Delivering Responsibly

2006 Highlights

This report is a summary of our online responsibility report that can be found at www.cn.ca

CN

What's inside

President's Message

Success in any business depends on highly motivated people maximizing the use of valuable assets to deliver safe and reliable customer-focused service while tightly controlling costs. Nowhere is this more evident than at CN, where the integrated application of our five core principles – Service, Cost Control, Asset Utilization, Safety and People - has been driving our business success for many years.

Running a safe operation without anyone getting hurt and without damaging the environment is a critical fundamental and a top priority at CN. In an effort to continuously improve the safety of our network, we invest a significant percentage of revenues in equipment and infrastructure each year. We also refine our processes and procedures to improve our safety performance and to ensure the environment is not compromised. In April 2007, we took our commitment one step further, by creating the new position of Vice-President and Chief Safety Officer. The officer has responsibility for CN's department of Safety, Risk Management and Environment, as well as the movement and handling of Hazardous Materials.

Delivering Responsibly describes the core principle of **Safety** at CN – of our employees, of the communities in which we operate, and of our **Environmental** efforts. It is also the first CN report to be inspired by Global Reporting Initiative (GRI) guidelines which provide an internationally accepted framework for sustainability reporting.

In this Executive Summary you will learn more about CN, and how our business philosophy, the safety of our employees, our communities and the environment, are all fundamentally intertwined. I invite you to read the full report on our website at www.cn.ca

Safety

Planning for Safety

CN is committed to safeguarding its employees, customers and the communities through which we travel at all times. As part of that commitment, we have comprehensive plans in place that address the issues of safety, security and employee well-being. We are devoted to providing proper training, procedures and tools to ensure a safe and secure working environment and to deliver our customers' shipments damage-free.

A Class 1 railroad is a complex operation. CN has more than 20,000 employees, orchestrating approximately 2,000 locomotives and 115,000 railcars (including non-CN owned cars) across a network of over 20,000 route-miles of track in Canada and the United States. CN's Precision Railroading lays the foundation for working safely because it is predicated on planning and predictability. Its focus on ensuring car performance to the scheduled service plan integrates all processes and involves all departments. As a result, employees operate "to the plan", creating a predictable, and therefore safer, work environment.

Investment

Year-in, year-out, more than half of CN's capital budget goes to basic capital. For 2007, that means spending approximately C$800 million in capital to replace rail, ties and other basic infrastructure across the system. In addition to capital, CN spends in excess of C$500 million a year on day-to-day maintenance of the plant, including track, signals and other assets.

Planning

CN's **Integrated Safety Plan** is the framework for integrating safety into our day-to-day operations. It is a proactive, comprehensive program designed to minimize risk and drive continuous improvement in the reduction of injuries and accidents.

Our **Emergency Response Plan** ensures that, in the event of an incident, there is an immediate, coordinated response to deal with the situation quickly, safely and effectively. An enhanced version of CN's Emergency Response Plan was rolled out across the company in 2006 and continues to promote effective interaction with first responders, such as fire fighters, police, and government agencies at all levels.

Safety road shows generate ideas, action

In late 2006, senior CN officers held safety road shows to raise employee awareness of our safety performance. The road shows were an unprecedented event at CN, providing an in-depth exploration of safety to thousands of CN managers from the senior executives responsible for the issues. During break-out sessions, participants identified a great number of initiatives that had significant potential to improve safety, many of which have already been implemented in our regions.

Key Initiatives - Mechanical

The focus of our mechanical initiatives is on early detection and preventative maintenance, which increases equipment reliability and the safety of our trains.

- **Inspections**

  We maintain an unwavering focus on the quality of our train and car inspections, ensuring they are performed according to safety rules and procedures through efficiency tests. In 2006, we performed 32 per cent more efficiency tests than in 2005.

  Roll-bys, which are supplemental visual inspections of trains, were also stepped up in 2006 by approximately 20 per cent at our major train yards and intermodal terminals.

- **Wayside Inspection Detectors**

  CN's system of wayside inspection detectors is one of the most advanced in North America. The detectors provide information on wheel impact loads, wheel dimensions, hot bearings and hot wheels.
  A central database identifies cars with multiple symptoms before they reach urgent levels.

- **Wheel Impact Load Detectors**

  CN has one of the largest networks of Wheel Impact Load Detectors (WILD) in North America, which catch flat spots and other imperfections on wheels as the train passes over the track.

  In 2006, we installed four more WILD sites on our system and lowered the alarm threshold to reduce the number of higher impact wheels travelling across the system.

  The WILD sites have been enhanced to also report on overloads and imbalanced loads resulting from improper customer loading. The additional capability enables us to contact the customer to reduce the occurrence of incorrect loadings which can damage the rail cars and track.

- **Hot Bearing Detectors**

  The electronic Hot Bearing Detector senses and reports an unsafe wheel bearing temperature level on a moving car or engine - important information to enable the train crew to avoid possible derailment.

  We have increased the number of Hot Bearing Detectors in Canada, which are now typically spaced at 15-mile intervals along most of our mainline.

