily available at this time. We will be working on developing a robust data management system to capture these emissions in the next few years.

11.5 Reasons for not reporting on Scope 2 GHG emissions

Scope 2 GHG emissions are not readily available at this time, since most of our Scope 2 data is managed in a decentralized manner and not being captured on a centralized system. We will be working on developing a robust data management system to capture these emissions in the next few years to enable us to report on all sources of GHG emissions.

12. Contractual Arrangements on Particular Types of Electricity Generation

12.1 Contractual Scope 2 GHG emissions

Scope 2 GHG emissions are not readily available at this time. We will be working on developing a robust data management system to capture these emissions in the next few years. In doing so, we expect to be able to include the emission factors resulting from contractual arrangements with our electricity suppliers.

12.2 Retirement of certificates related to zero or low carbon electricity

We have not retired any certificates associated with zero or low carbon electricity.

13. Scope 3 Other Indirect GHG Emissions

13.1 Employee business travel

The source of GHG emissions from employee business travel is not readily available at this time. Once we have developed a robust data management system for Scope 1 and 2 emissions, we expect to be in a better position to compile Scope 3 data.

13.2 External distribution/logistics

The source of GHG emissions from external logistics and supply is not readily available at this time. Once we have developed a robust data management system for Scope 1 and 2 emissions, we will work towards Scope 3 data compilation.

13.3 Use and disposal of company's products and services

The GHG emissions associated with the use of our transport and logistics services has been captured in Scope 1. The emissions associated with the disposal of CN's products and services are not being captured.

13.4 Company supply chain

The source of GHG emissions from our supply chain is not readily available at this time. Once we have developed a robust data management system for Scope 1 and 2 emissions, we will work towards Scope 3 data compilation.

13.5 Other

Other scope 3 GHG emissions are not readily available at this time. Once we have developed a robust data management system for Scope 1 and 2 emissions, we will work towards Scope 3 data compilation.

13.6 Reasons for not reporting on Scope 3 GHG emissions

Scope 3 indirect GHG emissions are not readily available at this time. Since a majority of our GHG emissions are generated from locomotive diesel consumption, we have focused our GHG measurement, reporting and reduction efforts on our locomotive emissions. In the coming years, we will be working to develop a more comprehensive GHG data collection and management system. Once we have developed a system for Scope 1 and 2 emissions, we expect to be in a better position to work towards Scope 3 data compilation.

14. Emissions Avoided Through use of Goods and Services

14.1 Emissions avoided through use of goods and services

The use of rail for freight transportation can provide sizeable emission reductions to our customers shifting from other less carbon efficient transportation choices. Over the past few years, CN has been working with the Alberta government to develop and approve a modal shift quantification protocol.

In May 2008, the quantification protocol was approved by the Alberta government, providing the basis upon which GHG reductions achieved from shifting from truck to rail are to be quantified. The following is a summary of the information applied for the emission avoidance estimations:

Timescale over which emissions are avoided

The estimated timescale over which the emissions are reduced is based on the net amount of baseline truck transportation that has been shifted to rail during a project time period;

Methodology for calculation emissions avoided

The methodology is based on the detailed specifications as defined in the Quantification Protocol for Freight Modal Shifting. The protocol provides a method for calculating the GHG emission reductions from shifting baseline truck freight transport to project rail freight transport. This activity results in emission reductions given the significantly higher fuel consumption and associated GHG emission rates of trucks as compared to rail per amount and distance of freight shipped.

Three key assumptions have been developed to account for the complex array of factors that can influence emissions, as follows:

- a) First, since complications can arise when there is a lack of data to account for the detailed truck and rail routing configurations a simplified quantification approach has been developed. The simplified approach uses average and conservative emission factors and assumptions to allow for the recognition of emission reducing modal shifting when detailed per-shipment project data is not available.
- b) Second, since emission reductions from a single shipment of goods will be very small, the protocol is intended to be used for the aggregation of emission reductions from all shipments initiated by a particular producer or aggregator of goods.
- c) Third, in order to accurately compare the GHG emissions of rail transport to truck transport, the protocol assumes a common project and baseline function of freight transportation, and a functional unit of revenue ton-kilometres (RTK) shipped, representing the product of the mass of freight shipped and the distance the freight is shipped.

Emission Factors and sources

The emissions factors, sources and sinks are identified in the protocol on pages 26-31.

Global Warming Potentials

Global warming potentials are those used by Environment Canada. In addition, we also provide a GHG calculator on the CN website to estimate GHG emissions when shipping with CN versus other transportation modes. In general, the calculator is based on the same quantification methodology as set out in the modal shift quantification protocol, except for the value applied for truck weight, which is a customizable function in the calculator.

15. Carbon dioxide emissions from biologically sequestered carbon

15.1 Total global carbon dioxide emissions from biologically sequestered carbon

We do not generate carbon dioxide from biologically sequestered carbon. At the current time, the use of bio-fuels in the rail industry is still at a research and development phase. We continue to monitor developments in this area.

16. Emissions Intensity

16.1 Scope 1 and 2 financial emission intensity measurement

The financial emission intensity measurement for our reported GHG emissions (Scope 1) is total revenues, as per the following measurement:

Total tonnes of GHG emissions in CO₂-e ÷ \$CDN million total revenues (rail freight and other revenues).

16.1.1. Description of the units

The financial intensity units are based on our total revenues, which include revenue from rail freight (i.e. petroleum and chemicals, metals and minerals, forest products, coal, grain and fertilizers, intermodal and automotive), as well as other non-rail revenues.

