

***ENBRIDGE***  
***2013***  
***CORPORATE***  
***SOCIAL***  
***RESPONSIBILITY***  
***REPORT***

***WITH A FOCUS ON GOVERNANCE,  
ENVIRONMENTAL, SOCIAL AND ECONOMIC  
PERFORMANCE DATA FROM 2012***



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Visit [www.enbridge.com](http://www.enbridge.com) to learn more.

# ***LETTER FROM AL MONACO, PRESIDENT & CEO***

Dear Reader:

Welcome to Enbridge's 10th annual Corporate Social Responsibility (CSR) Report, which provides an overview of our social, environmental and governance performance in 2012. It also provides updates on issues raised in prior years and covers developments to mid-2013 that are significant from a CSR perspective.

CSR is the integration of social and environmental considerations in business decision-making in ways that are transparent and accountable to stakeholders. Enbridge's corporate values are Safety, Integrity and Respect in support of our communities, the environment and each other. We believe our CSR policies, practices and commitments help us live those values and create additional value on many different levels. They help us engage and problem solve in meaningful ways with our employees, customers, land owners, local communities and other stakeholders. And, even more so now than was the case 10 years ago when we released our first CSR Report, they are critical to our ability to meet the changing expectations of our company and our industry regarding risk management and approval processes for energy infrastructure.

Driven by new technologies that are dramatically changing energy supply and demand equations, North America has entered a period of transformation in the way energy is produced, transported and used. As a business that is, in many ways, at the nexus of energy issues in North America, our company is deeply involved in this shift. We provide the transportation link between energy supply and demand for oil, gas and renewables. We connect the different energy markets that provide heat and light to homes, fuel for vehicles and planes, and many other essential products and services that support prosperity and quality of life for millions of people.

One of our biggest challenges is achieving unprecedented levels of performance in safety and environmental protection while at the same time realizing the social and economic benefits created by new energy opportunities. Local communities want more information and support on safety and emergency response issues, and more robust engagement on both projects and operations. There is considerable public policy debate on climate change and the expansion of oil and gas production and pipelines in North America. First Nations and other Aboriginal and Native American groups want better collaboration with business and government on sustainable development of natural resources and energy infrastructure.

We are responding to these and other new realities in ways that are fundamentally changing the way we do business. We are determined to be the industry leader in operational safety and reliability and we have established an Operational Risk Management (ORM) Plan to meet that objective across six key areas. The ORM sits alongside our strategic plan and, beginning in 2013, our progress will be independently verified.

We have undertaken one of the most extensive pipeline inspection and preventative maintenance programs in the history of our pipeline industry in North America. We are using some of the most advanced tools and technologies available to reduce the risk of accidents in all of our operations and facilities. To enhance transparency, we've issued a separate [public report in 2013](#) on our progress on our safety and operational reliability goals.

As documented in this CSR Report, we're adopting more proactive and rigorous approaches to consultation and engagement on all of our projects and operations. We're engaging with stakeholders and decision makers earlier and more often. Our outreach activities include presentations to municipal government, public open houses and information sessions along rights-of-way, meetings and collaboration with first responders at the local level, and meetings and collaboration with community and non-profit organizations. The development of energy infrastructure in both Canada and the U.S. also requires consulting with Aboriginal and Native American groups and building mutually beneficial relationships that respect Treaty and other Aboriginal rights. The input we receive from our enhanced consultation and engagement efforts is enabling us to make better decisions on safety measures, routes, environmental risk mitigation and community benefits.

This report also reviews our CSR results and opportunities. We've made our investments in renewable and alternative energy technologies a key element of our business strategy, and are currently the largest generator of solar—and the second largest generator of wind—energy in Canada. We're also investing in geothermal and run-of-river power generation, and technologies that will make it possible to store renewable energy.

We've met our initial targets for reducing our direct carbon emissions and we're making progress on reporting on our Scope 1 and 2 GHG emissions through our participation in the CDP Global 500 Carbon Disclosure ranking. We collaborate with our industry and other interested parties on climate change issues beyond our decision-making scope as an individual company. We support efforts by our Gas Distribution customers to use energy wisely through our demand-side management programs.

We also continue to honour our Neutral Footprint commitments to plant a tree for every tree we remove, to help conserve an acre of natural habitat for every acre we permanently alter when building new infrastructure, and to generate a kilowatt hour of renewable energy for every kilowatt hour of additional energy our operations consume.

In mid-2013, we appointed our first Chief Sustainability Officer (CSO). This new role in our company has a mandate to help us update our sustainability policies and priorities at an enterprise-wide level, and to ensure we're making social and environmental objectives part of all of our business systems and processes. Our CSO also has a mandate to improve our outreach on sustainability issues, including to groups that are critical of us, and to report back on how effective we are at addressing the issues that matter most to stakeholders and the future of our business.

Finally, with respect to our CSR reporting practices, this report was prepared using the Global Reporting Initiative's (GRI) G3.1 disclosure guidelines. To date there has been a one year gap between our annual report on our financial performance and our annual report on our CSR and sustainability (or, non-financial) performance. We're working to close that gap by spring 2014 and will also be taking steps to strengthen the way we determine materiality in our CSR reporting.

Thank you for your interest in our 2013 CSR Report. I'd like to acknowledge and thank all of the Enbridge employees whose everyday actions and dedication to their work makes our progress on our social, environmental and governance commitments possible. We'd value your ideas and input and would like to hear from you about this report. Please refer to the contact information at the back if you require further information or wish to provide us with your feedback.

Sincerely,

A handwritten signature in black ink, appearing to read "Al Monaco". The signature is fluid and cursive, with a long horizontal stroke at the end.

Al Monaco

# ABOUT ENBRIDGE

Over the past 60 plus years, Enbridge has become a leader in the safe and reliable delivery of energy in North America.

**We transport energy**, operating the world's longest, most sophisticated crude oil and liquids transportation system. We have a significant, and growing, position in natural gas gathering, transmission and midstream businesses, and an increasing involvement in power transmission.

**We generate energy**, expanding our interests in renewable energy and alternative energy technologies, including wind, solar and geothermal energy, a fuel cell/turbo-expander and waste heat recovery facilities.

**We distribute energy**, owning and operating Canada's largest natural gas distribution company, and provide distribution services in Ontario, Quebec, New Brunswick and New York State.

Enbridge manages and has a 67.3 per cent overall economic interest in Enbridge Income Fund, a 21.1 per cent combined direct and indirect ownership interest in Enbridge Energy Partners, L.P., and a 21 per cent indirect ownership interest in Midcoast Energy Partners, L.P.

Enbridge's corporate headquarters are in Calgary, Alberta, and, as of March 31, 2013, we had approximately 8,000 permanent employees and more than 2,300 temporary and contract workers in Canada and the U.S. In 2012 we were ranked as one of the Top 100 Employers to Work for in Canada, and one of Canada's Greenest Employers.

Enbridge Inc. common shares trade on the Toronto and New York stock exchanges under the symbol ENB. In 2012 and 2013 Enbridge was included on the Global 100 Most Sustainable Corporations in the World ranking, the Dow Jones Sustainability Index (North America and World indices) and the CDP Global 500 Carbon Disclosure ranking.

*For more information about Enbridge, please visit <http://www.enbridge.com/>.*

# ***ABOUT THE ENBRIDGE 2013 CORPORATE SOCIAL RESPONSIBILITY REPORT***

As we state in our [CSR Policy](#), Enbridge defines Corporate Social Responsibility (CSR) as: conducting business in a socially responsible and ethical manner; protecting the environment and the safety of people; supporting human rights; and engaging, learning from, respecting and supporting the communities and cultures with which we work. In this report we use the terms “CSR” and “corporate sustainability” interchangeably.

We prepared Enbridge’s 2013 Corporate Social Responsibility (CSR) Report, which is primarily focused on our CSR performance in 2012, using the Global Reporting Initiative (GRI) G3.1 sustainability reporting guidelines, which serve as a generally accepted framework for reporting on an organization’s economic, environmental and social performance. Abbreviations such as EC1, EN3 and SO1 (in this report’s Economic, Environment and Social Performance sections, respectively) refer to GRI Performance Indicators, which Enbridge addresses in this report. More information on the GRI’s G3.1 standard disclosures is available on the GRI website at <https://www.globalreporting.org/resourcelibrary/G3.1-Quick-Reference-Sheet.pdf>

## **Websites and Hyperlinks**

Enbridge’s 2013 CSR Report contains references to the websites of Enbridge Inc., certain of our affiliates, the Global Reporting Initiative (GRI), and other websites, and to certain documents posted on these websites. In addition, the online version of Enbridge’s 2013 CSR Report contains hyperlinks to these websites and documents. None of the information contained on, or connected to, these websites or documents is incorporated by reference in or otherwise part of Enbridge’s 2013 CSR Report. Enbridge does not assume any responsibility or liability for the content found on third-party websites.

# ***FORWARD-LOOKING INFORMATION***

Forward-looking information, or forward-looking statements, have been included in Enbridge's 2013 Corporate Responsibility Report to provide the company's shareholders, potential investors and other stakeholders with information about the company and its subsidiaries and affiliates, including management's assessment of Enbridge's and its subsidiaries' future plans and operations. This information may not be appropriate for other purposes. Forward-looking statements are typically identified by words such as "anticipate," "expect," "project," "estimate," "forecast," "plan," "intend," "target," "believe" and similar words suggesting future outcomes or statements regarding an outlook. Forward-looking information or statements included in this document include, but are not limited to, statements with respect to: expected earnings or adjusted earnings; expected earnings or adjusted earnings per share; expected future cash flows; expected costs related to projects under construction; expected in-service dates for projects under construction; expected capital expenditures; estimated future dividends; expected costs related to leak remediation and potential insurance recoveries; the expected impact and cost of complying with current and proposed new environmental regulations, including GHG emissions regulations; business opportunities expected to arise due to the climate change issue; and future power consumption by the company and its subsidiaries.

Although Enbridge believes that these forward-looking statements are reasonable based on the information available on the date such statements are made and processes used to prepare the information, such statements are not guarantees of future performance and readers are cautioned against placing undue reliance on forward-looking statements. By their nature, these statements involve a variety of assumptions, known and unknown risks and uncertainties and other factors, which may cause actual results, levels of activity and achievements to differ materially from those expressed or implied by such statements. Material assumptions include assumptions about: the expected supply and demand for crude oil, natural gas and natural gas liquids; prices of crude oil, natural gas and natural gas liquids; expected exchange rates; inflation; interest rates; the availability and price of labour and pipeline construction materials; operational reliability; customer project approvals; maintenance of support and regulatory approvals for the company's projects; anticipated in-service dates; the implementation of proposed environmental regulations, including GHG emissions regulations; future demand for renewable energy and alternative energy technologies; and weather. Assumptions regarding the expected supply and demand of crude oil, natural gas and natural gas liquids, and the prices of these commodities, are material to and underlie all forward-looking statements. These factors are relevant to all forward-looking statements as they may impact current and future levels of demand for the company's services. Similarly, exchange rates, inflation and interest rates impact the economies and business environments in which the company operates, may impact levels of demand for the company's services and cost of inputs, and are therefore inherent in all forward-looking statements. Due to the interdependencies and correlation of these macroeconomic factors, the impact of any one assumption on a forward-looking statement cannot be determined with certainty, particularly with respect to expected earnings or adjusted earnings and associated per share amounts, or estimated future dividends.

The most relevant assumptions associated with forward-looking statements on projects under construction, including estimated in-service dates, and expected capital expenditures include: the availability and price of labour and pipeline construction materials; the effects of inflation and foreign exchange rates on labour and material costs; the effects of interest rates on borrowing costs; and the impact of weather and customer and regulatory approvals on construction schedules. Enbridge's forward-looking statements are subject to risks and uncertainties pertaining to operating performance; changes to regulatory parameters, including those related to GHG emissions; project approval and ongoing support; weather; economic and competitive conditions; exchange rates; interest rates; commodity prices; and supply and demand for commodities. These include, but are not limited to, those risks and uncertainties discussed in this 2013 Corporate Social Responsibility Report and in the company's filings with Canadian and U.S. securities regulators.

The impact of any one risk, uncertainty or factor on a particular forward-looking statement is not determinable with certainty as these are interdependent and Enbridge's future course of action depends on management's assessment of all information available at the relevant time. Except to the extent required by law, Enbridge assumes no obligation to publicly update or revise any forward-looking statements made in this 2013 Corporate Responsibility Report or

otherwise, whether as a result of new information, future events or otherwise. All subsequent forward-looking statements, whether written or oral, attributable to Enbridge or persons acting on the company's behalf are expressly qualified in their entirety by these cautionary statements.

# STRATEGY AND PROFILE

## ORGANIZATIONAL PROFILE

Enbridge Inc. is a leader in energy transportation and distribution in North America. Enbridge also has a significant and growing involvement in natural gas gathering, transmission and gas processing businesses, and an increasing involvement in electricity transmission and renewable energy.

As a *transporter* of energy, Enbridge operates the world's longest crude oil and liquids transportation system. In 2012, Enbridge delivered more than 1,800,000,000 (1.8 billion) barrels (bbls) of crude oil and liquids through our systems to customers in Canada and the U.S.

As a *distributor* of energy, Enbridge owns and operates Canada's largest natural gas distribution company and provides distribution services in Ontario, Quebec, New Brunswick and New York State.

As a *generator* of electricity, Enbridge has interests in close to 1,750 megawatts of renewable and alternative energy generating capacity and is expanding our interests in wind, solar and geothermal energy. As of March 31, 2013, Enbridge had approximately 8,000 permanent employees and more than 2,300 temporary and contract employees in Canada and the U.S.

## OPERATIONS AND ASSETS

Enbridge's activities are carried out through the following business units: Liquids Pipelines; Major Projects; Gas Distribution; Gas Pipelines, Processing and Energy Services; Sponsored Investments; and Corporate.

*Liquids Pipelines (LP)*—consists of common carrier and contract crude oil, natural gas liquids (NGLs) and refined products pipelines and terminals in Canada and the U.S., including the Enbridge System, the Enbridge Regional Oil Sands System, Southern Lights Pipeline, Spearhead Pipeline, Seaway Crude Pipeline interest and other feeder pipelines.

*Major Projects (MP)*—is a centralized corporate function that provides service to all of Enbridge's business units. MP focuses on delivering Enbridge's capital program safely, on time and on budget, and operates based on a project-centric model that is supported by enhanced project management processes and systems.

*Gas Distribution (GD)*—consists of natural gas utility operations, the core of which is Enbridge Gas Distribution Inc. (EGD), which serves more than 2 million residential, commercial and industrial customers, primarily in central and eastern Ontario. This business unit also includes natural gas distribution activities in Quebec, New Brunswick and northern New York State.

*Gas Pipelines, Processing and Energy Services (Gas Transportation or GT)*—consists of investments in natural gas pipelines and processing facilities, renewable energy projects, Canadian midstream businesses, Enbridge's energy services businesses and international activities.

Investments in natural gas pipelines include Enbridge's interests in the U.S. portion of Alliance Pipeline (Alliance Pipeline U.S.), Vector Pipeline, and transmission and gathering pipelines in the Gulf of Mexico. Investments in natural gas processing include Enbridge's interest in Aux Sable, a natural gas fractionation and extraction business, and an interest in the development of Cabin Gas Plant in northeastern British Columbia, and processing facilities connected to the Gulf of Mexico system. The energy services businesses manage Enbridge's volume commitments on Alliance and Vector Pipelines, as well as perform natural gas, NGL and crude oil storage, transport and supply management services, as principal and agent.

*Sponsored Investments*—includes Enbridge's 21.1 per cent combined direct and indirect ownership interest in Enbridge Energy Partners, L.P. (EEP); Enbridge's 21 per cent indirect ownership interest in Midcoast Energy Partners, L.P.; Enbridge's 66.7 per cent investment in the U.S. segment of the Alberta Clipper Project through EEP and Enbridge Energy, Limited Partnership (EELP); and an overall 67.3 per cent economic interest in Enbridge

Income Fund (EIF), held both directly and indirectly through Enbridge Income Fund Holdings Inc. (EIFH). Enbridge manages the day-to-day operations of, and develops and assesses opportunities for each of these investments, including both organic growth and acquisition opportunities.

EEP transports crude oil and other liquid hydrocarbons through common carrier and feeder pipelines and transports, gathers, processes and markets natural gas and NGLs. The primary operations of EIF include interests in renewable power generation projects, a crude oil and liquids pipeline and gathering system, crude oil contract terminals and storage caverns, and a 50 per cent interest in the Canadian portion of Alliance Pipeline (Alliance Pipeline Canada).

*Corporate*—consists of the Enbridge's investment in Noverco Inc. (Noverco) and 100 per cent ownership of the Montana-Alberta Tie Line electrical transmission project, new business development activities, corporate investments, and financing costs not allocated to the business units.

## **REPORT PROFILE**

Enbridge's 2013 Corporate Social Responsibility (CSR) Report predominantly focuses on data collected and events that took place in 2012, although some significant events that took place in the first half of 2013 are also covered. Enbridge prepares a CSR Report each year. We published our previous CSR Report, which focused primarily on 2011 data, in October 2012.

Enbridge's 2013 CSR Report covers only information on the assets that Enbridge operates. The word "Enbridge" refers to the entire company, our subsidiaries and affiliates. Where possible, the data and statistics refer collectively to all of the facilities that Enbridge operates. However, when we report information pertaining to a specific company, business unit or project—for example, Liquids Pipelines or Enbridge Gas Distribution—we note it in the text.

Dollar figures refer to Canadian dollars unless otherwise indicated.

Enbridge's 2013 CSR Report was prepared using the Global Reporting Initiative (GRI) G3.1 sustainability reporting guidelines. These guidelines are intended to serve as a generally accepted framework for reporting on an organization's economic, environmental and social performance. They were designed for use by organizations of any size, sector or location and take into account the practical considerations faced by organizations ranging from small enterprises to those with extensive and geographically dispersed operations. The GRI guidelines contain general and sector-specific content that has been agreed on by a wide range of stakeholders around the world to be generally applicable for reporting an organization's sustainability performance.

To ensure that we have provided a balanced and reasonable presentation of our CSR performance, when determining the content for this report, we followed the GRI's "Reporting Guidance for Defining Content," which can be summed up in the following steps:

- Identify the relevant topics
- Determine the materiality of each topic by taking into account the external and internal factors suggested by the GRI
- Prioritize the topics based on these factors and on an analysis of stakeholders

In addition to its "Reporting Guidance for Defining Content," the G3.1 Sustainability Reporting Guidelines include "Reporting Principles for Defining Content." These principles are: materiality, stakeholder inclusiveness, sustainability context and completeness.