Key Initiatives - Mechanical

- **Hot Wheel Detectors**
  Hot wheels are most often caused by failure to properly release a railcar's braking system. We are proactive in identifying and repairing cars that record multiple hot or warm wheel readings using our network of Hot Wheel Detectors. Cars that register three or more warm or hot wheel readings are automatically flagged for testing and maintenance.

  In 2006, we performed over 500 systematic air brake tests on cars found with hot wheels, eliminating potential problems. We also doubled the number of electronic single car air brake test devices which are strategically located across the system. We now have 34 electronic testers which enable us to diagnose air brake problems more accurately.

- **Cold Wheel Detectors**
  CN has two Cold Wheel Detectors located at the bottom of long grades where train brakes are applied. The detectors provide early warnings of weaknesses in a car's brake system. We investigate and repair cars that record multiple cold wheel readings.

- **Roller Bearing Verification**
  We identify roller bearings that show signs of future failure using sophisticated wayside detector methods. The detection enables us to remove bearings before their internal failure becomes a critical factor requiring train stops, setouts and possible derailment.

Putting the brakes on unsafe practices

The condition of the wheels on a railcar is very important to safe railroad operations. If a railcar's handbrakes are applied when it is in motion, structural damage to the car's wheels can result. The damage can potentially lead to either broken wheels or a broken rail, both of which can cause a derailment.

In 2006, CN met with 100 of its largest customers to reinforce the importance of not moving cars with handbrakes applied. Local CN trainmasters reviewed company policy on the safe movement of cars with all CN train crews supporting these customers. Shortline railroads that provided service to these customers were also contacted. In addition, CN trainmasters conducted plant visits to engage customers in the safety effort, discussing proper procedures and reviewing CN's handbrake safety video with personnel.

The safety blitz was reinforced with unannounced spot checks to verify that rules for railcar movement were being followed.

Key Initiatives - Engineering

The focus of our engineering initiatives is to maintain the integrity of CN's physical plant, such as rail, signals, communications and bridges.

- **TEST car**
  CN's state-of-the-art TEST car analyzes and monitors geometric imperfections of the track structure as well as rail wear using state-of-the-art technology. Any imperfections that exceed FRA or Transport Canada safety guidelines or CN's own standards are immediately addressed by maintenance personnel.

  In 2006, we tested 48,000 miles of track with our TEST car and an additional 5,000 miles with an outsourced vehicle, inspecting certain portions of our system several times. CN is building a self-propelled track geometry TEST car at a cost of approximately $3 million to further increase testing.

- **Ultrasonic Rail Flaw Detectors**
  We use high-tech ultrasonic rail flaw cars to catch internal rail defects that could potentially lead to broken rails, the leading cause of derailments in the industry. In 2006, we conducted 25 per cent more ultrasonic rail flaw detections than in 2005.

- **Sightline and Surface Inspections**
  Train crews, wayside operators and maintenance forces have been responsible for the visual inspection of our tracks for as long as trains have been operating. In 2006, visual inspections increased by 50 per cent, from two inspections a week to three.

  Sightline and surface inspections of grade crossings are also a high priority. We inspect all of our rail crossings at least once every year.

- **Natural hazard warning systems**
  We have detectors in place to report slides or track hazards in known sensitive areas of our system, such as in key corridors of British Columbia. Slide Fences, for example, activate alarms if rock or debris fall on the track, warning approaching trains of a hazard.

  Tip Over Posts detect larger movements of debris, such as those from mud slides, and also activate hazard alarms.

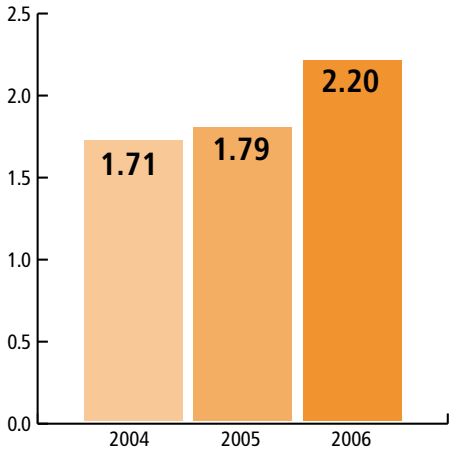
- **Precision Engineering**
  This is a major initiative to consolidate many separate engineering processes into a single information system. The system will enable employees to access and input critical information in real time, such as plant condition, completion of inspections, etc. More accurate, timely information supports improved planning and execution of engineering maintenance activities, correction of track defects and the completion of capital work programs.