16.1.2. The resulting figure

The resulting financial emission intensity figure is 0.000511 tonnes of CO₂-e per dollar of revenue earned.

16.2 Scope 1 and 2 activity related intensity measurement

The activity related intensity measurement for our reported GHG emissions (Scope 1) is Gross Ton Miles. The activity related intensity calculation is based on the following measurement: Total tonnes of GHG emissions in CO₂-e ÷ Gross Ton Miles. Scope 2 emissions have not been included within our present GHG reporting boundary, and therefore are not included in the numbers.

16.2.1. Description of the units

The Gross Ton Miles is the number of tons behind the locomotives (cars and contents) including company service equipment multiplied by the miles of road moved from originating to destination stations on a designated railroad.

16.2.2. The resulting figure

The resulting activity related intensity figure is 0.00001274 tonnes of CO₂-e per gross ton mile.

17. Emissions History

17.1 Emission variances from previous year.

The emissions do not vary significantly from previous years. However, emissions in 2008 decreased due to the increased efficiencies gained through our reduction programs.

17.2 Percentage emission variance previous year

The estimate percentage reduction of total absolute tCO₂e between 2008 and 2007 is 3 percent.

18. External Verification / Assurance

18.1 External verification of the information in questions 10-15

To date, the fuel consumption data and Gross Ton Miles data have been externally verified as part of our financial consolidated statements audit. At the same time, however, the conversion of the fuel consumption data to GHG emissions has not been externally verified.

18.2 Scope / boundary of emissions included in external verification

The fuel data and intensity numbers verified are those as presented in our 2008 consolidated financial statements.

18.3 Level of assurance

The fuel and intensity data has been verified based on a reasonable level of assurance.

18.4 Copy of verification statements

CN 2008 financial annual report verification statement as presented on pages 60 and 61.

18.5 Verification Standard

The fuel consumption data has been verified against the following criteria:

- » Internal Control – Integrated Framework issued by the Committee of Sponsoring Organization's of the Treadway Commission;
- » Standards of the Public Company Accounting Oversight Board (United States); and,
- » Canadian Generally Accepted Auditing Standards.

18.6 Plans for external verification of GHG emissions

As part of our reporting requirements with the Railway Association of Canada, there is currently an initiative to seek a qualified third party auditor to audit the processes and supporting documentation pertaining to the MOU. As parties to the Memorandum, we expect to participate in a process in the immediate future to select an auditor capable of independently verifying the GHG data.

19. Data Accuracy

19.1 Sources of data inaccuracy

Our data gathering on fuel consumption has some level of uncertainty since we currently apply a generic mass balance methodology. As a result, the discrepancies related to fuel consumption measurements from fuel dispenser metering systems are not always being captured. Furthermore, metering systems do not exist throughout our fuelling systems, thereby forcing the Company to rely on a combination of certified mass balance and metering measurements. We do not consider these uncertainties to be material.

19.2 Affect of sources of data inaccuracy

In 2008, we implemented a program to enhance our accuracy by taking measurements from our fuel dispensing metering systems. Doing so, detected a 1 percent variance in our reported data. Over the next year, we have started to develop a fuel management system, which will include the installation of meters in various fuelling system locations. We expect these equipment installations to create enhanced accuracy in our fuel measurements.

GHG Emissions Accounting, Intensity, Energy and Trading

19. Data Accuracy *(cont)*

19.3 GHG reporting under mandatory or voluntary scheme

Yes

19.3.1 GHG scheme

We currently report our GHG emissions to the RAC as part of our MOU obligations with the Canadian government. Through this reporting obligation, we are required to provide accurate and comprehensive information. Furthermore, a third party external verifier is expected to be selected in the immediate future by the MOU signatories to verify the information being provided.

19.3.2. The accuracy assessment for GHG emissions reported under that scheme for the last report delivered.

The accuracy assessment has not yet been provided, since the RAC and the MOU members have not yet selected a third party verified. Once selected, accuracy assessments will be available. We expect the selection to take place in the immediate future.

20. Energy and Fuel Requirements and Costs

20.1 Total cost of electricity, heat, steam and cooling

	2008
Cost of Purchased Energy - Total Cost in CDN millions	33

20.1.1 Cost breakdown by individual energy type

	2008
Cost of Purchased Energy - Total Cost in CDN millions	33

20.2 Total cost of fuel purchased for mobile and stationary combustion

	2008
Cost of Purchased Fuel - Total Cost in CDN millions	1,403

20.2.1 Cost breakdown by individual fuel type

	2008
Cost of Purchased Fuel - Total Cost in CDN millions	
Locomotive Diesel	1,332
Other Fleet and Miscellaneous Fuels	71

20. Energy and Fuel Requirements and Costs *(cont)*

Purchase Energy Input

20.3 Total consumption of purchased energy in MWh

The energy consumption data is not readily available. We expect to compile this data over the next few years.

20.4 Total consumption of fuels for stationary combustion.

The fuel consumption data for stationary combustion is not readily available. We expect to compile this data over the next few years.

20.4.1 Breakdown of consumptions of fuels by individual type

This data is not readily available.

Energy Output

20.5 Total energy generated in MWh from fuels in 20.4

This data is not readily available.

20.6 Total amount of self-generated renewable energy in MWh

We do not generate energy from renewable sources.

Energy Exports

20.7 Percentage of energy reported in response to 20.5 exported

We do not export energy to the grid or to a third party.