## **MATERIALITY**

Enbridge's 2013 CSR Report primarily focuses on material issues, i.e. those CSR-related subjects that we have determined are of highest interest to our stakeholders, Aboriginal and Native American groups and have the highest impact on the company.

For example, in this report readers will find a considerable amount of information about our focus on being an industry leader in safety, operational reliability and environmental protection because this is a strategic priority for the company, and of very high interest to a broad cross-section of our stakeholders, Aboriginal and Native American groups.

On our [CSR website](#), the main navigation of the site is organized to feature the five subject areas that we have determined are of greatest material importance for the company and our stakeholders: [Systems Integrity](#); [The](#)

Environment; In the Community; Economic Benefits; and Health & Safety.

In this full 2013 CSR Report, which is structured according to the GRI guidelines described in the Report Profile section above, we address the material issues within the three main chapters—Environmental Performance, Social Performance, and Economic Performance. In these chapters, we provide the greatest level of detail and analysis in subject areas that we have determined are of **high stakeholder interest** and have **high business impact**.

*For information on how we determined materiality, please see the Determining Materiality section below.*

Listed below by chapter and/or report section are the subject areas that we have deemed to be most material to Enbridge, our stakeholders and Aboriginal and Native American groups:

Material Subject Areas	
Environmental Performance	
Material subject	Details available in report section
Energy Use	EN3-EN4
Investing in Renewables	EN6
GHG Emissions	EN18
Spills and Releases / Prevention and Response	EN23-EN27
Pipeline Integrity	EN23-EN27
Process Safety	EN23-EN27  See also: Social Performance chapter, Part 1 → Labour Practices and Decent Work → Goals, Approach and Performance → Health and Safety Management
Innovation	Overall Management Approach to Corporate Social Responsibility → Innovation
Emergency Response	EN23-EN27  See also: Social Performance chapter, Part 1 → Labour Practices and Decent Work → Goals, Approach and Performance → Health and Safety Management  See also: Social Performance chapter, Part 3 → SO1 → Community and Landowner Relations
Public Awareness and Communication	SO1 → Community and Landowner Relations
Compliance with Laws and Regulations	Overall Management Approach to Corporate Social Responsibility → Compliance and Ethics  EN28  See also: HR3; SO2, SO3, SO8; PR2, PR4, PR7, PR9

<b>Social Performance</b>	
<b>Material subject</b>	<b>Details available in report section</b>
Training and Development	Social Performance chapter, Part 1 → Labour Practices and Decent Work → Training and Awareness  LA10, LA11  HR3
Employee Compensation	Social Performance chapter, Part 1 → Labour Practices and Decent Work → Total Compensation  LA3, LA14  EC1
Employee Engagement	Social Performance chapter, Part 1 → Labour Practices and Decent Work → Talent Management; Employee Perspectives Survey
Succession Management	Social Performance chapter, Part 1 → Labour Practices and Decent Work → Talent Management; Succession Management
Injury Rates	LA7, LA8
Stakeholder Engagement	Governance, Commitments and Engagement → Stakeholder Engagement
Landowner Relations	Social Performance chapter, Part 3 → SO1 → Community and Landowner Relations
Process Safety Management	Social Performance chapter, Part 1 → Labour Practices and Decent Work → Goals, Approach and Performance → Health and Safety Management  See also: Environmental Performance chapter → EN23-EN27
Contractor Safety Management	Social Performance chapter, Part 1 → Labour Practices and Decent Work → Goals, Approach and Performance → Health and Safety Management
Emergency Response	Social Performance chapter, Part 1 → Labour Practices and Decent Work → Goals, Approach and Performance → Health and Safety Management  Social Performance chapter, Part 3 → SO1 → Community and Landowner Relations  See also: Environmental Performance chapter → EN23-EN27
Aboriginal Rights	Social Performance chapter, Part 3 → SO1 → Aboriginal and Native American Relations

<b>Economic Performance</b>	
<b>Material subject</b>	<b>Details available in report section</b>
<b>Economic Benefits to Customers</b>	EC1
<b>Economic Benefits to Aboriginal Communities</b>	EC1 See also: Social Performance chapter, Part 3 →SO1 → Aboriginal and Native American Relations
<b>Economic Benefits to Communities</b>	EC1
<b>Economic Benefits to Shareholders/Investors</b>	EC1

## **DETERMINING MATERIALITY**

We use a variety of methods to determine what is of greatest material importance to Enbridge and our stakeholders, Aboriginal and Native American groups.

We apply the GRI's G3.1 "Materiality Principle," which states: "The information in a report should cover topics and indicators that reflect the organization's significant economic, environmental, and social impacts or that would substantively influence the assessments and decisions of stakeholders."

For the 2013 CSR report and previous reports, we also conducted materiality assessments with our groups of employee subject-matter experts.

*For information about these groups, please see the Employee Guidance and Input section below.*

In their materiality assessments, our groups of subject-matter experts took into account the following factors:

- The main concerns and future challenges facing the energy sector
- Relevant laws, regulations, international agreements and voluntary agreements of significance to Enbridge our stakeholders, and Aboriginal and Native American groups
- Recognized impacts, risks and opportunities that affect sustainability
- Enbridge's values, policies, strategies, management systems, goals and targets
- The interests and expectations of Enbridge's stakeholders, and Aboriginal and Native American groups
- Significant risks facing Enbridge
- The critical factors that enable Enbridge's success
- Enbridge's core competencies and the manner in which they could contribute to sustainable development.

The results of these materiality assessments influence the level of detail and analysis we provide for each topic area in this report, as well as the structure and content of Enbridge's CSR website ([csr.enbridge.com](http://csr.enbridge.com)).

Through these assessment exercises, we amalgamate the topic areas into three materiality matrices: one for Economic, one for Environmental and one for Social. Each matrix appears near the beginning of its relevant chapter—Environmental Performance; Social Performance; and Economic Performance.

Our subject-matter experts reconsider the matrices each year to ensure that we account for shifting levels of stakeholder interest and business impact.

## **EMPLOYEE GUIDANCE AND INPUT**

To ensure that a variety of views were incorporated into this report, Enbridge engaged the input of key employees (many of whom have direct access to various stakeholders and Aboriginal and Native American groups). These CSR subject-matter experts gather and share information, assess materiality and report on our performance.

The mandate of the subject-matter experts is to serve as the main providers of information for Enbridge's CSR reports and to ensure the accuracy of the information provided. The subject-matter experts are also responsible for

generating new ideas and discussing and resolving issues associated with the information gathering process.

Our subject-matter experts are grouped by category, as follows:

- Aboriginal Relations
- Community Investment
- Community & Landowner Relations
- Compliance
- Economic Benefits/Finance
- Environment & Climate Change
- Governance
- Health & Safety
- Human Resources
- Innovation
- Product Responsibility
- Supply Chain
- Systems Integrity

## **STAKEHOLDER INCLUSIVENESS**

To ensure that the information we included in our 2013 CSR Report met stakeholder inclusiveness guidelines, we applied the following tests suggested by the GRI:

- Enbridge can describe the stakeholders to whom we consider ourselves accountable. These stakeholders include:
  - Associations and civil society groups
  - Employees, contractors, unions, Board of Directors
  - CSR rating organizations
  - Customers
  - Environmental and other non-governmental organizations
  - Governments and government regulatory bodies in Canada and the U.S.
  - Landowners
  - Media
  - Right-of-way communities
  - Shareholders (retail and institutional investors)
  - Debt holders
- It is important to note that, in Canada, both a project proponent and the Crown (the federal and provincial governments) recognize Aboriginal groups as being separate and distinct from stakeholders, and have a legal duty to consult with them.
- The report content draws on the outcomes of the stakeholder engagement and Aboriginal and Native American consultation and engagement processes we use in our ongoing activities, the legal and institutional framework in which we operate, and our own corporate policies and priorities.

## **SUSTAINABILITY CONTEXT**

To determine the sustainability context of the information we included in our 2013 CSR Report, we applied the tests suggested by the Global Reporting Initiative (GRI):

- Enbridge presents our understanding of sustainable development and draws on objective and available

information as well as on measures of sustainable development for the topics covered in the report.

- We present our performance with reference to broader sustainable development conditions and goals, as reflected in recognized sectoral, local, regional and/or global publications.
- We present our performance in a manner that attempts to communicate the magnitude of its impact and contribution in appropriate geographical contexts.
- Our report describes how sustainability topics relate to long-term organizational strategy, risks and opportunities.

## ***COMPLETENESS OF INFORMATION***

To determine the completeness of the information we included in our 2013 CSR Report, we applied the tests suggested by the GRI:

- The report was developed taking into account the entire chain of entities upstream and downstream and covers and prioritizes all information that should reasonably be considered material on the basis of the principles of materiality, sustainability context and stakeholder inclusiveness.
- The report includes all entities that meet the criteria of being subject to control or significant influence of Enbridge unless otherwise declared.
- The information in the report includes all significant actions or events in the reporting period and reasonable estimates of significant future impacts of past events when those impacts are reasonably foreseeable and may become unavoidable or irreversible.
- The report does not omit relevant information that would influence or inform stakeholder assessments or decisions, or that would reflect significant economic, environmental and social impacts.
- Enbridge's CSR Report covers the activities of each of our business units, but focuses on the assets that we operate.

## ***GRI CONTENT INDEX***

In preparing our 2013 CSR Report, we have addressed all of the GRI G3.1 Performance Indicators. We have also responded to each core G3.1 Indicator with due regard to the G3.1 "Materiality Principle."

### **Data Quality Statement**

The information contained in the Enbridge 2013 Corporate Social Responsibility Report was supplied by subject-matter experts from each of Enbridge's business units. Where relevant, key information was sourced from Enbridge's [2012 Annual Review](#) and [2012 Financial Report](#) to shareholders.

# ***GOVERNANCE, COMMITMENTS AND ENGAGEMENT***

## ***GOVERNANCE***

Sound governance means sound business. At Enbridge, we believe good governance is essential for our shareholders, our employees and our company.

We have a comprehensive system of stewardship and accountability that follows best practices and meets the requirements of all rules, regulations and policies that apply.

Enbridge is listed on the Toronto Stock Exchange (TSX) and the New York Stock Exchange (NYSE) and we are subject to a range of governance regulations, rules and standards. We believe we are in full compliance with all Canadian and U.S. corporate governance regulations, rules and standards that apply to us.

## ***BOARD OF DIRECTORS***

Enbridge Inc.'s Board of Directors (the Board) functions independently of management and is accountable to its shareholders. The Board comprises 12 Directors, 11 of whom are considered to be independent and one of whom, Al Monaco, serves as Enbridge's President and CEO.

The Board is ultimately responsible for governance at Enbridge and for stewardship of the company. It has full power to oversee the management of Enbridge's business and affairs.

The Board carries out many of its responsibilities through its standing Board committees:

- Audit, Finance & Risk
- Corporate Social Responsibility
- Governance
- Safety & Reliability
- Human Resources & Compensation.

The Board:

- Reviews and approves the company's strategic plan and provides guidance and monitors our progress
- Monitors our risk management programs and helps us identify principal risks
- Makes sure we have appropriate internal control and management systems in place to manage money, compliance and risk and that these systems are functioning appropriately
- Approves major projects, plans and initiatives that could materially affect the company
- Approves all major corporate communications policies, including our corporate disclosure guidelines and all corporate disclosure documents
- Appoints the President and CEO and other members of senior management, monitors senior management's performance and reviews the succession strategy for all senior management positions every year

The Board delegates day-to-day management of Enbridge to the President and CEO and senior management, although major capital expenditures, debt and equity financing arrangements, and significant acquisitions and divestitures require Board approval.

The Board is responsible for overseeing the company's business affairs and management, particularly in key areas such as governance, strategic planning, risk management, succession planning and corporate disclosure. These duties are described in the company's terms of reference for the Board and the Board committees. These terms of reference are drafted by management under the guidance of the Governance Committee and approved by the Board, which reviews them once a year and updates them as needed.

## **BOARD COMMITTEES**

### ***Corporate Social Responsibility (CSR) Committee***

The CSR Committee is responsible for assessing the company's guidelines, policies, procedures and performance related to CSR, and reviewing our reporting in this area.

The Corporate Social Responsibility Committee is also responsible for:

#### *Assessing CSR guidelines, policies and procedures*

- Reviewing, approving or recommending to the Board the risk guidelines, policies, procedures and practices relating to CSR matters and approving them or recommending them to the Board for approval. CSR matters include: human rights, public awareness and consultation, issues management, environmental stewardship, external communications, government relations, stakeholder relations, Aboriginal and Native American relations and community investments
- Ensuring that the policies, procedures and practices related to CSR matters are relevant and consistently applied, and align with Enbridge's values of Integrity, Safety and Respect
- Reviewing and approving our methods of communicating CSR and related policies

#### *Monitoring and reporting CSR performance*

- Monitoring our performance on CSR matters and receiving regular compliance reports from management
- Reporting related to our CSR performance

### ***Audit, Finance & Risk Committee***

The Audit, Finance & Risk Committee assists the Board in overseeing:

- The integrity of our financial statements and financial reporting process
- The integrity of our management information systems, disclosure controls, financial controls and internal audit function
- Our external auditors, PricewaterhouseCoopers LLP (PwC), and ensuring they maintain their independence
- Our compliance with financial and accounting regulatory requirements and our risk management program

The Audit, Finance & Risk Committee is also responsible for ensuring that the committee, our external auditors, our internal auditors and management of Enbridge maintain open communications. Specifically, the Audit, Finance & Risk Committee is responsible for:

#### *Financial reporting*

- Reviewing Enbridge's quarterly and annual Management's Discussion and Analysis (MD&A), financial statements and notes, and recommending them to the Board for approval
- Reviewing and approving earnings releases and recommending them to the Board for approval
- Discussing with management and the external auditors any significant issues regarding Enbridge's financial statements and accounting policies
- Reviewing with management any anticipated changes in reporting standards and accounting policies

#### *Internal controls*

- Overseeing management's system of disclosure controls and procedures
- Overseeing the internal controls over financial reporting
- Overseeing the internal audit function

#### *External auditors*

- Reviewing the qualifications and independence of Enbridge's external auditors, PwC, and recommending their appointment to the Board
- Reviewing all audit and non-audit services to be provided by the external auditors, including proposed fees, and pre-approving them, consistent with the company's policy

- Setting the compensation of the external auditors, reviewing their performance, overseeing their activities and retaining them in their role as external auditors

The external auditors report directly to the Audit, Finance & Risk Committee. They meet regularly with the committee without any members of management present. The chair of the committee also meets with the senior partner of PwC from time to time to discuss significant issues, including:

*Finance*

- Reviewing the issuing of securities by Enbridge and authorizing or recommending such matters to the Board for approval
- Overseeing the filing of prospectuses or related documents with securities regulatory authorities
- Overseeing credit facilities and inter-company financing transactions and recommending them to the Board for approval

*Risk Management*

- Overseeing the annual review of Enbridge's principal risks
- Reviewing risks in conjunction with internal and external auditors
- Monitoring our risk management program
- Reviewing our annual report on insurance coverages

Together with the Board, the committee also reviews with senior management, internal counsel and others as necessary:

- Our method of reviewing risk and our strategies and practices related to assessing, managing, preventing and mitigating risk
- Loss prevention policies, risk management programs and disaster response and recovery programs

***Governance Committee***

The Governance Committee focuses on ensuring we have a comprehensive system of stewardship and accountability for directors, management and employees that is in the best interests of shareholders.

The Governance Committee is also responsible for developing our approach to governance, including the division of duties between the Chair of the Board, directors, the President and CEO and management. Specifically, the Governance Committee is responsible for:

- Recommending matters about overall governance to Enbridge's Board of Directors
- Reviewing the terms of reference for the Board and the Board committees
- Setting corporate governance guidelines for the Board
- Reviewing management's compliance reports on corporate governance policies
- Developing a Board composition plan and recommending the nomination of directors to the Board and Board committees
- Establishing formal orientation and education programs for directors
- Reviewing and reporting to the Board on risk management matters relating to corporate liability protection programs for directors and officers
- Assessing the performance of the Board, Board committees, the Chair of the Board and individual directors
- Monitoring the quality of the relationship among Board members and Board committees and with management and recommending any changes
- Ensuring the Board functions independently of management

The Governance Committee works closely with Enbridge's Corporate Secretary and other members of management to keep abreast of governance trends and to implement board governance best practices.

One of the Governance Committee's objectives is to nominate a balanced mix of members to Enbridge's Board of Directors who have the necessary experience and expertise to make a meaningful contribution in carrying out

duties on behalf of the Board. It sets guidelines for recruiting new talent with criteria for relevant expertise, senior management experience or other qualifications, recognizing our diversity goal of having more women and visible minorities on our Board. The Governance Committee also manages the annual performance review of the Board.

#### *Compensation*

The Governance Committee is responsible for reviewing and setting directors' compensation. Increases in directors' compensation were approved effective January 1, 2010 and July 1, 2013, and an increase in the Chair's compensation was approved effective January 1, 2012.

#### ***Safety & Reliability Committee***

The Safety & Reliability Committee is responsible for reviewing and making recommendations to Enbridge's Board of Directors with regard to matters such as the environment, health, safety, pipeline and facility integration management, security (physical, data and cyber), emergency response preparedness and other operational risks. More specifically the Safety & Reliability Committee is responsible for:

- Receiving reports on safety culture and related assessments
- Receiving reports on the risk management guidelines applicable to safety and reliability – and other – operational matters
- Reviewing management policies regarding the conduct of operations directed to prevent injury to the public, Enbridge's employees, and contractors and to minimize any adverse environmental impacts, including GHG emissions, and health or safety impacts

#### ***Human Resources & Compensation Committee***

The Human Resources & Compensation Committee assists the Board by reviewing, approving or making recommendations to the Board, or to the Boards of Directors of Enbridge's affiliates, with respect to:

- Human resources policies, practices and structures (to monitor consistency with the strategic plan, support operational effectiveness and efficiency, and maximize human resources potential)
- Compensation policies and guidelines
- Annual salary budgets
- Management incentive and perquisite plans and any other non-standard remuneration plans
- Selection, from time to time, of the comparator to be used for executive compensation purposes
- Senior management, executive and officer appointments and their compensation, including special pension arrangements
- Management succession plans, management development plans and termination policies/arrangements
- Enbridge's human resource structure

#### *Pension, retirement and savings plans*

The Human Resources & Compensation Committee is also responsible for reviewing, approving or making recommendations to the Board, or to the Boards of Directors of Enbridge's affiliates, with respect to the following pension, retirement and savings plans matters:

- Design, benefit provisions, investment options and text of applicable pension, retirement and savings plans
- Policies and guidelines with respect to funding of liabilities of each pension and retirement plan; investments of the assets of each pension plan; monitoring and evaluation of investment performance of the assets of each pension plan; and investment education and communications to members in respect of pension and retirement plans
- Funding and risk tolerance policies applicable to pension and retirement plans, and any material changes in surpluses or deficiencies

#### *Stock option plans or other long-incentive plan*

The Human Resources & Compensation Committee reviews and administers incentive stock option plans and any other long-term incentive plans and designates participants and the extent and terms of their participation, subject to Board approval.