2006 Performance Highlights

- 30% reduction in mainline TSB accidents
- Accident severity reduced significantly
- 15% reduction in FRA mainline accidents
- 22% increase in non-mainline FRA accidents, driven by switching rule violations in our train yards
- 13% improvement in FRA injury ratio

Federal Railroad Administration (FRA) train accident frequency

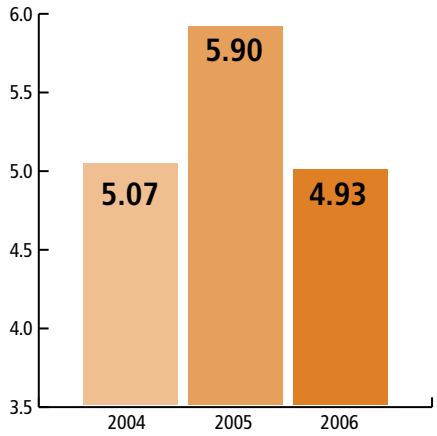
(accidents per million train miles)



CN's FRA accident ratio increased by 22 per cent in 2006 compared to 2005 due largely to an increase in the number of accidents that occurred away from our main track, such as in our train yards or on customer sidings. Regional action plans were put in place to address the situation through greater efficiency testing, coaching and rules compliance.

Transportation Safety Board (TSB) accidents - Canada total

(accidents per million train miles)



Our TSB accident ratio in 2006 was 4.93, an improvement of 16 per cent over 2005. A big contributor to the improved results was a 30 per cent reduction in mainline TSB accidents, which has had a positive impact on service and helped reduce costs. The improvement also reflects CN's intense focus on engineering and mechanical initiatives.

2006 Performance Highlights

Transportation of Dangerous Goods

Strict regulations by Transport Canada and/or the U.S. Department of Transportation, supported by CN policies and procedures, ensure dangerous goods/hazardous materials are transported safely.

Our Dangerous Goods department conducts internal compliance audits and training as well as outreach programs for agencies, shippers and local municipal responders in an effort to promote compliance, competence and due diligence.

Responsible Care®

CN is a partner, both in Canada and the United States, in Responsible Care®, an ongoing performance improvement initiative established by the Canadian Chemical Producers' Association (CCPA), and the American Chemistry Council (ACC). Partners commit themselves to continuous improvement in the areas of employee and public health and safety, and to environmental quality. In addition, they recognize the importance of communicating openly about the potential risks and hazards associated with their activities and the products they handle and transport.

In praise of safe handling

Every year, we present Safe Handling Awards to customers who demonstrate an excellent safety record in loading and shipping dangerous goods. Every CN customer who meets the threshold of loading tank cars of dangerous goods/hazardous materials in a calendar year is automatically entered in the Safe Handling Awards Program.

In 2006, we presented awards to 93 companies. The Safe Handling Awards program is part of a series of initiatives aimed at making CN the safest railway in North America.

Safety in the Community

CN is committed to help prevent incidents and injuries as part of our responsibility to the communities in which we do business. CN Police officers actively enforce rail safety laws through focused patrols of CN property, engaging local law enforcement in the safety effort.

All Aboard for Safety Program

This is our community-education program whose objective is to help prevent fatalities and injuries on or near railroad property. Key activities of the program include:

- Operation Lifesaver presentations: Every year, CN Police speak to more than 225,000 students and adults at schools and community events in Canada and the United States about the importance of safety and the dangers of walking and playing on or near railroad tracks.

- Safety blitzes: CN conducts regular safety blitzes at busy highway-railroad crossings with local police services to alert motorists to the importance of safety at crossings.

- Community outreach: CN police officers, risk managers and other CN employees participate in an extensive range of public events, including community events, trade shows, fairs and police department open houses.

- Safe Crossing Program: Created in 2005 by CN and Safe Kids Canada to encourage educators, parents and caregivers to teach children about safety at highway-railroad crossings.

Safe Crossing Week 2006 was held across Canada from October 23 to 29 to an enthusiastic response:

- Participation reached 50,000 children and the program secured the active involvement of mayors, schools and teachers across Canada.
- 9,000 elementary school children heard safety crossing messages during the week from CN Police.
- A total of 18 mayors proclaimed a Safe Crossing Week in communities across Canada.

Kid-friendly website teaches rail safety

In 2006, CN launched a website to help children learn about rail safety in a fun and entertaining way. The website features CN's *All Aboard for Safety train, Obie*, and his friend, *Max*, the engineer, who dispense safety tips.

The online *Obie* is based on an actual scale model of a CN locomotive, called *Little Obie*, that has been promoting rail safety with CN Police at schools and community events and giving rides to thousands of children across Canada and the United States for more than 10 years.

Safety in the Community

Mock collisions drive home the message

CN works with emergency services organizations to conduct dramatic, high-impact simulations of train-vehicle collisions for high school students. The re-enactments demonstrate the potentially dire consequences of being careless and/or drinking and driving, especially at crossings.

Crossing

We have dedicated ourselves to improving crossing safety across the CN system to help save lives and prevent fatalities and injuries.

Crossing incidents declined significantly in 2006 due in large measure to our use of a number of highly effective prevention strategies such as our joint work with local police services to enforce rail crossing safety. *All Aboard for Safety* has also played a key role in improving crossing safety.

Trespassing

As part of our involvement in Operation Lifesaver, CN has developed a Community Trespass Prevention Program which helps communities better understand how they can help the railroad address trespassing problems in their area.