20.8 Percentage of renewable energy reported in response to 20.6 exported

We do not export renewable energy to the grid or to a third party.

21. EU Emissions Trading Scheme

21.1 Facilities covered by the EU ETS	CN does not operate or have ownership of facilities covered by the EU Emissions Trading Scheme.
21.2 Free Allowance allocations	Not applicable.
21.3 Purchased Allowances	Not applicable.
21.4 Total CO2 emissions for January 01 to December 31 2008	Not applicable.

22. Emissions Trading

22.1 Details of emission trading schemes, other than the EU ETS	We are not currently required to participate, or are participating, in any emission trading schemes.
22.2 Overall strategy for complying with emission trading schemes, including the EU ETS	<p>At present, we are not required to participate in any trading schemes. As such, our immediate carbon strategy is focused on engagement with the various North American trading regimes to understand how to optimize the carbon benefits of rail freight transportation through the approval of a modal shift quantification protocol, as well as credits to be gained from locomotive efficiency improvements. With respect to the modal shift quantification protocol, we currently have the protocol approved through the Alberta Scheme, and are in the process of engaging with the federal government and other trading regimes to explore opportunities for carbon trading as it pertains to modal shift transportation.</p> <p>Furthermore, we are continuing to monitor developments under the various schemes, including Western Climate Initiative, to understand any obligations that may affect our business, as well as other opportunities for carbon trading. We are especially interested in continuing to explore the opportunities to gain carbon credits from locomotive efficiency improvements.</p>
22.3 Purchase of project based carbon credits	No.

22. Emissions Trading *(cont)*

22.4 Type, volume and vintage of units purchased

Not applicable.

22.5. Involvement in the origination of project based carbon credits

Yes. Over the past two years CN has been involved in the origination of project based carbon credits on two fronts. First, we have been involved in the development of the first ever project-based carbon credits quantification protocol from modal freight transport. Second, we have been involved in the origination of carbon credits from the replacement of our older locomotives with more fuel-efficient newer models.

22.6 Involvement details

See description below.

Modal Freight Transportation Carbon Credit Opportunities

Project Role

CN has played an active role in the development of a quantification protocol to provide shippers with carbon credits from shifting freight from truck to rail. As such, we have played an active role engaging with the Alberta government and developing the quantification protocol to meet the Alberta Regime eligibility criteria. The ownership of carbon credits will be the sole responsibility of our customers, who will take on the role of project proponent.

Location and Technologies involved

The initial carbon credit project was based within the province of Alberta, and involved rail freight locomotive technology, which is considered significantly more efficient than truck.

Project Standard / Scheme

The Standard that we applied was the ISO 14064 Standard, which is internationally recognized.

Validation / Verification

Yes. The credits had been externally validated.

Annual volumes of carbon credits

The total volume of carbon credits / reductions generated between 2003-2007 was approximately 160ktCO₂e.

Retirement method

These credits are currently being banked and have not yet been retired

22. Emissions Trading *(cont)*

22.6 Involvement details *(cont)*

Fuel Efficiency Carbon Credit Opportunities from Locomotive Replacements

Project Role	CN took on the role of project proponent to calculate the potential carbon reductions realized from the replacement of older locomotives with newer fuel-efficient newer models. The ownership of carbon credits is the sole responsibility of CN.
Location and Technologies involved	The project origination took place for our operations in Canada and the US. The project involved the replacement of rail freight diesel locomotives during the period 2003 to 2007.
Project Standard / Scheme	The Standard that we applied was the ISO 14064 Standard, which is internationally recognized.
Validation / Verification	Yes. The credits had been externally validated.
Annual volumes of carbon credits	The total volume of carbon credits / reductions generated between 2003-2007 was approximately 160ktCO ₂ e.
Retirement method	These credits are currently being banked and have not yet been retired.

22.7 Involvement in allowance trading

We are not involved in the trading of allowances under the EU ETS and / or project-based carbon credits.

22.8 Details of involvement

Not applicable.



Performance



Performance

23. Reduction Plans

23.1 GHG emissions / energy reduction plans

At CN, we are committed to the reduction of GHG emissions and energy from our operations. In partnership with the Canadian and US governments we have been working towards GHG reductions, which have provided the basis for our GHG reduction plan. In addition, since fuel consumption makes up an integral part of our business fundamentals, we have also established an aggressive operational and fuel efficiency program, which has contributed to our energy and GHG reduction achievements.

23.2 If not, explain why not.

Not applicable.

Goal Setting

23.3 Emission / energy reduction targets

Yes. CN has established both an GHG emissions intensity reduction target as well as a fuel improvement target

23.4 Baseline year for targets

GHG Reduction Target Baseline – The baseline year for the GHG emission intensity reduction target is 2007. This is a fixed target against which emissions in future years are compared. This target has been established based on tCO₂e per Gross Ton Miles.

Fuel Improvement Target Baseline – The fuel improvement target is based on year over year improvements. As such, we have established our fuel improvement target as the percentage improvement in Gross Ton Miles (GTMs) per US gallons of fuel consumed as compared to the previous year.

23.5 Emission / energy reduction targets

GHG Reduction Target Baseline – The reduction of locomotive GHG emission intensity (tCO₂e/GTM) by 5 percent by 2010, based on 2007 baseline year.

Fuel Improvement Target Baseline – Achieve a fuel improvement of 2.5 percent for 2009 over 2008.