### *Oversight of the President and CEO*

The Human Resources & Compensation Committee, in conjunction with the Chair of the Board:

- Leads the annual President and CEO review process
- Requests input from all of the members of the Board on the President and CEO's performance against objectives, and reports the results to the Board
- Reviews and approves corporate goals and objectives relevant to the compensation of the President and CEO, evaluates the President and CEO's performance in light of those goals and objectives and determines and recommends President and CEO's compensation to the independent members of the Board for their approval

## **EXECUTIVE COMPENSATION**

Enbridge has a pay-for-performance philosophy and compensation programs for senior management, including the executive team, that are aligned with corporate and shareholder interests.

To attract and retain top talent, we set total compensation targets around the median of the competitive market and a significant portion of total direct compensation is dependent on actual performance measured against short- and long-term performance goals, as approved by the Board.

Short-term incentive compensation for senior management is based on company, business unit and individual performance. Effective in 2011, company performance is measured by an annual earnings per share (EPS) target, as this metric best reflects Enbridge's overall corporate performance on an annual basis. EPS features prominently in the company's quarterly results discussions with external stakeholders and it is a metric that is broadly accepted by investment analysts and shareholders.

Business unit performance measures encompass a variety of metrics, including safety and system integrity. In addition, workplace health and safety, and environmental performance are among the key performance indicators that the Human Resources & Compensation Committee of the Board reviews each year.

Longer-term incentives include performance-based components that create a strong linkage to earnings growth and share price appreciation.

## **DIRECTOR COMPENSATION**

The Board is responsible for developing and implementing the directors' compensation plan and has delegated the day-to-day responsibility for director compensation to the Governance Committee.

Our directors' compensation plan is designed with four key objectives in mind:

- To attract and retain the most qualified individuals to serve as directors
- To compensate our directors to reflect the risks and responsibilities they assume when serving on our Board and Board committees
- To offer directors compensation that is competitive with other public companies that are comparable to Enbridge
- To align the interests of directors with those of our shareholders

While our executive compensation program is designed around pay for performance, director compensation is based on annual retainers. This is to meet the compensation objectives and to help ensure our directors are unbiased when making decisions and carrying out their duties while serving on our Board.

Our Directors' compensation plan has four components:

- An annual retainer
- An annual fee if he or she serves as the non-executive Chair of the Board or chair of a Board committee
- A travel fee for attending Board and Board committee meetings
- Reimbursement for reasonable travel and other out-of-pocket expenses relating to his or her duties as a director

We do not have meeting attendance fees.

Directors can receive their retainer in a combination of cash, Enbridge shares and Deferred Share Units (DSUs), but they must receive a minimum amount in DSUs. A DSU is a notional share that has the same value as an Enbridge common share. We expect directors to own Enbridge shares so they have an ongoing stake in the company and are aligned with the interests of shareholders. The ownership guideline changed from two times to

three times the annual Board retainer effective January 1, 2013. Directors must now hold at least three times their annual Board retainer, or \$630,000, in DSUs or Enbridge shares and meet that requirement within five years of becoming a director on our Board. DSUs are paid out when a director retires from the Board.

*For more information on corporate governance practices at Enbridge Inc., please visit <http://www.enbridge.com/InvestorRelations/CorporateGovernance.aspx>. For information on governance practices associated with Enbridge Income Fund Holdings Inc., please visit <http://www.enbridgeincomefund.com/>; with Enbridge Energy Partners, please visit <http://www.enbridgepartners.com/>; and with Enbridge Energy Management, please visit <http://www.enbridgemanagement.com/>; and with Midcoast Energy Partners, L.P., please visit <http://www.midcoastpartners.com/>.*

## **COMMITMENTS TO EXTERNAL INITIATIVES**

### **Externally developed economic, environmental and social charters, principles, or other initiatives to which Enbridge subscribes or endorses.**

Enbridge recognizes the increasing public demand for corporations to be accountable and transparent in all of their business activities and to be seen as proactively dealing with the issues of the day. With that in mind, and in keeping with our commitment to transparency and CSR, in 2002, Enbridge adopted the Voluntary Principles on Security and Human Rights, which were established by the U.S. Bureau of Democracy, Human Rights and Labor, and which address responsible corporate action in conflict zones. We have incorporated these principles into our Statement on Business Conduct.

In addition, in 2003, Enbridge became a signatory to the United Nations Global Compact (UNGC) and committed to following its principles. The Compact is an initiative that brings companies together with UN agencies, labour and civil society to support principles in the areas of human rights, labour and the environment. Enbridge has committed to support and advance the Global Compact's principles and to make them part of our strategy, culture and daily operations.

### **United Nations Global Compact / Precautionary Approach**

We are committed to the principles of the UNGC, including the "Precautionary Approach," which states that "Businesses should support a precautionary approach to environmental challenges."

In committing to the "Precautionary Approach," Enbridge is investing heavily in systems integrity and leak prevention technologies and initiatives, and is investing substantially in a wide range of low-environmental-impact energy sources—both renewable (including wind, solar and geothermal) and alternative (including waste heat recovery, flywheel technology and small-scale compressed natural gas storage)—that help to reduce GHG emissions and address the issue of global climate change.

Enbridge has also committed to stabilizing the company's own environmental footprint at January 2009 levels in the areas on which we have the greatest impact.

*For the current status of our Neutral Footprint commitments, please see our Neutral Footprint dashboard. For a complete summary of our Neutral Footprint commitments, please see Part 7 of section EN23-EN27 of the Environmental Performance chapter of this report.*

### **Memberships in associations and advocacy organizations in which Enbridge has positions in governance bodies, participates in projects or committees, provides substantive funding, or views membership as strategic**

Enbridge maintains membership or associate status in a number of associations and advocacy organizations, including:

- Alberta Chamber of Commerce
- Alberta Emerald Foundation
- American Association of Oil Pipelines
- American Gas Association

- American Petroleum Institute
- American Society of Mechanical Engineers
- Association for Financial Professionals
- Atlantic Centre for Energy
- Canadian Association of Petroleum Producers
- Canadian Business for Social Responsibility
- Canadian Chamber of Commerce
- Canadian Defense and Foreign Affairs Institute
- Canadian District Energy Association
- Canadian Energy Efficiency Alliance
- Canadian Energy Pipeline Association
- Canadian Gas Association
- Canadian Petroleum Tax Society
- Canadian Solar Industries Association
- Canadian Standards Association
- Canadian Wind Energy Association
- Circle for Aboriginal Relations
- Common Ground Alliance
- Conference Board of Canada
- Duluth Area Chamber of Commerce
- Edison Welding Institute
- Energy Council/Center for Environmental Energy Research
- Energy Council of Canada
- Fédération des chambres de commerce du Québec
- Gas Processors Association
- Globe Foundation EXCEL Partnership
- International Institute for Sustainable Development
- International Pipeline Conference Foundation
- Interstate Natural Gas Association of America
- London Benchmarking Group Canada
- National Association of Corrosion Engineers
- National Petroleum Council
- North Dakota Petroleum Council
- Northeast Gas Association
- NRCan National Non-Destructive Testing Certification Body (Canadian General Standards Board for 48.9712 Certification)
- Ontario Energy Association
- Petroleum Technology Alliance Canada
- Pipeline Research Council International
- Program of Energy Research and Development
- Smart Commute Initiative (Toronto)

- Southern Gas Association
- Superior-Douglas Chamber of Commerce
- Texas Association of Business
- Texas Oil & Gas Association
- Texas Pipeline Association
- Texas Taxpayers and Research Association
- Three Rivers Manufacturers Association
- U.S. Oil & Gas Association
- University of Alberta Advisory Committee, Canadian Centre for Corporate Social Responsibility
- Will County Center for Economic Development (Joliet, Illinois)
- Wisconsin Manufacturers & Commerce
- Wisconsin Taxpayers Alliance

## **STAKEHOLDER ENGAGEMENT**

To ensure that a variety of stakeholder views were incorporated into this report, Enbridge engaged the input of the key employee CSR subject-matter experts—many of whom have regular and direct access to various stakeholders—who sit on our various CSR subject-matter expert groups.

The mandate of the employees who sit on the CSR subject-matter expert groups is to serve as the main providers of information for Enbridge’s CSR reports and to ensure the accuracy of the information provided.

Enbridge’s stakeholders include:

- Associations and civil society groups
- Employees, contractors, unions, Board of Directors
- CSR rating organizations such as Corporate Knights, the Dow Jones Sustainability Index, CDP, etc.
- Customers Environmental and other non-governmental organizations
- Governments and government regulatory bodies in Canada and the U.S.
- Landowners
- Media
- Right-of-way communities
- Shareholders (retail and institutional investors)

It is important to note that, in Canada, both the project proponent and the federal government recognize Aboriginal groups as being separate and distinct from stakeholders, and have a legal duty to consult with them.

Enbridge’s business units identify and select stakeholders and Aboriginal and Native American groups with whom to engage by (a) defining the scope of a project and what impact it could have on other parties that have a direct correlation with the project’s geographical vicinity/scope, and (b) determining which regulatory bodies have jurisdiction over any proposed projects and what the regulatory requirements are for notification.

When identifying whom to engage in a given project, Enbridge aims to meet or exceed regulatory requirements regarding public consultation. We also aim to be open and transparent in our communication.

Enbridge engages stakeholders and Aboriginal and Native American groups proactively and on an ongoing basis. We attempt to engage them early in the project planning process to ensure specific concerns are addressed so that we can effectively address and resolve issues and adjust plans wherever necessary. We continue communicating with them throughout the project cycle, from regulatory review to construction to operation, to provide information, identify opportunities and address concerns.

We engage key stakeholders, Aboriginal and Native American groups who live along our existing rights-of-way

or close to Enbridge facilities through our Public Awareness Program.

In all our engagement efforts, including those aimed at Gas Distribution customers, we utilize a full range of communication channels, including:

- Direct-mail brochures and letters
- Websites, with specific pages for projects, pipeline public awareness and safety, pipeline integrity, community investment and more
- Social media sites, including Facebook, Twitter and YouTube
- Toll-free telephone information lines
- Advertising
- News releases and media briefings
- Exhibits
- Videos
- Public meetings/open houses and face-to-face meetings with public officials
- Tours
- Community sponsorships and support from Enbridge employees for community events
- Emergency responder exercises and meetings with first responders
- Outreach programs to excavators

Through our engagement activities, Enbridge addresses a broad range of topics and responds to a variety of questions and concerns, including:

- The relevance and importance of CSR in relation to Enbridge's core values of Integrity, Safety and Respect
- Construction timelines
- Impact of construction on communities
- Economic opportunities and benefits and compensation
- Environmental impacts of construction and environmental protection measures
- Potential impacts of a project on Aboriginal rights
- Emergency response and safety procedures
- Post-construction pipeline integrity maintenance and right-of-way restoration and maintenance

In Canada, Enbridge is an active participant in the Canadian Energy Pipeline Association's Integrity First® Program, which aims to strengthen the pipeline industry's performance, communication and engagement with stakeholders, Aboriginal and Native American groups.

In the U.S., Enbridge is involved in the federal Pipeline and Hazardous Materials Safety Administration (PHMSA) Pipelines and Informed Planning Alliance program, which is a multi-stakeholder consensus effort to develop best practices for development near pipelines and for assuring that those who host pipelines on their property understand how those pipelines are operated and what pipeline companies do to protect their neighbours.

# ***OVERALL MANAGEMENT APPROACH TO CORPORATE SOCIAL RESPONSIBILITY***

As we state in our [CSR Policy](#), Enbridge defines Corporate Social Responsibility (CSR) as: conducting business in a socially responsible and ethical manner; protecting the environment and the safety of people; supporting human rights; and engaging, learning from, respecting and supporting the communities and cultures with which we work. While we realize that some people define “CSR” differently from “sustainability,” we use the terms interchangeably.

CSR policies, principals and practices help us integrate social and environmental considerations into all aspects of our decision making and performance. Enbridge’s values—Safety, Integrity and Respect—serve as the foundation for our CSR practices and reporting.

## ***CHIEF SUSTAINABILITY OFFICER***

In June 2013, Enbridge appointed the company’s first Chief Sustainability Officer, who is responsible for enterprise-wide coordination and oversight of all aspects of the company’s CSR performance.

## ***CSR POLICIES AND VALUES STATEMENT***

Since 2004, Enbridge has had a [Corporate Social Responsibility Policy](#) that covers business ethics and transparency; environment, health and safety; stakeholder, Aboriginal and Native America relations; employee relations; human rights; and community investment. This policy applies to activities undertaken anywhere in the world by, or on behalf of, Enbridge and our subsidiaries and affiliates, whose operations we manage.

Enbridge also conducts business in accordance with our [Statement on Business Conduct](#), which outlines our commitment to specific standards of conduct expected of our directors, officers, employees, consultants and contractors in all countries in which Enbridge conducts business. As well, a variety of other policies and related documents provide direction for specific activities that pertain to CSR. They are:

- [Environment, Health and Safety Policy](#)
- [Aboriginal and Native American Policy](#)
- [Climate Change Policy](#)
- [Community Investment Program Criteria and Guidelines](#)

### **Enbridge Values**

Enbridge’s value statement is: Enbridge employees demonstrate integrity, safety and respect in support of our communities, the environment and each other.

Enbridge is building on our foundation of operating excellence by adhering to this strong set of core values that reflect what is truly important to us as a company. These values represent a constant guide by which we make our decisions, as a company and as individual employees, every day.

We convey Enbridge's values succinctly and effectively to employees so that they understand what it means to work for Enbridge and how we expect all employees to act when faced with decisions or choices. For new employees, our values provide a strong, clear and simple set of principles to help them integrate into the organization.

## ***SAFETY AND OPERATIONAL RELIABILITY—OUR TOP PRIORITIES***

We have taken steps and made structural changes to Enbridge to ensure we are fostering a culture that proactively identifies and mitigates risks across the whole organization and is constantly focused on our top priority—safety and operational reliability.

### **Executive Leadership**

Enbridge's executive leadership team and senior management are taking an active role in establishing the strongest attainable culture in support of Enbridge's safety and operational reliability priority.

The Operations and Integrity Committee (OIC) is the most important executive committee within Enbridge. The OIC, which meets monthly and is chaired by Enbridge's President and CEO, brings together the senior leaders accountable for operations, integrity and safety across the organization. It ensures that executive management establishes and monitors key policies and programs, including the harmonization of the safety management systems and oversight of the execution of the Operational Risk Management (ORM) Plan, which broadly aims to position Enbridge as the industry leader for system integrity, environmental and safety programs and charts the course for best-in-class practices. The OIC also oversees preventative measures, reviews incidents, discusses what has been learned from incidents and how to apply those lessons across Enbridge's business units, and ensures effective internal and external communication of operational objectives and accomplishments.

The involvement of Enbridge's senior management in establishing a pervasive safety culture, and in providing ongoing, active oversight, is fundamental, which is why we have tied compensation of senior management, through scorecard metrics, to safety and integrity performance. Business unit performance is assessed relative to a scorecard of metrics and targets established by each business leader and their senior management teams at the start of the year. Scorecards are reviewed across the enterprise by the Executive Leadership Team. Scorecards include a range of financial and operational metrics that include personal, public and process safety, reliability of our systems and environmental performance. Operational performance is a critically important focus for all employees, whether they are in direct operating roles or supporting functions. To reinforce that importance, all of the employees and executives have a significant element of their short-term incentive calculation tied to operational results. For the executives who are primarily responsible for an operating business unit, 50 per cent of their annual short-term incentive is tied to their business unit scorecard(s).

We further strengthened front-line executive oversight with the creation in early 2013 of a new role of Senior Vice President (SVP), Enterprise Safety & Operational Reliability, which reports directly to Enbridge's President and CEO and is accountable for the leadership and oversight of safety, operational reliability and environmental protection policies and practices across the enterprise. The department is accountable for defining an enterprise-wide set of integrated strategies and policies that support the organization's objective of being the industry leader in process, public and personal safety, operational reliability, and environmental protection.

### **Board Direction**

Enbridge's Board of Directors is responsible for providing direction on our ORM Plan. Each of Enbridge's major business units presents its ORM Plan progress to the Board annually and provides interim updates to the Board's Corporate Social Responsibility (CSR) Committee. In addition, in August 2013, the Board created the Safety & Reliability Committee to oversee safety, security, integrity management and operational risks.

### **Operational Risk Management (ORM) Plan**

Enbridge's ORM Plan is our detailed road map of programs and processes that will build and sustain our industry-leading position. The ORM Plan sets out how we will constantly reinforce the safety and integrity of our systems by investing in six key performance areas:

- Pipeline and Facility Integrity
- Leak Detection Capability and Control Systems
- Third-party Damage Avoidance and Detection

- Incident Response Capacity
- Employee and Contractor Occupational Safety
- Public Safety and Environmental Protection

We're striving to be the industry leader in all six of these critical safety and integrity dimensions.

### **Establishing a World-class Safety Culture**

Enbridge's goal is to establish a world-class safety culture—one that targets zero incidents and where our safety priority is engrained throughout our employee and contractor workforce.

In April 2013, we enacted Health & Safety Principles to guide our safety actions, policies, procedures and culture. All employees are responsible for knowing these principles and using them as a basis for their day-to-day actions.

The Enbridge Health & Safety Principles are:

- All injuries, incidents, and occupational illnesses can be prevented.
- All operating exposures can be controlled.
- Management is accountable for safety performance.
- All employees/contractors are responsible for safety.
- Assessment and improvement are a must.
- We promote off-the-job health and safety for our employees 24/7.

The Health & Safety Principles are fundamental expectations for all employees and contractors. They define our Path to Zero incidents, injuries and occupational illness—a workplace in which safety is everyone's responsibility, leadership is accountable for safety performance, continuous improvement is required, hazards are controlled and our commitment to caring extends beyond the workday.

Whereas our enterprise-wide values of Integrity, Safety and Respect help define who we are and lay the foundation for how we approach our business, the Health & Safety Principles make our core value of Safety real. They outline our expectations and employee obligations regarding health and safety at Enbridge.