In 2006, we continued to analyze cases of trespassing on CN property to identify high incidence areas. We stepped up enforcement in conjunction with local police groups, increased warning and reward ads in local media where problems have been identified and increased the awareness of CN employees to trespass prevention.

Workplace Health and Safety

Our foremost objective is the prevention of injury and illness at work. CN promotes and protects the health and well-being of its employees and strives to effectively manage illness and injury to reduce costs.

In 2006, approximately 14,500 employees received training at CN and the vast majority had safe work procedures and processes integrated into the training.

Safety and health committees

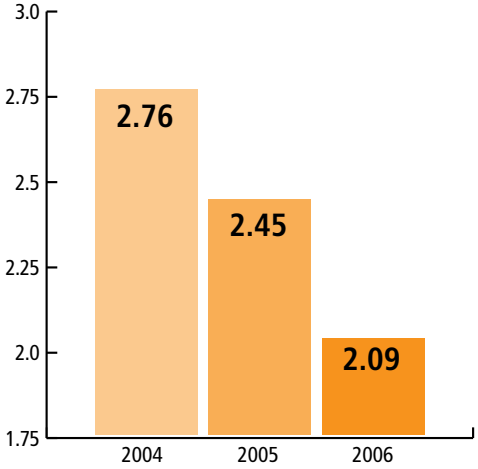
CN currently has more than 100 joint union-management committees across the U.S. and Canada. The committees help us to identify the top three causes of injuries and accidents in specific areas and are very proactive in implementing solutions locally.

Substance Abuse

A fundamental part of our commitment to health and safety is the zero tolerance we hold for impairment in the workplace, which is one of our key strategies to ensure we are the safest railroad in North America. Our policy covers all CN employees system-wide, as well as contractors and tenants, and sets a higher standard for those employees who work in safety sensitive positions.

Federal Railroad Administration (FRA) personal injury frequency

(injuries per 200,000 person hours)



The 14 per cent improvement in CN's injury ratio in 2006 over 2005 was made possible by an on-going focus on safety rules and safe work procedures, increased field audits and testing, and the work of local health and safety committees to address top causes of personal injuries.

Employee Work-Related Fatalities

Despite many positive trends in our safety performance, in 2006 there were three employee work-related fatalities. Two employees were killed in a derailment in Lillooet, British Columbia, and one engineering employee was struck by a broom truck in northern Québec. Each fatality was a painful reminder of how unforgiving our environment can be, and of how we should never lose the focus on safety.

Security

CN customers receive the highest security from our advanced monitoring and detection systems 24/7, 365 days a year. We also work closely with government security agencies to safeguard our network against breaches of security or sabotage.

Security Management Plan

CN's comprehensive Security Management Plan addresses the most critical issues for network security, including protection of critical assets, intelligence coordination and communications, vulnerability assessments, security alert levels and countermeasures.

CN Police

Our officers work with Canadian and American intelligence agencies, such as the RCMP or FBI, on shared security issues. They also have similar powers of arrest and enforcement as those granted to other federal, provincial and state police departments.

Customer Oriented Policing (COP) is an important component of the work of the CN Police service. Officers are assigned a specific territory or strategic location and work directly with CN employees, other police forces and the community to fulfil their mandate.

Investments in Security

Surveillance at all our major train yards and centres has increased over the years with the addition of technology-based security measures. We conduct targeted security audits on an on-going basis which allow us to focus our investments in security resources and infrastructure protection.

We introduced biometrics technology several years ago to add an additional level of security at two of our major intermodal terminals. Access to and exit from the terminals is granted to truck drivers only by fingerprint verification.

Security

Border Security

- Vehicle and Cargo Inspection Systems (VACIS), have been strategically placed at the majority of CN rail border crossings and at all Canadian ocean points of entry to screen cargo entering the U.S. VACIS is a gamma ray imaging system that helps inspectors carry out non-intrusive inspections of the contents of rail cars and containers – while trains are in motion – expediting transborder operations.

- CN also invests in electronic data interchange (EDI) technology to share import and export data and security information with customs agencies.