23.6 Sources or activities to which target applies

GHG Reduction Target Baseline – The GHG intensity reduction target applies specifically to the GHG emissions associated with fuel consumption from the use of our locomotives.

Fuel Improvement Target Baseline – The fuel improvement target applies to all fuel consumption from the Company operations, including locomotives, trucks and car activities.

23.7 Timescale / period of target

GHG Reduction Target Baseline – The GHG emission reduction target extends over the period 2007-2010.

Fuel Improvement Target Baseline – The fuel improvement target is a recent target, which has been established on a year over year basis. The current target extends through the period 2009

23. Reduction Plans *(cont)*

GHG Emissions and Energy Reduction Activities

23.8 Activities to reduce emissions / energy use

Since GHG emissions and fuel consumption are inextricably linked, the reduction activities that we have implemented are designed to meet both objectives. Our commitment to the reduction of GHG emissions and fuel consumption, takes place on several levels, from the way we operate the railroad through 'Precision Railroad' to the adoption of a number of programs that advance railroad efficiency and promote emissions reduction, including locomotive acquisitions and upgrades. In order to accomplish our reduction objectives, we have focused on programs that enable us to:

- » efficiently operate the railroad;
- » ensure the use of better locomotives;
- » promote focused fuel conservation practices;
- » employ better practices in our rail-yards;
- » use energy efficiently;
- » increase training and awareness; and,
- » contribute to innovation in technologies.

These practices have been well embedded in our core operations for more than a decade, which have enabled the Company to achieve considerable reductions in fuel consumption. In fact, since 2008, the fuel consumed per revenue ton-mile is 69 percent of that in 1991, which we believe to be a tremendous achievement. The following section provides an overview of the activities that we are continuing to, and planning to undertake to continue to reduce our GHG emissions / energy use.

EFFICIENTLY OPERATE THE RAILROAD

CN is well recognized as the most efficient railroad in North America. CN's 'Precision Railroad' model is the foundation of the Company's industry-leading operational efficiency and productivity. The underlying goal of 'Precision Railroad' is to ensure the most reliable and efficient movement of freight through highly precise planning for all facets of railroad operations. Each car or container has a specific trip plan that fits into the design of the train schedule. Through 'Precision Railroad', fewer railcars and locomotives are needed to ship the same amount of freight in a tight, effective and efficient operation. 'Precision Railroad' translates into greater reliability for customers, increased fuel efficiency and reduced carbon emissions. CN strives to consistently exceed 90 per cent for trip plan compliance. As part of a company-wide initiative to efficiently operate the railroad, we have implemented the following key programs.

Intermodal

For customers who do not have direct access to rail, using both truck (for the short haul) and rail (for the long haul), represents a significant opportunity to reduce the greenhouse gas emissions associated with truck-only shipping. CN has a large network of intermodal terminals across North America. Our innovative service model has enabled CN to become one of the most efficient intermodal railroads in North America. For the year 2008, our revenues from intermodal increased by 14% as compared to 2007. This increase was mostly due to freight rate increases, higher volumes through the Port of Prince Rupert, which opened its intermodal terminal in late 2007, and high Canadian and U.S. trans-border traffic due to market share gains (see Annual Report, p. 36).

Co-production

Co-production refers to a cooperative effort between railroads to share track and rail infrastructure in an effort to improve the flow of traffic and maximize efficiencies for both carriers. For example, CN and CPR share a track in British Columbia whereby all westbound trains of both railroads, usually carrying heavy commodities, operate over the CN line and all eastbound trains of both railroads, usually transporting lighter loads, operate over the CPR line. Fuel is saved by the single direction trains, as well as by trains using routes with the lowest grades to carry heavy loads.

Routing protocols

CN has a series of routing protocols with its U.S. interline partners, establishing the most efficient gateways for routing traffic between railroads—regardless of ownership. The routing protocols improve both transit time and asset utilization making the most efficient use of existing capacity and eliminating excess miles travelled on inefficient routings. CN has routing protocol agreements with all six Class 1 North American railways.

23. Reduction Plans *(cont)*

GHG Emissions and Energy Reduction Activities *(cont)*

23.8 Activities to reduce emissions / energy use *(cont)*

ENSURING BETTER LOCOMOTIVES

Since locomotive diesel engines make up the majority of CN's air emissions and fuel consumption, the Company continues to make significant investments in fleet renewal, remanufacture and retrofits. These initiatives are described in greater detail below.

Fleet Renewal / Acquisitions

CN has been implementing an aggressive locomotive-renewal program for more than a decade, which includes the purchase of new locomotives.

In 2008, CN invested approximately CDN\$ 200 Million in equipment, which included the acquisition of 20 new fuel-efficient locomotives. In December 2008, we also announced plans to purchase 40 additional, even more efficient, electro-motive diesel (EMD) locomotives. The 40 EMD SD70M-2 locomotives are scheduled for delivery in early 2010. We also have an option for 50 more of the 4,300 horsepower locomotives by 2011.

The new EMD locomotives will be up to 20 percent more fuel-efficient than the ones they replace and comply fully with the latest regulatory requirements for reduced locomotive emissions. In addition, the units will be equipped with distributed power ('DP') capability. DP enables remote control of a locomotive(s) throughout a train from the lead control locomotive. DP provides faster, smoother starting, improved braking and lower pulling forces at the head-end of a train. In addition, it significantly reduces the time required to charge a train's air brake system, a major benefit in cold weather conditions that can slow the rate at which air brakes are charged. Since the Company's privatization in 1995, we have acquired 631 new locomotives under our regular fleet renewal program. In 2008, the Company operated with an active locomotive fleet of approximately 1800. With the acquisition of more fuel-efficient locomotives in our fleet, we have been able to realize 15-25% fuel savings versus older models.