The Health & Safety Principles complement Enbridge's six Lifesaving Rules, which we introduced in January 2012. The Lifesaving Rules are:

- **Hazard Management:** Always ensure an analysis of potential hazards has been completed and proper authorization received prior to starting the work.
- **Driving Safety:** Only drive a vehicle or operate equipment when not under the effect of alcohol or any substances that cause impairment.
- **Confined Space Entry:** Always follow procedures for confined space entry.
- **Ground Disturbance:** Always follow procedures for locating, positively identifying and excavating buried facilities.
- **Isolation of Energized Systems:** Always follow procedures for Lockout / Tag-out.
- **Reporting of Safety-Related Incidents:** Always report significant safety related incidents.

Whereas the Health & Safety Principles outline how we think about health and safety at Enbridge and define our philosophy and approach, the Lifesaving Rules are concrete and absolute. Backed up by detailed policy and procedure, the Lifesaving Rules define specific actions and behaviors that all Enbridge employees and contractors are obliged to follow.

For Enbridge, safety isn't just a priority. It's our way of life. It's a core value that makes us Enbridge.

*For more information on safety and operational reliability at Enbridge, please see Enbridge's December 2013 [Operational Reliability Review](#).*

## **HUMAN RIGHTS**

Enbridge believes that we must consistently and rigorously uphold the highest standards of human rights in all of our work.

### **Aboriginal Rights**

Our relations with Aboriginal and Native American communities are extensive. More than 60 First Nations communities are located along our rights-of-ways in Canada alone. In both Canada and the U.S., energy infrastructure development requires the cooperation of Aboriginal and Native American persons who live and work in the area where the development is located.

In Canada, Aboriginal persons have a constitutionally protected right to be consulted if any government decision has the potential to impact treaty or other Aboriginal rights. Aboriginal groups can challenge or appeal decisions made by regulatory authorities if they are not satisfied with the decision from a rights and title perspective.

*For information on U.S. regulatory safeguards for protecting Native American rights, and on Enbridge's responsibilities to comply with both regulation and our own policies, please see the U.S.—Major Projects and Liquids Pipelines Operations content in the Aboriginal & Native American Relations—Recent Initiatives and Significant Events section of SO1/SO9/SO10 in this report.*

### **Assessment**

In order to protect human rights and Aboriginal rights, and to comply with Canadian and U.S. regulatory requirements, Enbridge assesses the potential social, economic and environmental impacts of all of our projects through socio-economic and environmental studies during which we consider:

- The biophysical elements of the terrestrial and marine environment, including key receptors that could potentially be affected
- The project's economic impacts, including its effects on the national, provincial and regional economy
- Aboriginal rights and interests, including the current use of lands and resources for traditional purposes by Aboriginal persons
- The safety of project workers, and the safety of the communities in which the project would operate
- Potential human health impacts, including changes in the natural environment that could affect the physical health of people

In evaluating these various areas, we also view them from the perspective of our [Corporate Social Responsibility Policy](#) and our [Aboriginal and Native American Policy](#), under which:

- Enbridge recognizes that governments have the primary responsibility to promote and protect human rights, and that we will work with governments and agencies to support and respect human rights within our sphere of influence.
- Enbridge respects Aboriginal rights, land, heritage sites, environmental protocols and traditional knowledge and is committed to a consistent and thorough approach to consultation, engagement and shared benefits.
- Enbridge will not tolerate human rights abuses, and will not engage or be complicit in any activity that solicits or encourages human rights abuse.
- Enbridge will always strive to build trust, deliver mutual advantage and demonstrate respect for human dignity and rights in all relationships we enter into, including respect for cultures, customs and values of individuals and groups.

In addition, in assessing the various areas of human rights, we look at them through the lens of our status as a signatory to the [United Nations Global Compact \(UNGC\)](#), and of our adoption of the [Voluntary Principles on Security and Human Rights](#).

The UNGC is an initiative that brings companies together with UN agencies, labour and civil society to support principles in the areas of human rights, labour and the environment. In 2003, Enbridge committed to supporting and advancing the UNGC's principles and to making them part of our strategy, culture and daily operations. Enbridge is a member of the core group of companies that, in 2013, established the UNGC's Canadian Network.

The [Voluntary Principles on Security and Human Rights](#) were established by the U.S. Bureau of Democracy, Human Rights and Labor, and have been incorporated into Enbridge's [Statement on Business Conduct](#).

## COMPLIANCE AND ETHICS

Enbridge is committed to stopping corruption in all forms, including extortion and bribery. Enbridge's commitment in this regard is derived from one of our core values: Integrity.

Enbridge's Integrity value is embodied in our [Statement on Business Conduct](#), which requires employees to make decisions about, and conduct Enbridge's business in, a responsible, honest and ethical manner. Enbridge's [Statement on Business Conduct](#) and [Whistle Blower Procedures](#) require employees to report (either directly or anonymously) any fraudulent activities or potential or actual events that do not comply with applicable legal requirements or Enbridge policies.

Additionally, Enbridge has established a Compliance Policy that defines clear responsibilities for Enbridge's Vice President and Chief Compliance Officer and business unit compliance officers, who oversee Enbridge's Compliance Program. The program is designed to minimize unethical behavior and support and demonstrate Enbridge's commitment to corporate responsibility and good governance.

As part of our Compliance Program, Enbridge set the following objectives for 2013:

- To stage the implementation of a Compliance and Ethics Management System within our Liquids Pipelines and Major Projects business units
- To complete at least one ethics and compliance perceptions survey in each of our major business units
- To complete a benchmarking analysis of Enbridge's [Statement on Business Conduct](#), with a view to potentially revising or enhancing it to ensure that it is consistent with best practices
- To develop enhanced anti-corruption training programs for key Enbridge staff

As part of our Compliance Program, Enbridge also routinely undertakes the following best practices to monitor and improve upon our compliance and ethics culture:

**1. Policies**—Enbridge has established a number of governance policies that are designed to ensure that our employees conduct their work activities in accordance with applicable laws. These policies include the [Statement on Business Conduct](#), the [Whistle Blower Procedures](#) and the Compliance Policy.

**2. Enbridge Ethics & Conduct Hotline**—Enbridge provides information to all employees and contractors on the avenues available to them to raise ethical or compliance issues directly with the responsible Compliance Officers or with other managers. Enbridge also maintains an Ethics & Conduct Hotline (the Hotline) that employees can use at any time to raise issues anonymously through a third-party provider. Each report received through the Hotline is provided directly to Enbridge's Vice President and Chief Compliance Officer, as well as to the responsible business-unit Compliance Officer, and is investigated to address and resolve any issues raised.

In 2012, Enbridge received 58 new hotline reports, of which 34 related to human resources issues, seven related to financial concerns, five related to allegations of misappropriation or misuse of assets, three related to safety issues, and two related to policy and process integrity. Enbridge has resolved all of the issues associated with each of the 2012 hotline reports.

For comparison, in 2011, Enbridge received a total of 34 new hotline reports, of which nine related to human resources issues, 15 related to allegations of misappropriation or misuse of assets, three related to safety issues, two related to financial concerns and five related to customer concerns or complaints.

**3. Tone At the Top**—While Enbridge has had a Chief Compliance Officer and three Compliance Officers in our primary functional business units since 2009, in early 2012, we changed our management structure to demonstrate an even greater emphasis on compliance and ethics. On April 1, 2012, Enbridge appointed our first enterprise-wide Vice President and Chief Compliance Officer, whose role is solely dedicated to the oversight of Enbridge's overall state of compliance and to enhancing Enbridge's culture of ethics and integrity.

**4. Audit**—In 2011, the role of Enbridge's Internal Audit Department was expanded to cover all operational and financial audits. The Internal Audit Department plays a key role in monitoring Enbridge's state of compliance and in assisting with investigations into any unethical conduct, including allegations of bribery, fraud and corruption. The Internal Audit Department is also charged with measuring the administration and effectiveness of the Compliance Program, including the effectiveness and accuracy of internal compliance reporting.

**5. Training**—In early 2013, all Enbridge employees and provisioned contract workers received online training in relation to our [Statement on Business Conduct](#). The online training program required these individuals to certify their compliance with the Statement on Business Conduct. In 2012, Enbridge employees were also required to complete

fraud awareness training, which included specific content on how to avoid conflicts of interest.

Other compliance training varies by business unit, and overall, Enbridge provided a considerable amount of this training to employees in 2012. Compliance personnel held dozens of training sessions and presentations on compliance-related issues to hundreds of employees and provisioned contract workers.

In addition, in November 2012, Enbridge's Liquids Pipelines (LP) and Major Projects (MP) business units, along with the Northern Gateway Pipelines Project, engaged over 70 employees who fulfill compliance functions at Enbridge's second annual Compliance Summit, which involved reviewing the new Compliance and Ethics Management System that has been developed for LP and MP. The Compliance Summit also covered other compliance-related processes and issues. We rolled out additional training for the new system in 2013.

**6. Compliance Investigations and Reports**—Enbridge's Compliance Officers coordinate investigations of material compliance matters, whether they arise directly from employees, through incidents or via reports to the Ethics & Conduct Hotline. Enbridge's Vice President and Chief Compliance Officer reports all material non-compliance matters to the Audit, Finance & Risk Committee or to the Safety & Reliability Committee of Enbridge's Board of Directors, and provides quarterly reports to these committees on material non-compliance issues related to their respective areas of responsibility.

Enbridge also engages employees with expertise in the area of audits and investigations who are available to assist Compliance Officers with investigations into material non-compliance issues. If necessary, Enbridge retains third-party experts to assist with these investigations.

**7. Non-Retaliation**—Enbridge is committed to the principle that no retaliatory action may be taken against anyone who raises non-compliance issues in good faith. Adhering to the non-retaliation principle is a key component of a strong culture of compliance and it also ensures that employees, contract workers and the public can feel confident that issues will be fairly and impartially reviewed and addressed.

**8. Metrics**—LP maintains a compliance index metric that ties ethical conduct and compliance to employees' bonus incentives and serves as a continuous reminder to them of the importance Enbridge places on ethical behaviour. The metric includes data on the number of times Enbridge vice presidents and directors speak about ethics and compliance to groups of five or more employees or provisioned contract workers, and on the annual volume of medium- and high-impact acts of non-compliance, ethics violations and regulatory actions.

**9. Anti-Corruption & Compliance/Ethics Affiliations**—Enbridge's Compliance Officers and other employees participate in a number of organizations that provide training and promote the advancement of ethical conduct in organizations throughout North America. Some of the organizations to which Enbridge or our employees belong include: the Society of Corporate Compliance & Ethics (SCCE); the Open Compliance & Ethics Group (OCEG); the Compliance & Ethics Leadership Council of the Corporate Executive Board; the Association of Certified Fraud Examiners (ACFE); and the Corporate Ethics Management Council (Conference Board of Canada).

## ***INNOVATION***

As the operator of one of the world's largest and most complex energy transportation systems, Enbridge's job is to deliver the energy North Americans need in the safest, most reliable and most efficient way possible. Because millions of people rely on Enbridge to transport, generate and distribute the energy they need every day, we're constantly searching the world for innovative ideas and new approaches—to improve the safety and operational reliability of our existing assets through innovative leak detection and prevention investments; and to invest in new, emerging technologies, projects and companies that will contribute to a cleaner energy future.

### **Innovative Leak Detection and Prevention Investments**

Safely transporting liquid hydrocarbons is Enbridge's core business, and we are committed to continuous improvements to ensure the reliability and integrity of our pipeline systems, and the systems and technologies we use to detect leaks.

Enbridge's leak detection systems must be reliable under all operating conditions to ensure the public's safety, and to minimize impacts to the environment and to corporate reputation. Enbridge is aware that regulator, public, and media attention has increased substantially as a result of our 2010 spill near Marshall, Michigan. To address these and other concerns, Enbridge has steadily increased our investments in innovative leak detection technologies since 2010, with the goal of implementing industry-leading leak detection capability.

Following is an overview of some of the specific initiatives being undertaken by Enbridge's Liquids Pipelines (LP), Gas Transportation (GT), and Gas Distribution (GD)—including Enbridge Gas Distribution (EGD)—business units.

**Liquids Pipelines (LP)**—For Enbridge's LP business unit, improving Enbridge's leak detection capabilities is a top priority. LP took immediate steps after Enbridge's 2010 Marshall incident to improve processes and training for the individuals providing analyst services to our control centre operations, and has since developed a plan that will propel it to industry-leading capability in the near future.

There are a number of aspects to LP's plan, but the key areas include targeted instrumentation improvements across all of LP's pipeline systems, improvements to the technologies LP uses, and researching and assessing new leak detection technologies for application on Enbridge's pipeline systems.

LP is specifically focused on enhancing our overall leak detection capabilities on the LP pipeline system through laboratory and field testing, and by researching and assessing the best commercially available technologies. This focus includes researching the best possible Computational Pipeline Monitoring (CPM) systems.

CPM systems are computer-based systems that use pipeline measurements to detect the presence of leaks. So far, LP has identified several technologies that have the potential to complement Enbridge's existing leak detection system and provide an extra layer of protection and surveillance capability. Enbridge's Northern Gateway Pipelines Project, for example, has committed to installing dual leak detection systems as a secondary safety measure and is working to find a CPM system that, when used with Enbridge's existing CPM system, will give Enbridge's pipeline controllers the best possible leak indicator data.

LP is also evaluating commercial technologies aimed at detecting very small leaks. For example, LP is assessing the effectiveness and reliability of acoustic in-line inspection tools, pressure wave systems and external sensor-based systems.

One promising technology uses fibre-optic cables that serve as both a microphone to "listen" for sounds produced at the onset of leaks, and also as a localized temperature sensor to detect variations in the ground temperature caused by the release of product into the environment. Assessing the effectiveness of these external systems led LP to partner with a research firm to design and build a world-class test apparatus to assess the reliability and sensitivity levels of these various technologies under near-real-world conditions.

In 2012, LP also partnered with the Pipeline Research Council International (PRCI), a U.S.-based research consortium, to test pressure wave sensor technology on parts of the Enbridge pipeline system. LP is interested in pressure wave technology because it could be retrofitted to existing pipeline segments and offers the potential to detect the onset of smaller leaks earlier than traditional means.

LP is also studying technologies developed in other industries, including the water supply and space industries, to see if there are crossover applications for Enbridge's system.

*For more information on LP's investments in innovation, please see section EN23-EN27 in the Environmental Performance chapter of this report.*

**Gas Transportation (GT)**—In the summer of 2012, Enbridge's GT business unit was at the centre of a major field demonstration at Mineral Wells, Texas, showcasing some of the latest technology in leak detection. In addition to vendors, participants included experts from Petroleum Research Council International (PRCI), industry, GT and other Enbridge business units. Testing involved controlled, simulated gas leaks along a stretch of GT's gas transmission pipeline network. One of the vendor companies used laser technology to detect gas emissions, while another used reflected refracted sunlight, measuring changes in the quality of light to detect leaks. Yet another used a gas-sniffing device to take air samples to detect traces of gas indicating a possible leak.

Through the testing, GT was interested in finding out what new technologies would work best for Enbridge and the industry, knowing that it needs to continually look at what technologies are out there to keep pipeline integrity at the forefront.

Currently, GT is exploring the application of SmartBall technology, which was originally developed as a means of finding small internal corrosion leaks in water pipes. A SmartBall is about the size of a softball, with an instrument-filled metal core, surrounded by a protective foam shell. Inserted through a small tap into the pipeline, the ball travels through the pipeline with product flow, using an integrated computer to listen for acoustic signals of tiny leaks or structural defects. Results of the SmartBall's inspection are captured on a memory card for later retrieval and analysis.

The moment the SmartBall hears a leak, it marks the location of the leak so that analysts can later do a full physical assessment of the pipe. The technology can be easily and cost-effectively inserted and retrieved from

operating pipelines. GT has already successfully deployed the technology on its liquids pipelines.

GT is also working with its Supervisory Controls and Data Acquisition (SCADA) group to evaluate the use of small micro-sensors powered by cathodic protection—an electrochemical technique used to control pipeline corrosion. The sensors can be embedded onto the pipeline to monitor a whole suite of pipeline data in real time.

Another area of interest for GT is the emerging development of “smart liners”—high-density polyethylene (HDPE) pipe liners fitted with detection sensors. The industry is already accustomed to inserting HDPE liners to create a protective barrier for metal pipe in areas of high corrosion risk. The additional detectors would be used to track pressure, stress and temperatures of pipe.

*For more information on GT's investments in innovation, please see section EN23-EN27 in the Environmental Performance chapter of this report.*

**Gas Distribution (GD) and Enbridge Gas Distribution (EGD)**—Systematic leak detection is a top priority for our GD business unit. Every day, GD crews scan the surface, hunting for minute signs of leaks from GD's vast underground network of pipes in an effort to identify early any network deterioration.

In 2012, EGD workers conducted leak surveys on 9,040 kilometres (5,617 miles) of distribution mains in its franchise area—about a quarter of its system. They also surveyed close to 490,000 “services” (gas pipes used to carry gas from the mains to customers' residences).

To conduct the surveys, EGD crews carry out foot patrols or drive vehicles specially equipped with leak detection equipment. Their toolboxes include hand-held flame ionization gas sampling devices, optical methane units and remote methane laser detectors. Many of EGD's mobile surveys employ an optical methane unit, which EGD helped to develop in the 1990s. Based on infrared absorption spectroscopy technology, the devices send out a light source, measuring the interaction between gas molecules and light, to detect any trace of leaking gas.

While these methods continue to provide reliable results, EGD constantly keeps a close watch on new innovations that promise increased efficiency and accuracy. Through a program of research and field trial investigations, EGD is working in partnership with vendors and industry consortiums such as NYSEARCH, a natural gas research, development and demonstration organization headquartered in the U.S.

In August 2012, in partnership with NYSEARCH, EGD hosted a field trial of a cavity ring-down spectroscopy device, a new technology that measures the levels of methane gas by measuring the absorption of light into the sample. Developed by Picarro, a California-based company, the equipment can be mounted on a vehicle to survey a system street by street, mapping and displaying results in real time. The technology looks promising. It's extremely sensitive and is able to measure gas levels down to parts per billion. EGD is studying it to understand how it operates under different circumstances, to certify the manufacturer's claims, and to determine its suitability for EGD's purposes.

In addition to leak detection technologies, EGD continues to monitor other technologies that are often in their earlier stages of development. For example, EGD is exploring the application of new robotic tools, i.e. additional advanced in-line inspection devices. In November 2012, the pre-commercial Pipetel Explorer 20/26 was tested on EGD's system on pipelines that would have otherwise required significant investment to enable traditional in-line inspection. Among the many benefits, this technology will assist in assessing the condition of pipe so that areas where leaks may occur in the future are proactively identified.