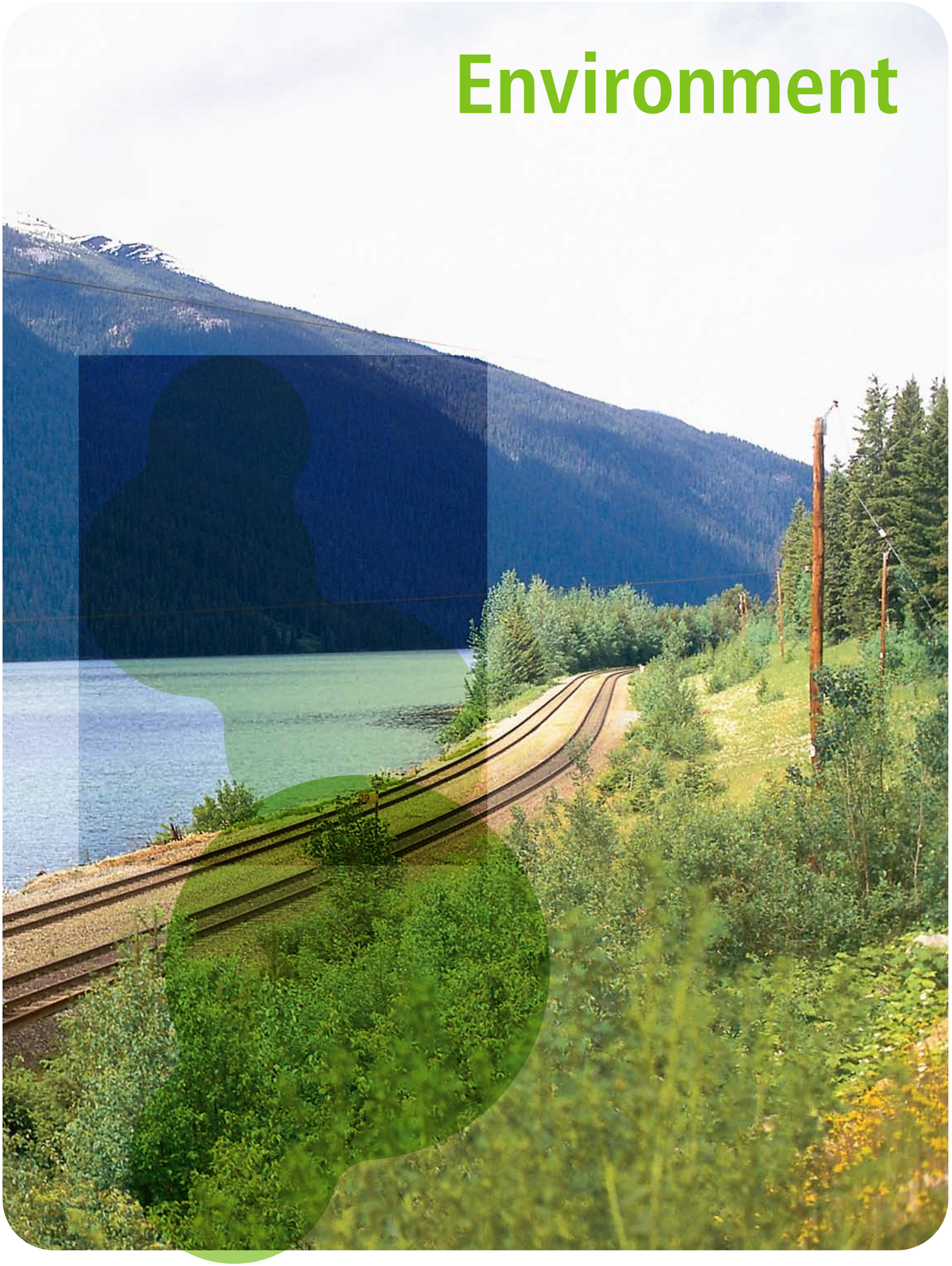
Security Partnerships

CN was the first railroad in North America to partner with both U.S. Customs and the Canada Border Services Agency to strengthen overall supply chain and border security.

In 2002, CN entered into the U.S. Customs-Trade Partnership Against Terrorism (C-TPAT) to enhance procedures in conveyance and physical plant security, access controls, manifest accuracy, personnel security, education and training awareness.

In 2003, CN became an accredited participant in Partners in Protection (PIP) which works to enhance Canadian border security, combat organized crime and terrorism, increase awareness of customs compliance issues, and help detect and prevent contraband smuggling.

Environment

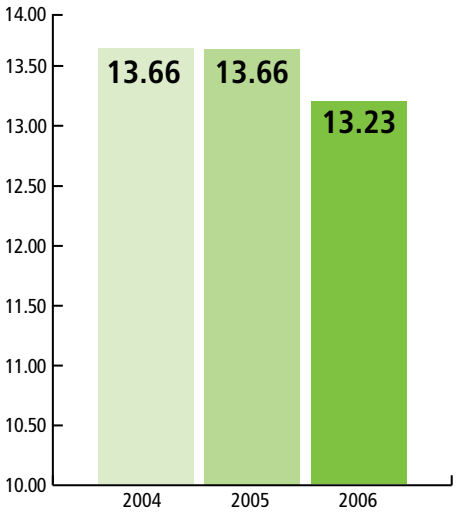


Air Emissions - The Numbers

Greenhouse gases (GHGs) from rail consist of carbon dioxide, methane and nitrous oxides. In Canada, the transportation sector as a whole contributes approximately one quarter of all GHG emissions with the rail sector accounting for four per cent of that amount.[1]

The following table summarizes GHG emissions from CN's locomotives for the last few years in tonnes of CO_2 equivalent. The emissions factors used are from the Locomotive Emissions Monitoring Program reports published by Environment Canada.

GHG Intensity at CN
CO_2e (kg/1000 GTM)



When our emissions are compared to our traffic volumes, we have actually been able to reduce emissions per Gross Ton Mile (GTM).