Furthermore, these locomotives are equipped with distributed power with higher-power and higher-adhesion capabilities, requiring fewer locomotives to pull the same train weight. With more optimum matching of motive power to train operations, these new locomotives result in economies in fuel consumption and reduction in emission intensities.

Fleet Remanufacture

Although there were no additional locomotives remanufactured in 2008, over 300 of our core fleet of diesel locomotives have been remanufactured since 2002, when we initiated a program to remanufacture a portion of our fleet. Remanufacturing our older locomotives increases reliability and ensures the locomotives meet U.S. Environmental Protection Agency (EPA) Tier 0 Regulations for NOx emission reductions.

Through the re-manufacture of our locomotives we have realized approximately 3 percent fuel efficiency, which has translated into roughly CDN\$ 35 Million of fuel savings to date.

Retrofitting Existing Switcher Locomotives

Over the past few years, we have started to investigate options to retrofit existing switcher locomotive bodies with new tier-compliant diesel engines. One of the options that is currently under review is the replacement of large conventional medium-speed diesel engines with multiple smaller industrial diesel engines packaged as individual generator sets (known as 'GENSETs'), which result in lower fuel consumption and emissions. To date, the application of GENSETs is still in a testing stage.

23. Reduction Plans *(cont)*

GHG Emissions and Energy Reduction Activities *(cont)*

23.8 Activities to reduce emissions / energy use *(cont)*

FOCUSED FUEL CONSERVATION PRACTICES

In operating the railroad, the Company has also been able to identify and promote a number of fuel conservation practices. These include the following:

Automatic Stop / Start Devices

In November 1996, CN began to equip its locomotive switching fleet with automatic stop / start devices. These devices conserve fuel and reduce emissions by automatically shutting down locomotives when they are not in use, and powering them up again when required to maintain critical locomotive functions. In general, CN has saved fuel and reduced emission throughout our Canadian operations by installing automatic stop / start devices. In fact, studies have shown that monitoring of line-haul locomotives equipped with a properly operating automatic stop / start system can generate annual savings per locomotive on average of 30,000L, and the capital and installation costs to supply auxiliary power for a shut-down locomotive can be recouped in approximately 2 years.

To date, over 50 percent of CN's switcher fleet has been retrofitted to employ this feature. In the next few years, we expect to continue to retrofit our switcher fleet with start / stop devices across the system. Furthermore, all new locomotives purchased by CN, as well as those locomotives that we overhaul, will be equipped with automatic stop / start devices.

Low Idle

At CN, we have been extending the application of the low idle feature to more of our locomotives. This feature allows the diesel engine to idle at a reduced speed when locomotives are awaiting assignment or coasting down hill, saving approximately 10 litres of fuel per hour. In addition, on the accepted duty cycles, savings can be up to 1 percent of the fleet annual fuel consumption. Since 1980, all new locomotives purchased by the Company have had low idle features. To date, approximately 60 percent of our fleet have applied the low idle feature.

Longer Trains

We are working to increase train productivity through the use of longer trains, which permit improved utilization of locomotive power. In order to enable longer trains, we have invested considerable capital into lengthening passing tracks and sidings, as well as equipping trains with distributed power. As a result, the Company can run longer, heavier trains, including in cold weather conditions, while improving train handling, reducing train separations and ensuring the overall safety of operations.

In 2008, we spent close to \$200 million in network improvements, including extended sidings and double stack clearances on the railway's B.C. North line to accommodate intermodal traffic from the Prince Rupert intermodal terminal, as well as new siding capacity between Winnipeg and Chicago. These improvements are enabling us to run longer trains that will offer train-mile savings, reduced wear on rails and wheels, and fuel consumption savings.

Train Pacing, Coasting and Braking Strategies

Dynamic brake equipment allows the use of the dynamic brake to control train speed variations rather than the use of the air brake system. As a result, fuel consumption is reduced. Furthermore, where operations permit, the use of pacing or coasting to stop our trains rather than using heavy braking requiring engine power, has also enabled us to yield fuel and emission reductions. Pacing is the use of better track / train management by the network management personnel to ensure trains are not rushing to stop at meets. Meanwhile, coasting takes place when power is removed ahead of time so that the train slows down on its own.

23. Reduction Plans *(cont)*

23.8 Activities to reduce emissions / energy use *(cont)*

GHG Emissions and Energy Reduction Activities *(cont)*

FOCUSED FUEL CONSERVATION PRACTICES *(cont)*

Notch Limiting

The practice of notch limiting is undertaken when our locomotive crew personnel are instructed not to run their top notch setting when maximum power is not required. A pilot project currently underway is showing significant benefits with respect to fuel savings.

Rail Lubrication

Rail lubrication reduces surface friction between the rail and the freight cars, requiring less effort to maintain a specific speed. This practice results in lower fuel consumption and lower GHG emissions. To date, approximately 62 percent of CN's locomotives are equipped with lubrication systems. We also achieved the same results by applying lubrication to the flange of the locomotive wheel, which also reduces any friction.

Reassigning Older Locomotives

When older locomotives are reassigned to lines with less traffic it ensures new more fuel-efficient locomotives are used in the heaviest work cycle. For example, we have recently expended resources to re-assign older locomotives in Alberta on the former Savage rail line.