EGD is also closely following a NYSEARCH study of micro-based sensors currently in early engineering stages. Micro-resonators are devices that can measure the viscosity of a gas mixture and in turn determine the amount of methane in an air sample. These new sensors have the potential to be used in applications where alarms indicating the presence of natural gas are desirable or simply in situations where monitoring the composition of air in the vicinity of the sensor is required.

*For more information on GD's and EGD's investments in innovation, please see section EN23-EN27 in the Environmental Performance chapter of this report.*

### **Innovative Equity and Project Investments**

Since 2002, the value of Enbridge's renewable energy assets has grown to over \$3 billion. In addition to investing in the renewable energy assets listed in GRI Performance Indicator EN6 in the Environmental Performance chapter of this report, Enbridge has made the following equity and project investments that strengthen our commitment to innovation:

## **Equity Investments**

- **Coastal Hydro Power Corporation**—Coastal Hydropower is a run-of-river hydro developer. It utilizes a Very Low Head (VLH) turbine that can be used for unconventional hydroelectric projects, including water control weirs, navigation canals, irrigation canals, dams built in small communities and municipal water intakes. With Coastal, Enbridge, in 2011, invested in the Wasdell Falls Run-of-River Hydroelectricity Project on Ontario's Severn River, located about an hour north of Toronto. The project, which is currently under construction, will generate 1.65 megawatts (MW) of hydroelectricity using highly efficient VLH turbines.
- **Genalta Power Inc.**—In 2010, Enbridge invested in Genalta Power Inc., a privately held Canadian corporation that owns and operates independent power plants that produce and sell environmentally friendly electricity generated from waste energy sources. Genalta works with site owners to provide base-load green energy; increased plant efficiencies; operating cost reductions; greenhouse credits and emissions reductions; and long-term sustainable energy. Genalta also capitalizes on opportunities in the independent power market by developing dependable, cost-effective and environmentally responsible power generation facilities.
- **Sea NG Corporation**—In 2010, Enbridge invested in Sea NG, which is developing a system to transport compressed natural gas by sea. The technology will open up new markets to transport quantities of gas that are too small to make LNG transport economically feasible. The gas will be held in purpose-built modules called Coselles™ (a blend of the words "coiled pipe" and "carousel") that are designed to hold large amounts of compressed natural gas. Sea NG's Coselle™ technology also has the potential to reduce GHG emissions by displacing the diesel currently used in many of these markets.
- **N-Solv Corporation**—Enbridge invested in N-Solv in 2001. N-Solv's Bitumen Extraction Technology process builds on the commercial success achieved by the Steam Assisted Gravity Drainage (SAGD) process. Heated solvent vapour is injected into the gravity drainage chamber of an oil sands extraction operation instead of steam, enabling the valuable components in the bitumen to be extracted while leaving problematic asphalt behind.
- **Value Creation Inc.**—In 2005, Enbridge and Value Creation announced a strategic alliance to pursue oil sands energy infrastructure development. The Value Creation Group of Companies focusses on developing oil sands processing improvements.
- **Hydrogenics Corporation**—In 2012, Enbridge entered into a partnership with Hydrogenics to develop large-scale electricity storage. Hydrogenics' water electrolysis technology can convert surplus renewable energy into hydrogen gas, and Enbridge's expertise in the ownership and operation of natural gas pipelines will enable the partnership to offer seasonal electricity storage capability to the electricity sector. The technology could be particularly advantageous in markets with large amounts of renewable energy from intermittent sources such as wind. By converting the electricity to gas and storing it in vast natural gas pipeline networks, more renewable energy can be stored for long periods, increasing the amount of clean energy that is available for consumers.
- **Morgan Solar Inc.**—In 2011, Enbridge invested in Morgan Solar, a next-generation solar technology company. Enbridge's investment is intended to help Morgan Solar commercialize a new line of concentrating photovoltaic (CPV) panels, which use plastic lenses to boost solar cells' power output. This technology provides an innovative means of generating solar power more efficiently, at less cost and with a lower environmental footprint.
- **Syscor Controls & Automation Inc.**—In 2012, Enbridge invested in Syscor, a company focused on commercializing wireless sensors for hydrocarbon storage tanks. Syscor's wireless sensors are capable of detecting temperature, pressure, inclination and vapour, thereby mitigating the risks associated with tank failures. Through our investment in Syscor, Enbridge is furthering our vision of being the safest operator of hydrocarbon facilities.

- **Temporal Power**—In 2013, Enbridge invested in Temporal Power, an Ontario-based manufacturer of electrical energy storage systems called flywheels. Temporal's technology consists of spinning cylinders (flywheels) that are accelerated to a high speed by an electric motor. The spinning cylinders store the electrical energy as kinetic energy through their continuous high-speed rotation. Electricity can then be extracted when needed by using the kinetic energy to spin an electricity generator. The fast-responding technology offers a cost-effective solution for utilities and power generators for balancing energy and improving power quality on the electrical grid.
- **On-Ramp Wireless Inc.**—In 2013, Enbridge invested in On-Ramp Wireless, a California-based developer of wireless solutions for energy automation and machine-to-machine (M2M) communications. On-Ramp's technology is the first purpose-built wireless network designed for connecting a large number of devices with very small data requirements. It is a powerful technology that has the potential to efficiently connect and monitor millions of unconnected sensors, meters and other industrial devices.
- **Smart Pipe Company Inc.**—In 2013, Enbridge invested in Smart Pipe, which develops, manufactures and installs high-strength, spool-able, composite high-density polyethylene (HDPE) pipe. The technology, developed by the Katy, Texas-based company, is highly applicable in difficult-to-access areas such as river crossings and urban areas, as it does not require trenching of a right-of-way. In addition, the Smart Pipe® technology does not rely on the structural integrity of the carbon steel pipe through which it is pulled.
- **NRGreen Power Limited Partnership**—Enbridge's interests in waste heat generation are through Enbridge Income Fund, which owns 50 per cent of NRGreen Power Limited Partnership (NRGreen). Under a 20-year power agreement with SaskPower, NRGreen has constructed four waste heat power generation units along the Alliance Pipeline in Saskatchewan. These four facilities combined produce approximately 20 MW of power. A fifth station, which is being built at Alliance's Windfall compressor station near Whitecourt, Alberta, is expected to be in service in the second half of 2013 and will deliver up to 14 MW of electricity. Heat is a by-product of the process used to compress natural gas so that it can be transported through pipelines for consumer use. Rather than allowing the heat exhaust to escape into the atmosphere, waste heat recovery units convert it into emissions-free electricity by using it to heat and condense fluids that drive turbines. The resulting electricity is then fed to the electricity grid.

### ***Project Investments***

- **Aquistore**—Enbridge is a partner in Project Aquistore, one of the first Canadian projects to field-study the storage of carbon dioxide in a deep saline aquifer. The Saskatchewan-based project aims to prove that deep saline aquifer storage of carbon dioxide is a safe and effective solution for GHG emission reductions, and to assess the costs associated with carbon capture and storage (CCS). The results of the project will be made available to inform future CCS projects, and for government policy regulation and development.
- **Neal Hot Springs**—In late 2012, the Neal Hot Springs Geothermal Project in which Enbridge invested with U.S. Geothermal Inc., became operational. The project generates about 22 MW net of renewable geothermal electricity. The project is located in eastern Oregon, about 90 miles (145 kilometres) northwest of Boise. Geothermal energy is renewable energy from the heat of the earth's core. Subsurface hot water is brought to the surface through production wells. The heat from this water is utilized to run an organic rankine cycle power plant. The water is then re-injected below the surface, where it is reheated for future use. Geothermal is baseload power, which means that it is generated and dispatched to the grid 24 hours a day.

## ***NEUTRAL FOOTPRINT COMMITMENTS***

In 2009, Enbridge announced a plan to stabilize our environmental footprint.

Our Neutral Footprint commitments are designed to reduce Enbridge's environmental impact where it is felt most: on the trees we remove and the natural habitat we permanently alter when building new energy infrastructure, as well as the energy we use to power our operations.

Through the program, we are counteracting our environmental impacts within five years of their occurrence by:

- Planting a tree for every tree we remove to build new pipelines and facilities (“Tree for a Tree”)
- Helping to conserve an acre of natural habitat for every acre we permanently alter to build new pipelines and facilities (“Acre for an Acre”)
- Generating a kilowatt hour of renewable energy for every kilowatt hour of additional energy our operations consume (“Kilowatt for a Kilowatt”)

Our Neutral Footprint commitments are voluntary and are applied and integrated into all of our projects and operations. By meeting these commitments, we will stabilize Enbridge’s environmental footprint at January 2009 levels.

*For the current status of our Neutral Footprint commitments, please see our [Neutral Footprint dashboard](#). For a complete summary of our Neutral Footprint commitments, please see Part 7 of section EN23-EN27 of the Environmental Performance chapter of this report.*

## **CHALLENGES AND OUR RESPONSES**

In recent years, a number of high-profile incidents, including Enbridge’s 2010 spill of oil into the Kalamazoo River near Marshall, Michigan, have significantly elevated the level of attention that the public and government at all levels are paying to health and safety, incident prevention and regulatory issues related to energy production and transportation.

In the midst of this increased scrutiny, our company is undertaking both large and small projects in North America that involve constructing new or upgrading existing energy infrastructure. These projects include oil and gas pipelines, storage tanks, power transmission lines, and renewable and alternative energy generation facilities for solar, wind and geothermal power.

As we plan, build and operate all aspects of our business we are highly focused on our need—and desire—to obtain and maintain support from local communities. We are also highly aware of the effect that our actions have on our broader reputation as a company. With these considerations in mind, we rigorously comply with all relevant local, regional and national regulatory requirements regarding consultation, social and environmental impact assessment and independent review. We also conform to our own corporate policies and objectives, which require us to:

- Ensure that safety and operational reliability remain the highest priority for our business
- Invest heavily in the tools, technologies and strategies that will ensure our energy transportation and distribution systems have the strength to continue to perform safely, reliably and in an environmentally responsible manner
- Communicate and engage with stakeholders, Aboriginal and Native American groups and decision makers so that, together, we can find solutions to local and global sustainability challenges related to energy production and distribution
- Operate our business to the highest ethical standards, with integrity, respect, honesty and transparency
- Actively maintain positive relationships with customers, investors, employees, partners, regulators, communities and other stakeholders, as well as Aboriginal and Native American groups
- Meet our standards for health, safety and environmental management and compliance
- Uphold strong corporate governance practices, including our [Statement on Business Conduct](#) and [Whistle Blower Procedures](#)
- Track and publicly report on GHG emissions from our operations and actively participate in the transition to a lower-carbon economy by investing in renewable and alternative energy projects and in technological innovation that supports better integration of conventional and renewable energy systems
- Provide socially responsible operations as a key element in our business strategy as implemented through our [CSR Policy](#), [Climate Change Policy](#), [Aboriginal and Native American Policy](#), [Enbridge’s Environment, Health & Safety Commitment](#), Community Investment initiatives and Neutral Footprint commitments.

Notwithstanding our efforts—and the efforts of others in the upstream and downstream components of the energy sector—to address heightened pressures and challenges on social and environmental performance issues, some of our projects and activities have attracted controversy, protests and organized campaigns of opposition.

In some instances, controversy has stemmed from issues that lie within our direct decision-making control as a company—such as project design, routing, and safety and risk management.

In other instances, controversy has resulted from more broadly based concerns that involve public policy issues outside of our direct control as an individual company. These concerns can include GHG emissions and climate change, Aboriginal rights and title, the pace and scale of the Canadian oil sands expansion, the design of public processes for regulatory review, and the siting of wind farms.

When dealing with contentious issues and projects, we use engagement and communications to (a) enhance our understanding of the concerns of stakeholders, Aboriginal and Native American groups and decision makers, and (b) improve our ability to respond with changes that address their concerns. . In cases involving issues outside of our decision-making scope, we collaborate with Aboriginal and Native American groups, business, government, communities and non-government organizations (NGOs) to advance progress on larger sustainable development challenges and improve social and environmental performance in our industry.

In 2012 and early 2013, two of Enbridge's proposed liquids pipeline projects—our Northern Gateway Pipelines Project and our Line 9 Reversal Project— and the site of our 2010 spill in Marshall, Michigan, were the focus of protests. The section below provides an overview of the formal processes we are engaged in regarding these projects and activities as well as the concerns expressed about them that we consider material from a CSR perspective. While the scope of this report largely covers matters in the 2012 reporting year, we also discuss matters outside of the 2012 reporting year that are of key interest to stakeholders and decision makers.

### **Enbridge Northern Gateway Pipelines Project**

In May 2010, Enbridge filed an application with the National Energy Board to construct and operate the Enbridge Northern Gateway Pipelines Project. The project, if approved, would involve building a new 1,177-kilometre (731-mile) twin pipeline system between Bruderheim, Alberta, and a new marine terminal in Kitimat, British Columbia, to export 525,000 barrels per day (bpd) of bitumen diluted with condensate (a hydrocarbon liquid used as a diluent with bitumen to decrease the bitumen's viscosity) and import 193,000 bpd of condensate

The project, which would cost an estimated \$6.5 billion, is under regulatory review by a federally appointed Joint Review Panel (JRP) that was established by the Canadian Environmental Assessment Agency and the National Energy Board, which are the two national regulatory agencies responsible for reviewing the impacts of proposals for trans-provincial energy projects.

It is important to note that, in Canada, both the project proponent and the Crown (the federal and provincial governments) recognize Aboriginal groups as being separate and distinct from stakeholders, and have a legal duty to consult with them. This is because Aboriginal people in Canada have a constitutionally protected right to be consulted if any government decision has the potential to impact treaty or other Aboriginal rights. Aboriginal groups can challenge or appeal decisions made by regulatory authorities if they are not satisfied with the decision from a rights and title perspective.

*For more information on efforts to engage with Aboriginal communities affected by the Northern Gateway Pipelines Project, please see the Canada—Enbridge Northern Gateway Pipelines Project section of SO1/SO9/SO10 in this report.*

The formal regulatory review process for the Northern Gateway Pipelines Project included a public review process that began in 2012 and is expected to conclude by mid-2014. In its entirety, the public review process involved 88 expert witnesses, 221 interveners, 12 government participants, 5,680 letters of comment and 1,100 oral statements. The JRP is expected to issue its recommendations by the end of 2013. The Federal Crown Consultation Coordinator (the Canadian Environmental Assessment Agency) will then consult with First Nations on the JRP recommendations and report back to the Government of Canada, which is expected to issue its final decision on the project by mid-2014.

In September 2012, the Government of British Columbia issued five conditions that it believes the Northern Gateway Pipelines Project must satisfy. And, in April 2013, the JRP issued 199 potential conditions for the project and will table final recommendations in December 2013.

Environmental, Aboriginal and community groups opposing the Northern Gateway Pipelines Project have a number of reasons for doing so. Among them are concerns that it would enable increased oil production, export and consumption that would, in turn, lead to increased climate impacts and risks; and that it would increase the risk of marine and on-land oil spills that would result in significant negative social, cultural, economic and environmental impacts.

In response to the conditions that have been put forward by the JRP and the Government of British Columbia,

as well as input provided by interveners in the public review process, Enbridge has incorporated, and continues to incorporate, changes to the project.

Some of the protests regarding the Northern Gateway Pipelines Project over the course of 2012 and early 2013 were:

- In February 2012, more than 600 protestors marched in the streets of Prince Rupert, British Columbia, to oppose the project.
- On March 26, 2012, approximately 750 people took part in an anti-project rally outside Enbridge's Vancouver, British Columbia, offices, and on March 31, 2012, a similar number of people protested outside a recreation centre in Comox, British Columbia, while the JRP heard presentations inside.
- On May 9, 2012, several hundred protestors peacefully marched to the King Edward Hotel in Toronto, Ontario, where Enbridge was holding our annual general meeting. With media in attendance, the protestors chanted and drummed in the street outside the hotel.
- On January 15, 2013, five protestors disrupted the JRP hearings taking place in Vancouver, British Columbia.
- On January 28, 2013, more than 200 protestors gathered in Kelowna, British Columbia, as the JRP held a one-day closed-door hearing on the project.

In response to specific concerns articulated by Aboriginal communities and community and environmental stakeholders, as well as to the general level of opposition to the project, we expanded our engagement activity in 2012 and 2013 to seek additional opportunities for discussion, problem solving and innovation. These efforts resulted in further changes to safety measures, routing, environmental risk mitigation and our strategies for local benefits and inclusion.

In 2012, the Northern Gateway Pipelines Project also facilitated three rounds of regional Community Advisory Board (CAB) meetings in Grande Prairie, Edmonton, Prince George, Terrace and Kitimat and, in June 2012 hosted the annual CAB Sharing Table and Conference in Richmond, British Columbia. The Northern Gateway Pipelines Project also continued its discussions around the Aboriginal Economic Benefits Package that it announced in 2010.

*For more information on efforts to engage with Aboriginal communities affected by the Northern Gateway Pipelines Project, please see the Canada—Enbridge Northern Gateway Pipelines Project section of SO1/SO9/SO10 in this report.*

### **Line 9 Reversal Project**

Enbridge's Line 9, the 194-kilometre (121-mile) 9A portion of which runs from Sarnia, Ontario, to North Westover, Ontario, and the 639-kilometre (397-mile) 9B portion of which runs from North Westover, Ontario, to Montreal, Quebec, was originally built in the 1970s to supply eastern Canadian markets with western Canadian crude oil. Enbridge has been operating the line safely and reliably since 1976.

Enbridge reversed the line in 1999 as oil imports became more affordable. As a result, refineries in Ontario and Quebec have relied on a significant proportion of imported crude oil from areas such as the North Sea, West Africa and the Middle East (Quebec's two remaining refineries currently process about 90 per cent foreign-sourced crude). However, because western Canadian crude oil is currently priced lower than foreign-sourced crude oil, Enbridge, along with Ontario- and Quebec-based refiners, developed a plan to re-reverse Line 9 to enable western Canadian oil to again supply eastern Canadian markets.

The reversal of Line 9A was the first phase of the project. Enbridge submitted an application to the National Energy Board (NEB) for this portion of the project in August 2011, and the NEB approved it in July 2012. Enbridge is currently conducting the work associated with this first phase.

The proposed reversal of Line 9B is the second phase of the project. Enbridge filed an application with the NEB for this second phase in November 2012, proposing at the same time to expand the capacity of Line 9B from 240,000 bpd to 300,000 bpd, and to have permission to use the line to transport a mix of light crude oil and diluted bitumen, with the majority of the oil transported being light. The NEB judged the application complete in December 2012, and set oral final argument hearings for Line 9B in October 2013 in Montreal, Quebec (October 8 to 11, 2013), and Toronto, Ontario (October 16 to 19, 2013). A final decision from the NEB is expected in early 2014.