Monitoring and Standards

On May 15, 2007, CN, in conjunction with the Railway Association of Canada, signed a new agreement with Environment Canada and Transport Canada in which the railway industry will further reduce air pollution and greenhouse gas (GHG) emissions.

Under the Memorandum of Understanding (MOU) the rail industry voluntarily commits to reducing air pollutants and improving railway fuel efficiency, which reduces greenhouse gas emissions. The government will begin to regulate emissions in 2011.
For more on the agreement: http://www.tc.gc.ca/mediaroom/releases/nat/2007/07-gc018e.htm

In the U.S., CN's locomotive emissions are regulated by the U.S. Environmental Protection Agency (EPA). In 1998, the EPA published locomotive emission standards for newly manufactured and remanufactured locomotive engines. The regulations set maximum limits on hydrocarbons (HC), carbon monoxide (CO), nitrogen oxides (NOx), and particulate matter (PM). CN purchases only tier-compliant locomotives and is committed to complying with U.S. government regulations.

Source: Environment Canada 2004 Locomotive Emissions Monitoring Program

Air Emissions - Framework for Reduction

CN's commitment to the reduction of greenhouse gases can be seen in the way CN operates the railroad, a constant pursuit of efficiency and the reduction of waste.

Precision Railroading

CN operates a Precision Railroad, the underlying goal of which is to ensure the most reliable and efficient movement of freight.

In 2006, measured against strict compliance targets, CN's trip plan was close to 90%. That kind of reliability translates into less inventory requirements for customers, fewer railcars to ship the same amount of freight, fewer locomotives, and, ultimately, less locomotive emissions.

The Power of Intermodal

Freight railroads are more fuel efficient than trucks. Railroads therefore emit less carbon dioxide for the same transportation service. CN's intermodal service, which uses 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 for those customers who do not have direct access to rail.

CN has a large network of intermodal terminals throughout Canada and the United States. Our innovative IMX model has enabled CN to become one of the most efficient intermodal railroads in North America.

The efficiency of 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. Fuel efficiency is realized by the reduced transit times of single direction traffic, as well as by trains using routes with the smallest elevation change to carry heavy loads.

Showing innovation with Routing Protocols

In 2004 and 2005, CN announced a series of agreements with its U.S. interline partners. These agreements, known as routing protocols, established 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 now has routing protocols in place with Burlington Northern, Union Pacific, Norfolk Southern and CSX.

Air Emissions - Framework for Reduction

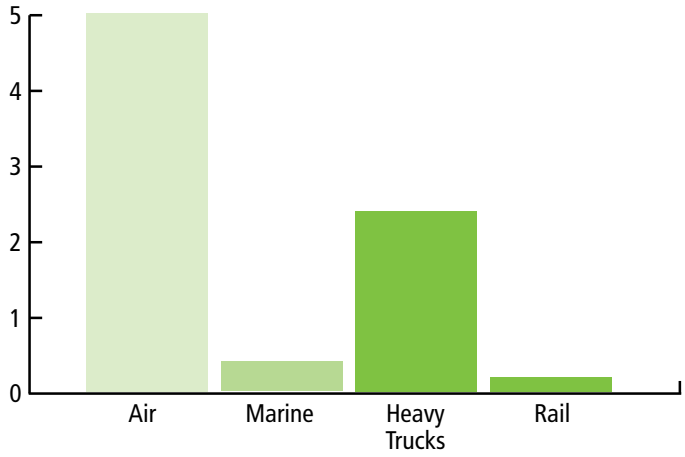
How transportation modes compare

Rail is the most energy-efficient method of moving freight. Data from a 2006 study conducted by Natural Resources Canada confirms that railroads are much more energy-efficient than trucks because rail consumes far less energy–that is, fuel- to transport one tonne of freight one kilometre.

As the following illustration shows, it takes 11.5 times more energy to transport a tonne of freight one kilometre by heavy truck than by train.

Energy Intensity of Freight Modes 2004

(Megajoules/Tonne-kilometre)

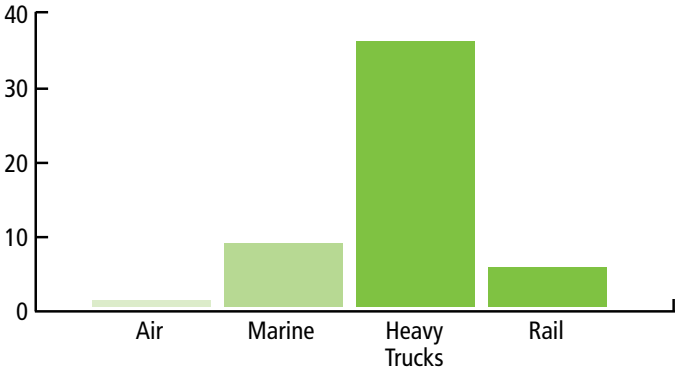


Source: Natural Resources Canada, Office of Energy Efficiency, Energy Use Data Handbook, August 2006

Data from the 2006 Natural Resources Canada study also shows that rail emits six times less greenhouse gases than heavy trucks because rail uses less energy to move more goods.