Acquisition of Trucks for Rail Cars

The Association of American Railroads (AAR) has required all new freight cars to be equipped with trucks (bogies) that steer better around curves. This reduces lateral curve forces on the rails resulting in lower fuel consumption and less wear on the rail. CN has purchased 2200 freight cars with 4400 M-976 trucks (bogies) since 2004.

Smart Indicators

CN has installed weather stations on all switch warmers on its main line between Winnipeg and Montreal. The systems monitor outside temperatures and humidity and when conditions for snow or freezing rain are predicted the units automatically warm the switches. By using the smart indicators to ensure that the switches are heated only when required, CN has been able to reduce our switch energy consumption by 50 percent.

BETTER PRACTICES IN OUR RAIL YARDS

Through better operational practices in our rail yards, we have been able to increase our operational efficiency, while significantly reducing our fuel consumption. These practices include:

- » locomotive shutdowns in our yards in accordance with CN's shutdown policy;
- » streamlined car handling where our operators minimize switching moves in our yards; and,
- » crew training and awareness, including the Advanced Locomotive Refresher Training (ALERT), that focuses on the importance of fuel conservation practices.

In order to assess performance with regards to better practices in our rail yard, we review variances on an ongoing basis between how trains are operated and handled. In 2008, our reviews indicated a 2/3 compliance rating. These types of practices have been important contributors to our fuel reduction accomplished, which to date stand at 30 percent since 1991.

Performance

23. Reduction Plans *(cont)*

23.8 Activities to reduce emissions / energy use *(cont)*

GHG Emissions and Energy Reduction Activities *(cont)*

ENERGY EFFICIENCY ACTIVITIES IN OUR OPERATIONS

We have also started a number of initiatives throughout our yards and facilities to promote energy efficiency. Over the past few years, these initiatives have focused on equipment efficiencies as well as building designs. A description of these programs is presented below.

Enhanced Ventilation Systems

In 2006, CN began a major overhaul of the ventilation system of the locomotive diesel shop at MacMillan Yard, our largest yard. A new and more energy efficient system with radiant heat recovery was installed to reduce the amount of cold air. These modifications have saved 1,166,733 kgs of CO₂e and approximately CDN\$400,000 since 2006.

Lighting Upgrades

In 2008, CN converted its three corporate logos at our headquarter buildings to LED lights. Although brighter than ever, the change has resulted in significant energy savings, which amounted to approximately \$CDN 45,000 in annual energy cost savings.

Green Office Buildings

CN is increasingly looking to the Leadership in Energy and Environmental Design (LEED)-inspired criteria when it expands or builds new office space. We have LEED inspired CN offices in Montreal, Edmonton and Homewood that use natural or energy-efficient lighting, variable ventilation systems and low volatile organic compound (VOC) carpeting and fabrics. In Montreal, we have been able to realize annual savings of approximately CDN\$100,000 at CN's headquarters. In Edmonton and Homewood we expect to implement various LEED elements, including high efficiency boilers, lighting controls, and energy efficient windows. At this stage, the energy data associated with the buildings is still being compiled, and estimated savings have not yet been established.

Heating Equipment Replacements

At CN's Walker Yard in Edmonton, employees have been making energy-efficiency improvements in the 80-year old Car Repair Shop whenever equipment in the shop needed replacing. Over the years, they replaced approximately 80 old space heaters with more efficient and reliable ones; they replaced 96 Watt incandescent lights with compact fluorescent bulbs that consume only 24 Watt power, and installed timers and motion detectors to regulate lighting in work areas that are unused for 30 minutes or more. Through these initiatives, energy and cost savings have been realized. For example, in 2007, the Walker Yard team replaced 40 high intensity mark and warning lights with low-energy and long-life LED lights, saving 1,248W of power.

Automatically Controlled Blowers

In 2000, we initiated a program to automatically control snow clearing blower devices at the Symington Yard. The blowers are typically left running continuously throughout the winter months and used extensively to clear snow from the switch point areas in track turnouts. By automatically controlling the blowers through a load management system (the system incorporates ION meters and contactors to relay information from 3 weather stations), the blowers are switched on only when weather poses a threat to the effective operation of the switches.

Today we have just over 300 – 71/2 hp motors under the control of the load management system, which are running 30 to 45 percent less than in prior years. As a result, we have been able to achieve hundreds of thousands of saved kilowatt-hours of electricity. In general, the capabilities of the load management system have been invaluable, which we have now installed at more than 20 sites in Winnipeg. Through the system, we have been able to use the ION power meters to also monitor real time electrical and gas consumption, while at the same time control the energy load in Winnipeg. Through the achievements of this program, Manitoba Hydro has recognized us as energy conservation leaders and has featured us several times in the Manitoba Hydro profile.

23. Reduction Plans *(cont)*

23.8 Activities to reduce emissions / energy use *(cont)*

GHG Emissions and Energy Reduction Activities *(cont)*

ENERGY EFFICIENCY ACTIVITIES IN OUR OPERATIONS *(cont)*

We have also started a number of initiatives throughout our yards and facilities to promote energy efficiency. Over the past few years, these initiatives have focused on equipment efficiencies as well as building designs. A description of these programs is presented below.

Lighting Replacements and Air System Enhancements

As part of a yard replacement program at the Symington Yard, we have changed over 50 1000-watt Mercury Vapour fixtures at our Symington Yard, with 400-watt metal halide fixtures. The replacement of these fixtures has resulted in a reduction of 30,000 volt-amps of electrical demand, which has enabled us to realize significant energy savings.