In 2013, the Government of Quebec announced that it would conduct its own review of Enbridge's Line 9 Reversal Project, and launched its public hearings on November 26, 2013.

Opposition to the Line 9A and proposed Line 9B reversals is based on concerns about oil production and climate change, oil sands and corrosivity, pipeline integrity and the risk of spills, local oversight and involvement in

safety and emergency response planning, and the adequacy of the NEB review process.

On June 20, 2013, approximately 18 protesters occupied an Enbridge pumping station for almost a week, some chaining themselves to a fence, in an effort to stop construction at Enbridge's North Westover, Ontario, terminal, which was approved to be built under the NEB ruling approving the Line 9A reversal.

As with the Northern Gateway Pipelines Project, controversy over the Line 9 project reflects the changed public environment we must now operate in to secure project approvals and public acceptance. In response we are adopting a more proactive and rigorous approach to consultation and engagement. This includes presentations to municipal governments, open houses and information sessions along our right-of-way, meetings and collaborations with emergency first responders at the local level, and meetings and collaborations with community and non-profit organizations.

### **2010 Line 6B Spill near Marshall, Michigan**

In July 2010, Enbridge's Line 6B pipeline ruptured, causing a major oil spill into the Kalamazoo River near Marshall, Michigan. Since the time at which the spill took place our goal has been to: comply with all requirements mandated by the U.S. Environmental Protection Agency, restore the area to as close as possible to its pre-existing condition, and take all of the internal steps required to ensure an incident of this nature does not occur again in our system. Throughout 2012 and 2013 we continued our clean-up efforts at Marshall, and continued to engage with the Marshall community.

On June 24, 2013, an individual protesting oil pipelines and spills disrupted the rebuilding of Enbridge's 6B pipeline south of Marshall, Michigan (close to where the pipeline ruptured in 2010), for several hours.

*For further information on Enbridge's clean-up and community relations efforts regarding our 2010 Line 6B spill near Marshall, Michigan, please see the Community Partnerships & Investments section of SO1/SO9/SO10 of this report, the Part 3: Liquids Pipelines section of EN23-EN27 of this report, and EN23-25, Significant Spills Summary—Liquids Pipelines—July 2010 to July 2012, of Enbridge's 2012 CSR Report.*

## **SUPPLY CHAIN MANAGEMENT**

### **Guiding Principles**

Enbridge's supply chain management activity is primarily carried out by the following business units:

- Liquids Pipelines (LP)
- Major Projects (MP)
- Gas Distribution (GD)
- Gas Transportation (GT)

The policies, practices and procedures that these business units use are currently relatively distinct from each other, although efforts are under way to better align and coordinate them. One of the first steps toward achieving this alignment has been the recent formation of an enterprise-wide Supply Chain Council, consisting of procurement leaders from each of the business units noted above. This council will pave the way for the development of a comprehensive and consistent approach to supply chain management throughout Enbridge.

In addition to forming the Supply Chain Council, the business units noted above have also incorporated Enbridge's core values—Safety, Integrity and Respect—and our Statement on Business Conduct into their supply chain management policies, practices and procedures. As just one example, MP has adopted a Supply Chain Management Protocol that states that all supply chain management activities must be conducted in an ethical manner that delivers the best value for Enbridge while ensuring adherence to Enbridge's values, Statement on Business Conduct and Compliance Policy.

MP has also incorporated Social License Guiding Principles for Enbridge Projects that state that:

Enbridge's commitment to Corporate Responsibility performance goes beyond compliance with regulations, to living our values and engaging stakeholders in ways that are beneficial to both the company and our stakeholders. It is evident that our customers, investors, internal and external stakeholders, landowners, the

public, suppliers and regulators want to deal with responsible and reputable organizations that continue to earn and maintain their social license to operate. Enbridge is committed to meeting or exceeding their expectations.

Enbridge has established principles and policies in various areas that provide guidance on the way we relate with communities and the stakeholders affected by our activities. These statements of principle and policies are listed below:

- [Enbridge Values—Integrity, Safety and Respect](#);
- [Enbridge's Statement on Business Conduct](#);
- [Enbridge's Corporate Social Responsibility Policy](#);
- [Enbridge's Aboriginal & Native American Policy](#);
- [Enbridge's Environment, Health & Safety Commitment](#);
- Enbridge's Safety and Environmental Guidelines for Contractors;
- Enbridge's Environmental Guidelines for Construction; and
- Enbridge's Major Projects Environment Policy.

Compliance with these policies and statements of principle is a condition of conducting business with and on behalf of Enbridge.

### **Pre-qualification**

For many years, LP, MP and GT have used ISNetwork (ISN), a global resource for connecting corporations with safe, reliable contractors and suppliers, as a prequalification standard for service-providing suppliers, and GD has started to incorporate the use of this resource, too. Through ISN, GT is also a member of the Facility Audit Network (FAN) through which five pipeline companies agree to perform standardized audits of contractors and share the results with the other members.

In addition, in 2012, LP established a Prequalification Committee consisting of a diverse range of leaders representing LP and MP Supply Chain Management, Engineering, Operations, Control Systems and MP Quality. The committee provides an important forum to obtain input into supplier pre-qualification and disqualification processes, and for the group to share emerging issues. It also ensures that Enbridge's standards regarding safety, quality, human rights and environmental practices are upheld throughout the supply chain.

For its part, GD employs a Vendor Policy that outlines the qualifications that suppliers must have before they can be hired. These qualifications include financial stability, product quality, technical competence, quality assurance programming, and adherence to Enbridge's [Corporate Social Responsibility Policy](#). GD's Vendor Policy also includes criteria on how GD must select and evaluate suppliers, and the environmental responsibility criteria that suppliers must meet.

### **Contracts**

Some of Enbridge's supplier contracts, in addition to incorporating our [Statement on Business Conduct](#), also incorporate scorecards focused on financial and non-financial criteria. For example, MP employs Master Service Agreements (MSAs), which incorporate scorecards based on safety, quality, corporate responsibility, financial, environmental, noise level and customer service objectives.

Similarly, GD uses Extended Alliance contracts to govern its relationships with its three largest suppliers (which include a customer services firm and two large pipeline construction companies). These contracts include scorecards for safety, quality, customer care, and delivery-related objectives. GD gives each objective a weighting and a target score, and then scores each supplier against the objectives. The supplier's actual score becomes a variable that determines the rate at which EGD pays the supplier. In areas where the supplier does not meet objectives, GD meets with the supplier to discuss appropriate corrective actions.

Suppliers with Extended Alliance contracts must also meet regularly with GD, undergo various types of audits (quality assurance audits, for example), and meet the requirements of GD's stringent quality assurance program.

### **Supplier Development/Relationships**

While all of Enbridge's business units have always maintained informal relationships with their suppliers, most of them are also developing formal meetings with key suppliers to ensure that existing agreements and supplier performance are reviewed, tracked and updated on a regular basis. For example, MP has created formal governance structures between Enbridge and key MP suppliers, such that their performance can be tracked and improved, and such that MP can better manage its supplier relationships (which include senior executives from both

MP and from suppliers).

In addition, in June 2013, LP and MP joined forces to hold their first-ever supplier forum, with the goal of building and renewing sustainable supplier relationships. The day-long forum, which was held in Calgary, Alberta, involved approximately 100 representatives from about 65 of LP's and MP's key suppliers of materials and services.

The forum underscored the reality that the market for materials and services is tight, and that, in order to obtain quality service providers and good suppliers, Enbridge must be a customer of choice. The forum also highlighted the reality that, in order for Enbridge to maintain our social license to operate, our suppliers must be aligned with our values and of our expectations for quality and timely delivery.

Enbridge plans to host similar supplier events in the future in both Canada and the U.S.

### **Safety Roundtables**

Because safety is one of Enbridge's values, we have a vested interest in ensuring that this value is extended to our suppliers of services and materials. As such, Enbridge has begun to involve our suppliers in industry-organized safety roundtables.

The principal safety roundtable that Enbridge participates in is the Pipeline Construction Safety Roundtable (PCSR), which helps Enbridge raise the overall caliber of safety among pipeline owners and main-line construction contractors.

Enbridge understands that many of the major contractors we hire are also being hired by other North American companies. By inviting all of the parties to join the conversation on how best to organize practices, training, equipment safety and leadership competency, Enbridge can help turn good practices into industry standards.

### **Restricted-party Screening**

Working with Enbridge's Law department, MP, GD and GT are cross referencing the suppliers with which Enbridge does or intends to do business against various databases to ensure that suppliers who have behaved in a socially irresponsible manner anywhere in the world are screened out. This recent initiative has proved invaluable because it allows us to be aware of supplier restrictions on an enterprise-wide basis.

LP screens its suppliers with the assistance of Enbridge's Risk, Compliance and Law departments.

### **Next Steps**

With Enbridge's business units at varying stages of development with respect to supply chain management, Enbridge will continue to work through the enterprise-wide Supply Chain Council to develop a comprehensive and consistent set of policies and practices to govern this important aspect of our business.

## ***ENTERPRISE SECURITY***

### **Security Management Standard**

To meet the requirements of the U.S. Transportation Security Administration (TSA) *Pipeline Security Guidelines* adopted in December 2010, and the Canadian Standards Association *Z246.1-09 Security management for the petroleum and natural gas industry systems* (September 2009), Enbridge's Enterprise Security group has developed a Security Management Standard. This Standard applies to all onshore transmission and distribution pipeline assets for both natural gas and liquids. The Standard brings a risk-based approach to the application of security measures throughout the company and provides criteria that business units use to assess security risks to their personnel and facilities. In addition, it establishes baseline security risk reduction measures that should be implemented at each facility—commensurate to the identified risk.

Enterprise Security provides oversight to Enbridge's business units in the development of their business-specific security programs and policies and in the conduct of physical security assessments of their operations and facilities. In addition, Enterprise Security acts as the enterprise-wide security liaison for enforcement and regulatory agencies in Canada and the U.S. and participates on behalf of the enterprise in various industry and federal government-sponsored security committees and security advisory groups in Canada and the U.S.

### **Foreign Travel Protection Policy**

While traveling to, within or from countries other than Canada and the U.S. for business purposes, Enbridge employees and contractors may be exposed to greater risks to their personal security. The purpose of the Foreign Travel Protection Policy is to reduce the exposure to personal security risks potentially faced by employees and

contractors while traveling to a foreign country on Enbridge business. The policy considers the security of personnel and provides a mechanism by which information can be delivered to the employee about issues affecting their security.

Enterprise Security's responsibilities under this policy include ensuring employees receive the appropriate and necessary pre-departure briefings, facilitation of the requisite security arrangements when necessary, as well as the debriefing of the traveler following travel, as required. The Expatriate Protection Policy mandates that employees and family members be made aware of the security issues that may affect their personal security while residing and working in a foreign country and further, was designed to reduce their exposure to personal security risks. As determined by Enterprise Security, the expatriate employee and family may be subject to additional country-specific security requirements dependent on the location of their assignment.

## ***ENBRIDGE'S 2013 CSR REPORT***

The following three sections of this report focus on Enbridge's Environmental, Social and Economic Performance. The Social section is further divided into Labour Practices and Decent Work, Human Rights, Society and Product Responsibility. Each of the main three sections includes a scorecard highlighting Enbridge's objectives and performance in key areas deemed to be of high stakeholder interest and high business impact, as well as information pertaining to Materiality and the Performance Indicators prescribed by the Global Reporting Initiative (GRI) G3.1 Sustainability Reporting Guidelines.

# ENVIRONMENTAL PERFORMANCE

**“Nothing is more important to us than the safe delivery of energy that millions of people rely on.” – Al Monaco, President and CEO**

Millions of people across North America rely on Enbridge every day to transport, generate and distribute the energy they need for their daily lives.

And while we know that pipelines remain the safest and most reliable way to transport the huge volumes of energy that society demands, we also know that the safe transportation of fossil fuels remains firmly on the public and regulatory agenda.

Notwithstanding a record of continually improved safety performance across all modes of transport (pipelines, rail and tankers), there is growing concern over the public safety and environmental risks associated with transporting fossil fuels. In some cases, this concern manifests itself in the form of well-organized opposition from groups opposed to energy development, including oil sands development and shipment of production from oil sands regions. This opposition is having an impact on the reputation of energy and pipeline companies alike, including Enbridge.

The public wants to know what's being done to continually improve—to prevent incidents, improve safety and reduce our industry's environmental impact. When public concerns are raised about Enbridge's projects and operations, we endeavour to respond to and resolve issues through transparent public engagement, education and communication.

## **Becoming an High Reliability Organization**

Enbridge is striving to be a North American leader in pipeline and systems integrity, process safety, and environmental responsibility. We're on a Path to Zero—zero incidents and zero injuries—and we're taking tangible action to reach that goal.

We've re-organized Enbridge to ensure we're constantly focused on our core business priorities of safety and operational reliability.

Our Operations Integrity Committee is chaired by Enbridge's President and CEO and is the most important executive committee in the company. Our Operational Risk Management Plan, which is a road map of programs that are required to achieve and sustain Enbridge's industry-leading position, is as important to us as our Strategic Plan.

We're focused on transitioning Enbridge to being a High Reliability Organization (HRO) like the airline, nuclear, chemical processing and aerospace industries.

To make that transition, we're adopting an HRO mindset.

HROs look at all situations through a process-safety lens, and refuse to accept that any incident is inevitable or acceptable. For HROs, the consequences of failure are always top of mind; disciplined processes are developed, implemented and continuously improved; strong safety cultures are cultivated; and operational reliability is extremely strong.

We're continuously focusing on safety—from design to construction to operations—and stepping up our efforts to reduce operational risks. This focus includes efforts to further prevent spills and releases from our energy transportation and distribution systems.

To mitigate risks, we're ensuring that we have multiple defenses in place to prevent incidents; adequate ability to monitor and detect anomalies during design, construction and operation; and the ability to over respond in the event of an incident.

HROs also rely on advanced technology, and Enbridge is investing heavily in the tools, technologies and strategies that will ensure our energy transportation and distribution systems have the strength to continue to perform safely, reliably and in an environmentally responsible manner. In 2012, our company-wide capital

investment in systems integrity and maintenance was approximately \$2.0 billion, and in 2013, we expect it to reach approximately \$2.4 billion. Innovations that we're evaluating and investing in include: real-time leak detection technologies; ultra-high-sensitivity gas-leak monitoring systems; advanced aerial leak-detection technologies; gas-sensing technology for use on above-ground storage tanks; and leak-response technologies.

Enbridge is also taking a leadership position in the pipeline industry in both Canada and the U.S. Through sponsorship and technical leadership of joint industry research projects, we've actively pursued improvements to both pipeline in-line inspection technologies and engineering models that characterize the pipe condition. This work has provided our industry with improved methods of managing mechanical damage to pipelines. We're also an active participant in numerous industry technical committees and working groups—improving codes and standards; enhancing the current body of knowledge about pipelines; and advocating for areas of focus for research and development. These efforts can further promote a “zero spill” culture not only within Enbridge, but also in the greater pipeline community.

### **Climate Change**

Other areas of public concern today are climate change, GHGs, and the pace and scale of society's transition to a lower carbon economy.

Enbridge recognizes that climate change is a critical global issue. Through our [Climate Change Policy](#), we acknowledge that dealing with climate change is a shared responsibility with implications for citizens, governments and business. Enbridge is committed to being part of a collaborative solution. We recognize that meaningful GHG reductions will require governments to collaborate with both industry and the consuming public to establish clear, realistic GHG emissions objectives, public policies and effective regulations.

Enbridge is actively participating in society's transition to a lower carbon intensive economy, and has taken significant steps to lower our own GHG impacts and help our gas distribution customers lower their impacts.

Since our initial investment in a wind farm in 2002, we've invested more than \$3 billion in wind, solar, geothermal, waste heat recovery, and a host of other alternative energy technology projects that, together, have the capacity to generate over 1,700 MW of emissions-free energy— enough to meet the annual needs of approximately 566,000 homes and result in the avoidance of approximately 1.6 million tonnes of GHG emissions each year.

And we're not stopping there. We plan to double our renewable and alternative energy production capacity in the five years from 2011 to 2016.

We're also investing in energy innovation. For example, as society generates more renewable energy, industry needs to find a way to store it during non-peak demand hours. That's why we're investing in technologies that support large-scale electricity storage.

In addition to contributing to a cleaner energy future, our renewable energy investments are a key component of Enbridge's plan to achieve a neutral environmental footprint as we grow our operations. Through our Neutral Footprint commitments, which began in January 2009, we've formally committed to planting a tree for every tree we remove and helping to conserve an acre of natural habitat for every acre we permanently alter when building new energy infrastructure, as well as generating a kilowatt hour of renewable energy for every kilowatt hour of additional energy our operations consume. Our Neutral Footprint commitments are voluntary and are applied and integrated into all of our projects and operations.

*For the current status of our Neutral Footprint commitments, please see our [Neutral Footprint dashboard](#). For a complete summary of our Neutral Footprint commitments, please see Part 7 of section EN23-EN27 of the Environmental Performance chapter of this report.*

As Canada's largest local gas distribution utility, we're also committed to helping our customers use energy wisely. Enbridge Gas Distribution has more than 30 programs that encourage its customers to adopt energy-saving equipment and reduce their consumption of natural gas. Since 1995, these programs have resulted in net energy savings to customers of about \$2.3 billion; helped customers reduce their natural gas cumulative consumption by about 7.1 billion cubic metres—the equivalent of enough gas to supply approximately 2.76 million homes for one year; and avoided approximately 13.4 million tonnes of carbon dioxide emissions.

People place their trust in companies like Enbridge to deliver their energy safely, reliably and responsibly, and that will always be our number one priority in everything we do.