GHG by transportation mode

(Mt of CO_2e)



Air Emissions - Key Initiatives

We continually strive to improve the fuel efficiency of our locomotive fleet and adopt initiatives that promote emissions reduction.

LOCOMOTIVES

Fleet Renewal

To continuously improve fuel efficiency and service reliability, we implemented an aggressive locomotive-renewal program several years ago.

From 2000 to 2006, CN has purchased over 200 new, more fuel efficient locomotives to modernize our fleet. CN purchased 10 new locomotives in 2005 and 50 in 2006 that are compliant with the US EPA emissions limits, resulting in approximately 40 per cent less nitrogen oxides than unregulated locomotives. Locomotives delivered from 2005 onward meet the EPA Tier 2 standards. In 2007, CN will purchase 65 EPA Tier 2 compliant locomotives, in addition to the 65 already on order for delivery this year.

All new locomotives purchased, typically over 4,400 horsepower, consume up to 15 per cent less fuel than the units they replace. The more powerful units also mean that fewer locomotives are required to pull the same train length, translating into economies in fuel consumption and lower exhaust emissions.

In 2002, CN began a new program to refurbish over 300 of its core fleet diesel locomotives. The program covers almost 30 per cent of CN's main line fleet of about 1,100 locomotives. Refurbishing these locomotives increases locomotive efficiency and reliability as well as ensures the locomotives meet US EPA Tier O regulations for nitrogen oxide (NOx) emission reductions.

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 only when required to maintain critical locomotive systems.

Low Idle

The low idle feature allows the diesel engine to idle at a reduced speed when locomotives are awaiting assignment or coasting down hill. Reduced fuel consumption – as much as 10L/hour- is the result.

One employee's efforts save fuel, and money

When CN locomotive engineer Bruce Rogers decided to think locally about what he could do to conserve fuel, a simple, at-work solution came to mind. Throughout 2006, on his own initiative, Bruce shut down locomotive power on his runs out of Fond du Lac, Wisconsin, when it wasn't needed - saving 58,500 gallons of fuel or the equivalent of 680 tonnes of CO2E. Assuming an average cost of $2.00 US per gallon of fuel, Bruce's initiative also saved CN $117,000. For his outstanding efforts Bruce earned one of the top awards in the company in 2006, the CN President's Award for Excellence.

Air Emissions - Key Initiatives

Train braking strategies

Dynamic brakes use less fuel to control train speed. Where operations permit, the use of pacing, or coasting to a stop rather than using heavy braking requiring engine power, also yields fuel and emissions reductions.

Crew training and awareness

We have ongoing training programs, such as Advanced Locomotive Engineer Refresher Training (ALERT), that focus on the importance of fuel conservation practices, including locomotive shutdowns in yards. We review variances between drivers in the manner of operating and handling a train which can have a significant impact on fuel consumption and emissions generated.

Reducing air emissions the SmartWay

In 2005, CN became a signatory to the U.S. SmartWay agreement, a voluntary program between the Environmental Protection Agency (EPA) and the rail industry to increase energy efficiency and reduce air pollution and greenhouse gases. The goal of the program is to eliminate between 33-60 million metric tons of carbon dioxide emissions and up to 200,000 tons of nitrogen oxide emissions per year in the U.S. by 2012. This represents savings of as much as 150 million barrels of oil per year – equivalent to taking about 12 million cars off the road.

TRACK

Rail Lubrication

Trackside flange lubricators, locomotive-mounted wheel flange lubricators and way-side top of rail lubricators apply a lubricant to the top of the rail to reduce the surface friction between the rail and the freight cars. The reduction in rolling resistance means less effort is required to maintain a specific speed, resulting in lower fuel consumption and lower GHG emissions. Approximately 62 per cent of CN's fleet is equipped with locomotive-mounted wheel flange lubricators.

Freight Car Productivity Improvement

Since 2004, the Association of American Railroads (AAR) has required all new freight cars to be equipped with trucks that self-steer around curves. The feature reduces lateral curve forces on the rails, resulting in lower fuel consumption and less wear on the rail. Over 100,000 new cars with the self-steering M-976 trucks have been built in North America since 2004, any of which are allowed to run on almost all CN lines. CN has purchased over 4,400 trucks during the same period for its own fleet.

Emergency Preparedness

CN takes great measures to prevent environmental incidents from occurring in the operation of our railroad. However, when incidents do occur, we have a comprehensive Emergency Response Plan (ERP) and procedures in place to deal diligently with the situation.

CN follows an Environmental Incident Reporting and Communication Procedure which is integrated into an incident command system. The Procedure aims to ensure every incident with an environmental impact is immediately reported to government authorities and that the impact is contained to a minimum. The safety of the public and of workers is a top priority.

The Procedure includes information to assist CN employees in responding to a broad range of environmental emergencies and outlines the responsibilities for spill response, clean-up and reporting.