Furthermore, we have also embarked on a program to enhance our yard air system in an effort to streamline and maximize efficiencies. As part of this initiative, we re-designed the front end of the Symington yard air system and developed strategies to reduce leaks and damage to the secondary lines. We also installed wet / primary tanks, heat regenerative dryers, and O-loss drains to reduce the running time of our lead yard compressor by over 60 percent nominally. As a result of these modifications, our energy consumption to operate our yard air system has been reduced by 50 percent.

TRAINING AND AWARENESS

We also support forums that educate both external and internal stakeholders on climate change risks, impacts, mitigation and adaptation processes. For instance, in 2008, we were a key sponsor for Climate Project Canada, which enabled 250 Canadian to obtain training on the 'Inconvenient Truth' presentation. Due to CN's contribution to the event, 3 of our employees were trained on the 'Inconvenient Truth' presentation. As part of the Project, our employees will be using the training to make at least 10 presentations per year and provide over 13 presentations internally at CN across several HQ departments from April of 2008 to April of 2009. We have since completed a second round of training in Nashville at the North American Summit, and have committed to making a least 10 additional presentations in 2009.

PRODUCT INNOVATION

CN actively investigates and adopts new engine technologies that have proved effective in lowering fuel consumption and emissions. Over the last several years, we have continued to monitor our manufacturers in the development of new engine technologies to lower fuel consumption and emissions. New technologies that we are currently monitoring include: hydrogen injection, GENSETs, engine idling technologies, rail lubrication, and alternative fuels.

Over the past year, CN partnered with General Electric and the Sustainable Development Technology of Canada in the advancement of the next generation of locomotives for GHG reduction. Through this partnership we expect to invest over CDN\$ 1 Million 'in kind' labour and one locomotive for a 3-year period (2009, 2010, and 2011). We are also continuing to dialogue with our manufacturers to understand GENSET locomotives and the additional advantages of fuel savings.

Goal Setting

In order to assess progress against meeting the emission intensity and fuel improvement goals that CN has set, we use the following performance indicators:

- a) Greenhouse gases emitted per gross ton mile.
- b) Fuel improvement measurements based on a percentage improvement in Gross Ton Miles (GTMs) per US gallons of fuel consumed.

23.9 Benchmarks / Key Performance Indicators to show progress against reduction goals

Performance

23. Reduction Plans *(cont)*

Goal Achievement

23.10 Emission reductions and energy savings realized due to reduction activities

SAVINGS REALIZED THROUGH GHG REDUCTION INITIATIVES

Since our renewal of the MOU with the Canadian government in 2007, we have achieved a 1 percent reduction in our GHG emission intensity based on total CO₂e, as of year end 2008.

SAVINGS REALIZED THROUGH FUEL EFFICIENCY INITIATIVES

While we have always conducted our business to operate in a fuel-efficient manner, most of our initiatives have historically been focused on our diesel locomotive fuel consumption, which represents a majority of our GHG and energy source. In order to develop a more comprehensive approach, we recently established a target for fuel improvement to include all other aspects of our core business. Based on our actions over 2009, we will be in a better position to describe the savings realized through our fuel-efficient initiatives. Given our current data, we can report a fuel improvement of 1% for our diesel fuel locomotive consumption in 2008, as compared to 2007.

23.11 Investment required to achieve emission reductions and energy savings

INVESTMENTS IN GHG REDUCTION INITIATIVES

The focus of our GHG emission reductions has been directed towards the use of fuel for our locomotives. Since 2006, we have spent more than CDN\$ 200M on locomotive acquisitions and obtained a 5 percent reduction in GHG emissions and fuel consumption.

Goal Planning and Investments

23.12 Investments required to achieve future targets or reduction activities

INVESTMENTS TO MEET FUTURE – GHG REDUCTION INITIATIVES

In order to achieve our future GHG reduction plan, we expect an additional investment of \$200 Million in 2009, which will include improvements to the quality of the fleet and the acquisition of new fuel-efficient locomotives. In fact, in December 2008, we announced plans to purchase 40 additional, even more efficient, locomotives, and secured an option for 50 more. We also expect to spend more than \$300 million on the business, which will include investments to improve service and operating efficiency. The payback on this investment is expected to be within the next five years.

INVESTMENTS TO MEET FUTURE FUEL EFFICIENCY INITIATIVES

The focus of our fuel efficiency initiatives has been directed to the way in which we run the railroad. In 2009, we expect to invest approximately CDN\$ 1.5 billion on capital programs, of which CDN\$ 1 billion is targeted towards track infrastructure, CDN\$ 200 million to improvements in fleet quality and CDN\$ 300 million on the business. These investments are expected to contribute to improved service and operating efficiency, and ultimately enable us to meet our 2009 fuel improvement initiatives. The payback on this investment is expected to be within the next five years.

23.13 Future Scope 1 and 2 Emissions for next five years

Over the next five years, we expect our Scope 1 GHG emissions to decrease. This projected decrease is based on traffic projections, internal operational efficiencies and the acquisition of new more fuel efficient locomotives.

23.14 Future energy use for the next five years

Over the next five years, we expect our net energy demands to increase slightly. This projected increase has been established for our entire operations throughout North America, based on economic conditions and growth rate projections (in terms of increased traffic).