**ENVIRONMENT—GOALS AND PERFORMANCE**

<i>Environmental Scorecard Results</i>				
Objectives	2012 Results	2011 Results	Details available in GRI Performance Indicator Section	Challenges
Reduce direct GHG emissions	<p>Enbridge Gas Distribution (EGD) completed its multi-year, multi-million dollar cast iron pipe replacement program in Ontario, through which EGD has reduced annual GHG emissions by approximately 122,000 tonnes of carbon dioxide equivalent since 1990.</p> <p>EGD has established a new target of 5 per cent reduction of carbon dioxide equivalent per customer by 2015.</p> <p>Enbridge's Gas Transportation business unit in the U.S., using a 2015 baseline, will target reducing direct methane emissions by 5 per cent by 2020.</p>	<p>Enbridge confirmed that we had met our target to reduce Canadian direct GHG emissions to 20 per cent below 1990 levels by 2010.</p>	EN18	<p>Increased demand for energy</p> <p>Operational growth</p> <p>Diversity of operations</p> <p>Have already secured the “easy” reductions, so the next round of reductions will be more difficult to achieve</p>
Develop enterprise-wide carbon data and GHG management strategies	<p>An Emissions Data Management System (EDMS) has been developed and is being rolled out; once in operation, EDMS will generate a baseline for each Enbridge business unit from which reduction targets will be established.</p>	<p>Continued implementation of Emissions Data Management System, which we now aim to have operational before the end of 2012 in Canada and before the end of 2013 in the U.S.</p>	EN18	<p>Operational differences between jurisdictions</p> <p>company-wide growth</p> <p>Design and installation difficulties of the Emissions Data Management System, resulting in implementation delays</p>
Develop enterprise-wide emissions data management system for criteria air contaminants	<p>The system has been developed and is being tested.</p>		EN20	
Help customers use energy wisely through demand-side management programs	<p>Saved about 62 million cubic metres of natural gas, enough to supply approximately 24,000 homes with natural gas for a year. Since their inception in 1995, these programs have helped our customers avoid approximately 13.4 million tonnes of carbon dioxide emissions.</p>	<p>Saved about 77 million cubic metres of natural gas, enough to supply about 25,000 homes with natural gas for a year.</p>	EN5; EN26/EN27	<p>Enbridge can encourage customer efficiency but cannot enforce it</p>

<i>Environmental Scorecard Results (continued)</i>				
Objectives	2012 Results	2011 Results	Details available in GRI Performance Indicator Section	Challenges
<p>Invest in renewable and alternative energy technologies, with the aim of doubling Enbridge's clean energy capacity in the five years from 2011 to 2016</p>	<p>Completed Phase 1 of the 308-MW Lac Alfred Windfarm, in which we hold a 50 per cent interest. The 150-MW Phase 1 was put into service in January 2013, and phase 2 is expected to be operational by December 2013.</p> <p>Acquired a 50 per cent interest in the 153-MW Massif du Sud Windfarm in Quebec, which began delivering emissions-free energy to the Quebec grid in January 2013.</p> <p>Acquired a 100 per cent interest in the 50-MW Silver State North Solar Project near Las Vegas, Nevada.</p> <p>The 35-MW (22-MW net) Neal Hot Springs Geothermal Project in Oregon became operational in November 2012.</p> <p>Invested in Genalta Power, which owns and operates independent power plants that produce and sell environmentally friendly electricity from waste energy sources.</p> <p>Entered into a partnership with Hydrogenics Corporation, whose water electrolysis technology will convert surplus renewable energy into ultra clean burning hydrogen gas.</p> <p>In early 2013, made an equity investment in Temporal Power, an Ontario-based developer and manufacturer of electrical energy storage systems.</p> <p>In April 2013, secured a 50 per cent interest in the development of the 300-MW Blackspring Ridge Windfarm in Alberta, which will be the largest wind project in western Canada when operational.</p> <p>In July 2013, acquired a 50 per cent interest in the 82-MW Saint-Robert-Bellarmin Windfarm in Quebec.</p>	<p>Completed 250-MW Cedar Point Windfarm in Colorado.</p> <p>Completed 99-MW Greenwich Windfarm in Ontario.</p> <p>Acquired 50% interest in 308-MW Lac Alfred Windfarm in Quebec.</p> <p>Completed 15-MW Amherstburg II Solar Project.</p> <p>Acquired 5-MW Tilbury Solar Project.</p>	<p>EN6</p>	<p>Identifying opportunities and applying technologies</p> <p>Competitive rates of return for renewable and alternative energy projects</p> <p>Storing energy generated by renewable sources</p>

<i>Environmental Scorecard Results (continued)</i>				
Objectives	2012 Results	2011 Results	Details available in GRI Performance Indicator Section	Challenges
Lead climate change solutions	<p>Since an initial investment in a wind farm in 2002, Enbridge has invested more than \$3 billion in wind, solar, geothermal, waste heat recovery and a host of other alternative energy technology projects. We plan to double our renewable and alternative capacity in the five years from 2011 to 2016.</p> <p>Enbridge entered into a partnership with Hydrogenics to develop large-scale electricity storage.</p> <p>In early 2013, Enbridge made an equity investment in Temporal Power, a developer and manufacturer of electrical energy storage systems.</p> <p>In 2013, Enbridge invested in On-Ramp Wireless Inc., whose technology has the potential to efficiently connect and monitor millions of unconnected sensors, meters and other industrial devices.</p> <p>In 2013, Enbridge invested in Smart Pipe Company Inc., which develops, manufactures and installs high-strength, spool-able, composite high-density polyethylene pipe.</p>	<p>Investments in renewable and alternative electricity generation (see above) and new emerging technologies—carbon capture and storage; bitumen extraction; solar power; run-of-river hydro; compressed natural gas storage; waste heat recovery; geothermal power; fuel cell/turbo-expander; renewable energy storage. (For a description of the above, please see the Innovation section of the Overall Management Approach to Corporate Social Responsibility and EN6).</p>	<p>Re Innovation: Overall Management Approach to CSR</p> <p>Re renewable and alternative energy investments: EN6</p> <p>Re initiatives to reduce GHG emissions: EN18</p>	<p>Uncertainty surrounding proposed GHG regulations and legislation</p> <p>High costs associated with implementing climate change technologies</p> <p>Local opposition to renewable energy projects such as wind and solar farms</p>
<p>Zero significant releases</p> <p>Minimize environmental impacts should releases occur</p>	<p>Company-wide results:</p> <ul style="list-style-type: none"> <li>• 85 reportable commodity (liquids) spills totaling approximately 10,224 bbls, of which 68 had a volume of 10 bbls or less and two were significant. (Enbridge defines “significant spill” as any commodity off-site release that is greater than 100 bbls or entails clean-up costs of \$1 million or more.)</li> <li>• One reportable gas release totaling 4.25 million standard cubic feet.</li> </ul> <p>Our company-wide capital investment in systems integrity and maintenance was approximately \$2.0 billion. In 2013, we expect our company-wide investment in systems integrity and maintenance</p>	<p>94 reportable spills, leaks and releases totaling approximately 2,366 bbls, of which 82 had a volume of 10 bbls or less and one was significant.</p>	<p>EN23-27</p>	<p>While Enbridge’s pipeline and system integrity initiatives contribute to reducing the risk of spills, leaks and releases, these measures cannot completely eliminate the risk. Therefore, Enbridge has comprehensive spill preparedness and response and environmental mitigation plans in place to respond rapidly and completely and minimize environmental impacts if a spill does occur.</p>

	<p>to reach approximately \$2.4 billion.</p> <p>Our Liquids Pipelines business unit conducted approximately 170 in-line inspections and approximately 2,800 integrity digs.</p>			
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<i>Environmental Scorecard Results (continued)</i>				
Objectives	2012 Results	2011 Results	Details available in GRI Performance Indicator Section	Challenges
<p>Ensure no net increase to Enbridge's environmental footprint as a result of new projects in operation between 2009 and 2015. Enbridge's Neutral Footprint commitments: "Tree for a Tree"; "Acre for an Acre"; "Kilowatt for a Kilowatt"</p>	<p>From the start of January 2009 through to the end of the third quarter of 2013:</p> <ul style="list-style-type: none"> <li>• 594,925 trees removed and 804,010 tree seedlings planted; and</li> <li>• disturbed 2,932 acres of natural habitat and helped conserve 51,543 acres (surplus of 48,611 will be applied to future projects)</li> <li>• By the end of the third quarter of 2013, we were forecasting that our power consumption will grow by 3,609 GWh by 2015, while power generated from our renewable energy assets (both existing and under construction) will be 3,795 GWh.</li> </ul>	<p>From the start of January 2009 through to the end of the second quarter of 2012:</p> <ul style="list-style-type: none"> <li>• 545,000 trees removed and 375,000 tree seedlings planted; and</li> <li>• disturbed approximately 1,700 acres of natural habitat and helped conserve 5,260 acres (surplus will be applied to future projects)</li> <li>• By the end of 2011, we were forecasting that our power consumption will grow by 2,668 GWh by 2015, while power generated from our renewable energy assets (both existing and under construction) will be 3,080 GWh.</li> </ul>	<p>EN6 re electricity consumption; EN11-EN15 re land impacts; EN23-EN27, Part 7 re Neutral Footprint commitments</p>	<p>Identification of comparable areas for conservation</p> <p>Development of appropriate partnerships for tree planting</p> <p>The need to increase investments in demand-side management programs that help customers use energy wisely</p> <p>The need to increase investments in renewable and alternative energy technologies</p>

## MATERIALITY

Enbridge's 2013 CSR Report primarily focuses on material issues, i.e. those CSR-related subjects that we have determined are of highest interest to stakeholders and to Aboriginal and Native American groups and have the highest impact on the company.

The matrix below illustrates the Environmental Performance subject areas that we have deemed to be material to Enbridge, our stakeholders and Aboriginal and Native American groups, ranging from less material in the lower left corner and increasing in material importance up to the right corner, where the subjects of highest interest to our stakeholders and highest impact for the company are listed.

Environmental Materiality Matrix				
		Low	Medium	High
Stakeholder Interest	High		<ul style="list-style-type: none"> <li>Air emissions</li> <li>Fines/penalties</li> </ul>	<ul style="list-style-type: none"> <li>GHG emissions</li> <li>Energy use</li> <li>Investing in renewables</li> <li>Spills and releases/ Prevention and response</li> <li>Pipeline integrity</li> <li>Process safety</li> <li>Emergency response</li> <li>Public awareness and communication</li> <li>Compliance with laws and regulations</li> </ul>
	Medium	<ul style="list-style-type: none"> <li>Water use</li> <li>Environmental expenditures</li> <li>Land use</li> </ul>	<ul style="list-style-type: none"> <li>Biodiversity/Habitat protection</li> <li>Reclamation</li> <li>Hazardous waste</li> <li>Pipeline route selection</li> </ul>	<ul style="list-style-type: none"> <li>Remediation</li> <li>Facility maintenance</li> </ul>
	Low	<ul style="list-style-type: none"> <li>Material use</li> <li>Water discharges</li> <li>Non-hazardous waste</li> <li>Transport</li> </ul>	<ul style="list-style-type: none"> <li>Facility design</li> </ul>	
		Business Impact		

Listed below by chapter and/or report section are the Environmental Performance subject areas that we have deemed to be most material to Enbridge our stakeholders, and Aboriginal and Native American groups:

Material Subject Areas	
<i>Environmental Performance</i>	
Material subject	Details available in report section
Energy Use	EN3-EN4
Investing in Renewables	EN6
GHG Emissions	EN18
Spills and Releases/ Prevention and Response	EN23-EN27

Pipeline Integrity	EN23-EN27
Process Safety	EN23-EN27 See also: Social Performance chapter, Part 1 → Labour Practices and Decent Work → Goals, Approach and Performance → Health and Safety Management
Innovation	Overall Management Approach to Corporate Social Responsibility → Innovation
Emergency Response	EN23-EN27 See also: Social Performance chapter, Part 1 → Labour Practices and Decent Work → Goals, Approach and Performance → Health and Safety Management  See also: Social Performance chapter, Part 3 → SO1 → Community and Landowner Relations
Public Awareness and Communication	SO1 → Community and Landowner Relations
Compliance with Laws and Regulations	Overall Management Approach to Corporate Social Responsibility → Compliance and Ethics  EN28  See also: HR3; SO2, SO3, SO8; PR2, PR4, PR7, PR9

## **ENVIRONMENTAL PERFORMANCE INDICATORS**

### **MATERIALS**

#### **EN1**

*Materials used by weight or volume.*

#### **EN2**

*Percentage of materials used that are recycled input materials.*

Across the Enbridge organization, pipe and paper are the two most commonly used materials.

#### **Pipe**

The most significant purchase Enbridge makes is steel pipe, with which we construct our pipelines. 94.7 per cent of the pipe that Enbridge's primary supplier, Evraz Inc. NA, manufactures for us is made from recycled steel. In 2012, Enbridge purchased approximately 200,000 tonnes of pipe from Evraz. This equates to 189,000 tonnes of recycled steel being used.

Enbridge Gas Distribution (EGD) purchased approximately 2,164 tonnes of steel pipe and approximately 982 tonnes of polyethylene pipe in 2012. The recycled content of 900 tonnes of the steel pipe ranges from 25 to 100 per cent, while the recycled content of the remaining 1,264 tonnes of steel pipe is 96.2 per cent. Regarding polyethylene pipe, 51 per cent of total pipe (above 2-inch diameter Nominal Pipe Size) purchased includes up to 30 per cent recycled material.

#### **Paper**

In 2012:

- Enbridge offices in Calgary used approximately 39 tonnes of printing/photocopying paper with 25 tonnes having 30 per cent recycled content.
- Liquids Pipelines' Edmonton offices used approximately 89 tonnes of paper, with 74 tonnes having 30 per cent recycled content.
- Gas Transportation used approximately 52 tonnes of paper.
- For its administrative activities, Gas Distribution used approximately 37.5 tonnes of paper, with 30 per cent recycled content. This is up from 35 tonnes in 2011 but down from 39 tonnes in 2010. In addition, for billing its customers, GD used approximately 5,800 tonnes of paper containing 30 per cent recycled content. To help conserve resources, GD has initiated a paperless billing option for its 2 million customers. By September 2013, approximately 325,000 customers (16 per cent) had signed up for this option.

## **ENERGY**

#### **EN3**

*Direct energy consumption by primary energy source.*

#### **EN4**

*Indirect energy consumption by primary source.*

## **ENBRIDGE'S ENERGY USE IMPACTS**

Enbridge's Liquids Pipelines systems in Canada and the U.S. primarily use electric pumps to move product through its pipelines, while our natural gas gathering, transmission and distribution systems use natural gas as fuel for the compressors that move the gas along their pipelines. Enbridge's gas distribution systems in Ontario, Quebec, New Brunswick and New York State are powered by electricity and natural gas. We use diesel fuel and natural gas to drive pumps in remote locations along the Enbridge Norman Wells Pipeline system in the Northwest Territories.

#### **Direct Energy Consumption**

The table below summarizes direct energy consumption associated with operations of: Liquids Pipelines (Canada); Liquids Pipelines (U.S.); Vector Pipeline (U.S.); Gas Transportation; Enbridge Gas Distribution (EGD); Enbridge's

renewable and alternative energy facilities; and Enbridge's corporate offices. All units in these tables are in gigajoules (GJ).

Liquids Pipelines (Canada) (GJ)	2012	2011	2010	2009
Stationary equipment—natural gas	78,842	83,300	74,033	84,661
Stationary equipment—propane, diesel	51,903	44,535	43,179	35,745
Mobile sources—all fuel types	50,467	48,492	63,103	57,205
<b>Total</b>	<b>181,213</b>	<b>176,327</b>	<b>180,315</b>	<b>177,611</b>

Table note: The above data includes natural gas energy used at Enbridge's Liquids Pipelines offices in Edmonton.

Liquids Pipelines (U.S.) (GJ)	2012	2011	2010	2009
Stationary equipment—natural gas	27,968	79,252	52,237	-
Stationary equipment—propane, diesel	211	82	64	32
Mobile sources—all fuel types	43,523	42,401	40,585	38,352
<b>Total</b>	<b>71,702</b>	<b>121,735</b>	<b>92,886</b>	<b>38,384</b>

Table note: The above data excludes energy data for certain, smaller U.S. offices due to the unavailability of data at these sites.

Vector Pipeline (U.S.) (GJ)	2012	2011	2010	2009
Stationary equipment—natural gas	6,324,572	6,165,554	6,071,251	5,295,566
Mobile sources—all fuel types	1,377	1,425	1,580	1,364
<b>Total</b>	<b>6,325,949</b>	<b>6,166,979</b>	<b>6,072,831</b>	<b>5,296,930</b>

Gas Transportation (GJ)	2012	2011	2010	2009
Stationary equipment—natural gas	34,321,847	-	-	-
Mobile sources—gasoline	98,627	95,200	86,457	137,184
Mobile sources—diesel fuel	504,694	524,867	414,190	153,048
<b>Total</b>	<b>34,925,168</b>	<b>620,067</b>	<b>500,647</b>	<b>290,232</b>

Table note: Regarding "Stationary equipment—natural gas," this is the first time Enbridge has reported this figure. This figure covers energy consumption from all combustion operations at GT's facilities. All equipment is operated using best management practices to maximize efficiency, thus reducing excess emissions from these sources. Best management practices include all recommended routine maintenance, such as oil and air filter changes, along with monitoring the operations of individual engines and ensuring the optimization of operating conditions.

Gas Distribution (GJ)	2012	2011	2010	2009
<b>Buildings and Operations</b>				
Natural gas combustion	522,793	657,359	540,795	480,362
<b>Fleet and Equipment</b>				
Diesel vehicles	46,438	49,073	50,195	46,154
Gasoline vehicles	51,042	53,520	53,499	55,844
NGV (natural gas vehicles)	47,358	45,860	50,847	44,534
<b>Total</b>	<b>667,631</b>	<b>805,812</b>	<b>695,336</b>	<b>626,894</b>

<b>Renewable and alternative electricity generation (GJ)</b>	<b>2012</b>	<b>2011</b>
Stationary equipment—natural gas	7,797	24,786
Stationary equipment—liquid fuels	397	410
Mobile sources—all fuel types	862	907
<b>Total</b>	<b>9,056</b>	<b>26,103</b>
<b>Corporate (GJ)</b>	<b>2012</b>	<b>2011</b>
Stationary equipment—natural gas	17,161	16,798
Mobile sources—all fuel types	21,648	24,597
<b>Total</b>	<b>38,809</b>	<b>41,395</b>

Table notes: Prior to the 2011 reporting year, energy data for Enbridge's Corporate offices were included in the data of the Liquids Pipelines business unit.

Enbridge has not reported immaterial energy use data associated with its offices in two of its Calgary buildings.

### Indirect Energy Consumption

The table below summarizes indirect energy consumption associated with operations of: Liquids Pipelines (Canada); Liquids Pipelines (U.S.); Gas Transportation; Enbridge Gas Distribution; Enbridge's renewable and alternative energy facilities; and Enbridge's corporate offices. Data on electricity consumption on the Vector Pipeline (U.S.) system has not been compiled but it is comparatively minor relative to the direct energy use on this natural gas transmission pipeline operation. All units in these tables are in gigajoules (GJ).

<b>Liquids Pipelines (Canada) (GJ)</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>	<b>2009</b>
Electricity	7,125,134	6,612,792	7,247,633	7,243,904

Table note: The above data includes the electricity used in Enbridge's Liquids Pipelines offices in Edmonton.