Incidents are handled by CN's internal environmental specialists who have access to a network of material and specialized equipment suppliers and contractors at their disposal to assist with a response. CN works closely with government environmental officials during and after an incident to ensure sites are restored to government standards.

Storm and Wastewater

CN complies with all environmental agency regulations governing the discharge of company storm and wastewater.

CN has nine wastewater treatment plants and numerous oil/water separators and stormceptors located in its yards and has made some major investments over the years to ensure treatment processes are well controlled and operated. We comply with all operations, maintenance and discharge regulations.

CN is currently in the process of upgrading our treatment plants with Supervisory Control and Data Acquisition (SCADA) systems which enable us to verify at all times that the wastewater treatment plant is operating correctly and that we are in compliance with discharge regulations.

Reduction Initiatives

In addition to the responsible management of discharges from our wastewater we also look actively for ways to reduce the amount of water that enters our treatment facilities. An upgrade at CN's Johnston Yard in Memphis, Tennessee, for example, decreased the facility's water costs by 40 per cent, reduced its overall water consumption and reduced the amount of water going to treatment systems.

Biodiversity

CN's network passes through a wide range of habitats, including national parks, forests, prairies and wetlands. To coexist with wildlife and aquatic life, CN strives to meet or exceed all environmental regulations and self-regulates to minimize potential impacts from our operations.

Monitoring and assessments

CN has an extensive and varied environmental monitoring program to gauge the effects of our construction and maintenance projects on fish, wildlife and vegetation.

Prior to initiating construction projects, CN completes environmental and wildlife assessments. Once projects have received all required permits and approvals from environmental regulatory agencies, we monitor the projects during construction and after completion.

Protecting aquatic life

CN has long been sensitive to the need to balance essential track work with aquatic protection. Our objective is to prevent impacts to the ecosystems in areas where we operate and to correct environmental impacts which may have occurred historically. This objective is achieved through a number of initiatives, including:

- Fish Culvert Passage Program
  CN initiated a fish passage restoration program in 1998 to address fish migration problems as a result of the CN rail line. CN has been proactively assessing thousands of culverts to determine if they pose passage problems and correcting them as required.

- Thompson Canyon Trials
  The Thompson and Fraser Rivers cut through steep canyons in south-central British Columbia. Since 1998, CN has been attempting to revegetate sections of the canyon where riverbanks have been affected by cast-off rock and debris.

- Field personnel receive "Environmental Protection for Engineering" training that provides guidelines for working around sensitive natural environments, provincial and national parks, waterways, fish and wildlife habitats, etc. In 2006, over 100 employees received training on Environmental Protection for Engineering projects.

- Compliance audits, site monitoring, and post-construction monitoring are in-house tools that help ensure the long-term productivity of aquatic systems. Many engineering projects that CN completes require results to be reported to government agencies.

Since 1998, CN has used Geographic Information Systems (GIS) mapping to obtain information that is crucial for environment impact assessments and/or emergency response procedures. Access to relevant data about nearby communities and sensitive habitats improves the speed and quality of emergency response. CN is working towards completing a GIS map of the entire network of culverts, bridges and sensitive habitats.

Waste Management and Recycling

As part of our environmental policy, CN conducts its activities in consideration of minimizing the wastes generated by its rail operations as well as the responsible disposal of the wastes.

Waste

We retain the services of a national waste contractor to handle and safely dispose of all wastes that cannot be recycled. The contractor ensures its subsidiaries are licensed in accordance with applicable provincial or state regulations in order to support CN's North American operations. The contractor helps us track the wastes we generate by submitting a monthly report to CN, and works with us to find waste reduction and recycling opportunities within our operations.

Recycling

Across the company, we have programs in place to recycle fluorescent tubes, batteries, used oil, used oil filters, scrap metals, as well as rail, cars and ties. At large CN facilities where enough waste is generated, we also have recycling programs in place for such materials as paper, wood pallets and cardboard.

CN collects and recycles lead-acid batteries from our cars, locomotives and other mobile equipment as well as dry-cell batteries, and batteries from our signals and communications activities (crossing gates, lights, etc.). In 2006, we recycled 95 per cent of all lead acid batteries collected and 7 per cent of all other batteries (not all batteries are recyclable in all provinces/states).

Oil is collected and recycled from a variety of sources including locomotive maintenance, fleet vehicle maintenance and spills. In 2006, CN recycled 99 per cent of the oil it collected and 23 per cent of used oil filters.

Ties

Old railroad ties are another large source of waste material. Historically, railroad ties were automatically sent to landfill but over the years, CN has actively looked for opportunities to reuse them where possible.

Old ties can be used as fuel in cogeneration plants, chipped and used as landfill cover, recycled or reused on our own system in low traffic areas. We make every effort to dispose of old ties by sending them to cogeneration plants but this is contingent upon the availability and proximity of such facilities to CN.

Tie Disposal in 2006

	Total	Uses		
		Cogeneration	Landfill	Reuse
Canada	389,928	56%	42%	2%
US	852,121	70%	12%	18%