23.15 Methodology used for estimations and any assumptions

In order to establish our growth rate estimations for the next five years regarding GHG emissions and energy use, we applied various traffic growth rate scenarios to our projections. Our growth rate scenario assumptions fell within a range of 1-3 percent within a 5-year period.

24. Planning

24.1 Factoring costs of future emissions into capital expenditures and impact of costs on investment decisions

The cost of future emissions is regularly assessed in light of evolving regulatory requirements and in consideration of the Company's GHG reduction targets.



Governance



Governance

25. Responsibility

25.1 Board or other executive committee responsibility for climate change

Yes.

25.2 If not, describe responsibility for climate change

Not applicable.

25.3 Board or Executive Committee with responsibility for climate change

The overall responsibility for climate change falls to the Environment, Safety, and Security Committee of the Board.

25.4 Mechanism by which the Board or Executive committee reviews progress on climate change

Climate change information that is significant to the Company is typically presented to the Executive Committee through monthly meeting business performance sessions. The information on climate change is obtained through proceedings at the Environment, Safety, and Security Committee, as presented by CN's Corporate Environment Department.

CN's Corporate Environment Department is at the core of its environmental management activities, including climate change. Made up of 19 environmental specialist professionals, the Corporate Environment Department monitors CN's climate change performance and compliance through agreements with governments. Together, CN's Corporate Environment Department ensures that the Company meets or exceeds applicable requirements and manages and monitors fuel improvement and emission reduction programs and performance.

On a quarterly basis, the Corporate Environment Department is responsible for the provision of climate change performance information to the Environment, Safety Security Board Committee. When considered significant, climate change matters are discussed at the monthly Executive Committee meetings as well as the annual Board Level meetings.

26. Individual Performance

26.1 Incentives for management of climate change

Currently, the Company does provide a mix of corporate and individual performance incentives for the attainment of fuel improvement targets. Since our fuel improvement performance is directly linked to GHG emissions, the incentives provided are indirectly linked to our climate change objectives.

26.2 Linkage of incentives to monetary rewards

Yes. Fuel improvement individual performance incentives are linked to monetary rewards. As such, performance in meeting our fuel improvement objectives results in a corresponding percentage bonus increases.

26.3 Entitlement of incentives

The incentive benefit is available to the responsible individual overseeing performance within the Supply Management, Engineering and Mechanical operations.

Governance

27. Communications

27.1 Existence of informational publications on climate change risks and opportunities

Yes.

27.2 Information provided in annual report or other mainstream filings

The risks and opportunities presented to the Company, as well as emissions and plans to reduce emissions are provided in the following documents:

- » Annual Report
- » Investor Fact Book.

Both these reports can be accessed at the following website: <http://www.cn.ca/en/investors-financial-quarterly-releases-dividends.htm>

27.3 Other voluntary communications

We provide information on CN's climate change performance at the following publically available information sources:

- » CN's website www.cn.ca
- » Delivering Responsibly Report www.cn.ca/delivering_responsibly
- » Locomotive Emissions Monitoring Program reports published by Environment Canada. Reports are available on the website of the Railway Association of Canada.

28. Public Policy

28.1 Engagement with policy makers on the topic of climate change

CN has been actively engaged at various levels through North America engaging with policy makers on responses to climate change, specifically in the area of carbon trading regimes, rail industry GHG emission standards and bio-fuel specifications. The following provide an overview of our engagements:

Carbon Trading Policy Making

Alberta Government - We have been actively engaged with the Alberta government's carbon offset program to work with them on the approval of a modal shift quantification protocol that gives shippers emission credits for switching from truck to rail.

Canadian Federal Government - We are currently working with the federal government towards approval of the truck to rail modal quantification protocol at the national level.

Other Carbon Trading Regimes (Chicago Climate Exchange, Montreal Climate Exchange, Western Climate Initiative etc) - Over the next year we will be engaging with the respective authorities linked to the various carbon trading schemes to start a dialogue on the approval of the truck to rail modal quantification protocol.

Governance

28. Public Policy *(cont)*

28.1 Engagement with policy makers on the topic of climate change *(cont)*

CN has been actively engaged at various levels through North America engaging with policy makers on responses to climate change, specifically in the area of carbon trading regimes, rail industry GHG emission standards and bio-fuel specifications. The following provides an overview of our engagements:

Emission Standards Policy Making

Railway Association of Canada (RAC) - Through our membership with the RAC, we have been participating in initiatives to provide GHG emission data and support studies into the carbon benefits of rail freight transport.

Environment Canada - We are also engaging with Environment Canada, through our role as the chair of the RAC MOU Management Committee, in discussions regarding the development of future emission standards for locomotives.

US EPA – We are involved and continue to engage with the US Environmental Protection Agency to reduce emissions and develop action plans to demonstrate progress in meeting our Smart Way Agreements.

American Association of Railroads (AAR) – An important part of AAR's mission is to work with elected officials and leaders in Washington, D.C. on critical rail transportation issues to ensure that the railroads meet America's transportation needs today and in the future. As a voting member of the AAR, we use this forum to dialogue and keep track of American policies on the rail industry.

Bio-fuel Specifications

At CN, we have engaged with a number of provinces on issues related to the percent of renewable content in diesel fuels. In particular, we have been working with the provinces of Quebec, British Columbia, and Manitoba. Through our deliberations, we have communicated our concern regarding the potential for fuel cost increases from limited supply of renewable content alternatives.

Furthermore, we are in continued dialogue regarding the technical difficulties associated with applying bio fuels in rail freight transportation during winter periods.