<b>Liquids Pipelines (U.S.) (GJ)</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>	<b>2009</b>
Electricity	7,785,871	7,351,434	7,591,274	7,576,462

Table note: The above data excludes energy data for certain, smaller U.S. offices due to the unavailability of data at these sites.

<b>Gas Transportation (GJ)</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>	<b>2009</b>
Electricity	1,371,244	1,968,522	601,758	665,399

<b>Enbridge Gas Distribution (GJ)</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>	<b>2009</b>
<b>Buildings and Operations</b>				
Electricity	64,583	58,724	71,825	73,261

<b>Renewable and alternative electricity generation (GJ)</b>	<b>2012</b>	<b>2011</b>
Electricity	13,727	10,345

<b>Corporate (GJ)</b>	<b>2012</b>	<b>2011</b>
Electricity	10,314	9,146

Table note: Enbridge has not reported immaterial energy use data associated with its offices in two of its Calgary buildings.

## EN5

*Energy saved due to conservation and efficiency improvements.*

Enbridge strives to reduce energy use through efficiency improvements and conservation efforts.

### **Liquids Pipelines**

As products in Enbridge's pipelines and power contracts change, we continually review natural flow rates and line splits for our liquids pipelines. The flow rates and line splits are designed to optimize pipeline operating pressures to match equipment and the types and quantities of products transported. By applying these criteria to pipeline operations, Enbridge works to optimize the operating performance of the system, thus lowering power costs and reducing maintenance. In addition, Enbridge has introduced additives in the pipeline to reduce friction of liquids products and optimize flow.

Indirect emissions from operations are due mainly to the electricity used at pump stations on the liquids pipelines system. There are both operating-cost and GHG-emission-reduction benefits when pumping operations are optimized and when more energy-efficient equipment is used. However, it is difficult to baseline and isolate these savings from other factors such as changing pipeline hydraulics, and therefore this report does not track reductions associated with these capacity increases.

### **Gas Transportation**

Gas Transportation (GT) purchased three Forward Looking Infrared GasFind infrared cameras in 2011 for use in detecting leaks at operating facilities. These cameras are capable of producing real-time images of fugitive emissions leaking from process equipment and piping. GT continued to use these cameras in 2012 to conduct periodic surveys at facilities to identify leaks and other maintenance issues during routine operations, and to verify the integrity of initial construction and repairs at facilities. The ease of use and rapid-scan functionality of the cameras allow for a greater frequency of leak detection surveys at facilities, resulting in more rapid detection of leaking components for repair and reduced gas loss due to fugitive leaks from GT's facilities. An additional two cameras were budgeted for purchase in 2013.

### **Enbridge Gas Distribution**

Enbridge Gas Distribution (EGD) has been proactive in reducing its direct energy consumption by reducing its electricity and gas requirements to run its owned and leased buildings. These actions have resulted in dramatically reducing EGD's gas and electricity usage, including the reduction of the EGD head office's 2012 electrical consumption by 80 per cent from the 1990 base. This is attributable to a number of industry-leading, energy conservation projects including self-generation of electricity through a fuel cell/turbo-expander that operates from energy that is recovered from a natural gas pressure reduction station, and which provides about 65 per cent of EGD's head office's electricity requirements. Enbridge launched the world's first integrated energy recovery and fuel cell power plant at EGD's head office building in Toronto in 2008.

Actions taken to reduce direct energy consumption at EGD's head office building include: reusing waste heat from the on-site power generation systems for the ongoing building and pipeline operations; and free cooling in the data centres during the winter and shoulder seasons.

Leading by example, EGD designed and completed construction in July 2012 of a new 105,000-square-foot Technology Centre utilizing many new technologies to target significant energy reductions while improving the occupants' comfort. The building achieves energy efficiencies with all LED lighting, efficient building envelope, water capture and re-use, and a white reflective roof. The centre is designed to achieve a LEED<sup>1</sup> Gold rating when built and LEED certification is expected in 2013. EGD is also utilizing the same technologies and improvements to guide the design for its new planned buildings.

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<sup>1</sup> Leadership in Energy and Environmental Design (LEED) is an internationally recognized mark of excellence, providing building owners and operators with a framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions. LEED certification provides independent, third-party verification that a building was designed and built using strategies aimed at achieving high performance in key areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection and indoor environmental quality.

## Demand-side Management

Enbridge is committed to helping customers use energy wisely. Enbridge Gas Distribution (EGD) has a range of demand-side management (DSM) programs designed to meet the needs of our customer groups and market sectors. From homeowners to large industrial facilities, and everything in between, EGD encourages, educates, facilitates and incentivizes customers to adopt energy-savings equipment and operating practices to reduce consumption of natural gas.

EGD does this by:

- Conducting energy audits of residential homes and commercial and industrial facilities to identify opportunities to improve energy efficiency
- Providing financial rebates and incentives to encourage them to adopt energy-saving equipment and practices
- Working with industry and trade associations in various sectors—such as schools, hotels/motels, construction, automotive, food and beverage, and pulp and paper—to promote DSM programs and contribute to industry standards and best practices
- Holding design charrettes to support and educate builders on higher efficiency building options before a shovel hits the ground at a new build site
- Partnering with governments, suppliers and equipment manufacturers to invest in new energy-efficient technologies that benefit ratepayers and enhance the competitiveness of EGD's business;
- Participating in consumer and community events to promote and ensure that program opportunities are well publicized and accessible to all consumers, including low-income earners
- Ensuring that all of EGD's incentives and rebate offers are available on the website for fast and easy review and downloading

In 2012, EGD's DSM programs saved approximately 62 million cubic metres<sup>1</sup> of natural gas, which is enough to supply approximately 24,000 homes<sup>2</sup> with natural gas for a year.

Since 1995, EGD's DSM programs have delivered about 7.1 billion cubic metres of natural gas savings (the equivalent of enough gas to supply approximately 2.76 million homes for one year<sup>2</sup>) and net energy savings to customers of about \$2.3 billion. Through these DSM activities, EGD has helped its customers avoid cumulatively approximately 13.4 million tonnes of carbon dioxide emissions<sup>3</sup>.

As a recognized DSM leader in the natural gas industry, EGD is frequently invited to provide advice on DSM policy and programming. EGD is a model of success in achieving measurable results in conservation activities and has often been recognized in both Canada and internationally for its role in developing effective policy frameworks, cooperation with stakeholders, innovative programming, and significant results. For example, EGD's market transformation programs are focused on facilitating fundamental changes that result in greater market shares for energy-efficient products and services. In one recent example, EGD is actively promoting the use of Drain Water Heat Recovery technology. In most homes, the second largest energy expense is for heating water. However, rather than have all the heat disappear down the drain with the water, these recovery units extract the heat and transfer it back to the cold water going into a home's water heater. This can lead to reduced hot water costs for a homeowner. In Ontario, EGD played an instrumental role in having this technology added to the revised provincial building code, thus providing builders another option for meeting the code.

EGD will continue to research our customers' needs and marketplace trends, and design new approaches and programs in consultation with our stakeholders, thereby delivering value to our customers, shareholders and the environment.

1 2012 natural gas m<sup>3</sup> savings are in the process of being audited, and are subject to final regulatory approval and clearance of accounts with the Ontario Energy Board.

2 Assumes that a typical residential customer uses 2,568 m<sup>3</sup> of natural gas per year to heat their home and water.

3 Assumes that 1.89 kgs of carbon dioxide are emitted for each m<sup>3</sup> of gas that is consumed.

## EN6

*Initiatives to provide energy-efficient or renewable energy based products and services, and reductions in energy requirements as a result of these initiatives.*

The public's focus on conservation and climate change continues to motivate governments to increase their emphasis on energy efficiency and renewable and alternative energy initiatives, including wind, solar, water, biomass, biogas, waste heat, fuel cell/turbo-expander and geothermal energy generation.

Consistent with our vision of being a leading energy delivery company, Enbridge is investing substantially in low-environmental-impact energy sources—both renewable and alternative—that help to reduce GHG emissions and address the issue of global climate change.

Since 2002, we have steadily increased our investments in clean energy projects. In just 11 years, our renewable energy assets have grown from virtually nothing to more than \$3 billion. We plan to double our clean energy capacity in the five years from 2011 to 2016. This is one of the ways we are laying the foundation for a more diversified asset base and continued growth and prosperity for the company.

The majority of Enbridge's renewable energy investments are in wind and solar energy projects. We have grown to the point where today, in Canada, Enbridge is the largest solar energy generator and the second largest wind generator; and we are also a growing player in the U.S. with wind, solar and geothermal investments.

Enbridge also invests in other technologies, projects and companies that will contribute to a cleaner energy future and will achieve returns similar to those realized by Enbridge's oil and gas transportation and delivery operations.

In 2009, Enbridge announced an ambitious plan to stabilize our environmental footprint at January 2009 levels. Please see below in this EN6 section for more information on the "Kilowatt for a Kilowatt" aspect of the Neutral Footprint commitments; and section EN11-15 of this Environmental Performance chapter for more information on the "Tree for a Tree" and "Acre for an Acre" aspects of the initiative. For a complete summary of our Neutral Footprint commitments, please see Part 7 of section EN23-EN27 of this Environmental Performance chapter.

### Renewable and Alternative Energy

Enbridge's renewable and alternative energy portfolio is diversified and growing. We have interests in wind, solar, geothermal and waste heat recovery, as well as a fuel cell/turbo-expander. These facilities have a total generating capacity of approximately 1,745 MW, enough to meet the needs of approximately 566,000 homes. Enbridge's renewable and alternative energy investments also result in the avoidance of approximately 1.6 million tonnes of GHG emissions each year.

The following table provides an overview of Enbridge's current renewable and alternative energy projects that are or will soon be operational. More details about these and other investments are provided below the table:

### ENBRIDGE'S RENEWABLE ENERGY PROJECTS

*(100 per cent owned and operated by Enbridge and our affiliates, except where less than full ownership/operatorship is indicated.)*

Project Name	Type	Generating capacity	Ownership	Location	In-service date
SunBridge	wind	11 MW	Enbridge Income Fund (50%)*	Gull Lake, Saskatchewan	2002
Magrath	wind	30 MW	Enbridge Income Fund (33%)*	Magrath, Alberta	2004
Chin Chute	wind	30 MW	Enbridge Income Fund (33%)*	Taber, Alberta	2006
Cruickshank	wind	8 MW	Enbridge Income Fund*	Bruce County, Ontario	2009
Underwood	wind	182 MW	Enbridge Income Fund*	Bruce County, Ontario	2009
Talbot	wind	99 MW	Enbridge Income Fund*	Chatham, Ontario	2010
Greenwich	wind	99 MW	Enbridge Income Fund*	Dorian, Ontario	2011
Cedar Point	wind	250 MW	Enbridge Inc.	Limon, Colorado	2011
Lac Alfred	wind	308 MW	Enbridge Inc. (50%)	Amqui, Quebec	2012/2013
Saint-Robert-Bellarmin	wind	82 MW	Enbridge Inc. (50%)	Saint-Robert-Bellarmin, Quebec	2012
Massif du Sud	wind	153 MW	Enbridge Inc. (50%)	Chaudière-Appalaches Region, Quebec	2013
Blackspring Ridge	wind	300 MW	Enbridge Inc. (50%)	Vulcan County, Alberta	2014
Sarnia Solar Project	solar	80 MW	Enbridge Income Fund	Sarnia, Ontario	2009 (20 MW) 2010 (60 MW)
Tilbury Solar Project	solar	5 MW	Enbridge Income Fund*	Tilbury, Ontario	2010
Amherstburg II Solar Project	solar	15 MW	Enbridge Income Fund*	Amherstburg, Ontario	2011
Silver State North Solar Project	solar	50 MW	Enbridge Inc.	Primm, Nevada	2012
Neal Hot Springs	geothermal	22 MW	Enbridge Inc. (41%)	Malheur County, Oregon	2012

## ENBRIDGE'S ALTERNATIVE ENERGY PROJECTS

(100 per cent owned and operated by Enbridge and our affiliates, except where less than full ownership/operatorship is indicated.)

Project Name	Type	Generating capacity	Ownership	Location	In-service date
NRGreen Power	waste heat recovery	20 MW	Enbridge Income Fund (50%)*	Saskatchewan	2008
NRGreen Power	waste heat recovery	10 MW	Enbridge Income Fund (50%)*	Alberta	2013
Fuel Cell/Turbo-expander	fuel cell	2 MW	Enbridge Inc.	Toronto, Ontario	2008

\*Through our investment in Enbridge Income Fund and our common and preferred interest in Enbridge Income Fund, Enbridge Inc. retains a 67.8 per cent interest in the Fund.

## ENBRIDGE'S RENEWABLE ENERGY INVESTMENTS

### Wind Power

Enbridge currently has interests in wind farms in Alberta (3), Saskatchewan (1), Ontario (4), Quebec (3) and Colorado (1), which, once all completed, will have a combined total capacity of 1,552 MW. Enbridge's share in these assets equals 1,085 MW.

In 2012, Enbridge saw completion in Quebec of Phase 1 of the 308-MW Lac Alfred Windfarm, in which we hold a 50 per cent interest. The 150-MW Phase 1 reached commercial operations in January 2013, and Phase 2 in August 2013. Also in 2012, Enbridge acquired a 50 per cent interest in the 153-MW Massif du Sud Windfarm in Quebec, which began delivering emissions-free energy to the Quebec grid in January 2013.

In April 2013, Enbridge announced that we had secured a 50 per cent interest in the development of the 300-MW Blackspring Ridge Windfarm in Alberta. Located 50 kilometres north of Lethbridge, Blackspring Ridge will be the largest wind project in western Canada when operational. The project is expected to reach commercial operations in mid-summer 2014.

Then, in July 2013, Enbridge acquired a 50 per cent interest in the 82-MW Saint-Robert-Bellarmin Windfarm in Quebec that reached commercial operation in October 2012. The Quebec wind energy market is the second largest in Canada.

Wind-generated electricity is the fastest-growing sector of electricity generation in North America, as substantial technological advances, cost reductions, renewable portfolio standards and availability of long-term power purchase agreements have enabled such projects to become economically attractive investments.

Enbridge expects future wind opportunities to come through acquiring construction-ready or operational projects, expanding our existing operations and developing new greenfield projects throughout North America.

Today, the wind power projects in which Enbridge has interests have a total capacity to supply approximately 500,000 homes and avoid the emission of approximately 1.3 million tonnes of carbon dioxide per year.

### Solar Power

Enbridge believes that solar energy represents meaningful opportunities for long-term growth. We currently have interests in solar farms in Ontario (3) and Nevada (1) with a combined total capacity of about 150 MW.

Enbridge first entered into solar energy in a significant way in 2009 with our investment in the 80-MW Sarnia Solar facility, one of the largest photovoltaic solar energy facilities in North America.

In early 2011, we acquired two new solar energy projects in Ontario from First Solar, a leading manufacturer of photovoltaic solar panels. The Tilbury Solar Project and the Amherstburg II Solar Project have a combined generating capacity of 20 MW.

In March 2012, Enbridge acquired a 100 per cent interest in the 50-MW Silver State North Solar Project near Las Vegas, Nevada, and starting in May 2012 the output from this utility-scale facility is being sold to NV Energy under a 25-year power purchase agreement.

Today, Enbridge's solar power investments have the capacity to supply approximately 25,000 homes and avoid the emission of approximately 92,000 tonnes of carbon dioxide per year.

### Geothermal Power

Geothermal power, which is recovered from the heat of the earth's interior, supplies just 0.3 per cent of the world's energy needs, but proponents hope to see that figure climb to anywhere from 10 per cent to 20 per cent by 2050. Geothermal is baseload power, which means that it is generated and dispatched to the grid 24 hours a day.

In 2010, Enbridge invested in the 35-MW (22-MW net) Neal Hot Springs Geothermal Project, in Oregon. Developed and operated by U.S. Geothermal Inc., the project became operational in November 2012, delivering electricity to the Idaho Power grid under a 25-year power purchase agreement. The annual yield for the project will be about 191,000 MWh, enough to power about 17,500 homes. Enbridge owns a 41 per cent interest in the project.

## **ENBRIDGE'S ALTERNATIVE & EMERGING TECHNOLOGY INVESTMENTS**

In addition to investing in renewable energy projects, we're also searching the world for and investing in new technologies and businesses that are strategically aligned with Enbridge's business interests.

*Please see the Innovation section of the Overall Management Approach to Corporate Social Responsibility chapter in this report for a full listing of Enbridge's equity and project investments.*

## **ENBRIDGE'S NEUTRAL FOOTPRINT COMMITMENTS—KILOWATT FOR A KILOWATT**

As part of our Neutral Footprint commitments, Enbridge has committed to generating a kilowatt hour of renewable energy for every kilowatt hour of additional energy our operations consume above 2008 levels (January 1, 2009, being the start date for applying our Neutral Footprint commitments). We will fulfill this commitment within five years of the additional energy consumption.

Each year, Enbridge will compile the forecasted power consumption for Enbridge's company-wide operations. Any net increase in power consumption will be counterbalanced by our investments in economically viable renewable energy production. Enbridge will address growth in our electricity consumption on a five-year rolling basis consistent with the long-range planning horizon.

Enbridge's investments in new renewable power generation will, at a minimum, be proportional to the growth in electricity consumption by our operations, beginning January 1, 2009. Because Enbridge's electricity consumption fluctuates from year to year, we base this commitment on our long-term consumption forecast. We are forecasting that our power consumption will grow by 3,609 GWh by 2015, while power generated from our renewable energy assets (both existing and under construction) will be 3,795 GWh. For the current status of our "Kilowatt for a Kilowatt" progress, please see our [Neutral Footprint dashboard](#).

*For a complete summary of our Neutral Footprint commitments, please see Part 7 of section EN23-EN27 of this Environmental Performance chapter.*

### **EN7**

*Initiatives to reduce indirect energy consumption and reductions achieved.*

#### **Organization-wide**

At the end of 2012, Enbridge had 31 active TelePresence video conference rooms. These installations increase efficiency by making it easier for employees to meet virtually face to face, reducing travel, and increasing productivity. In 2012, Enbridge estimates that there were 5,700 scheduled TelePresence meetings, a 27 per cent increase over 2011. This reduced travel by approximately 2,300 trips and 3.6 million kilometres (about 2.2 million miles) of air travel and avoided 147 tonnes of carbon dioxide emissions. To be conservative, we have based these estimates on just one third of the actual usage of the video conference facilities.

#### **Batteries**

Enbridge's business units have battery recycling programs in place. For example, in 2012, Enbridge Gas Distribution recycled almost 8,100 kilograms of batteries, all of which were sorted, processed and recycled, thereby diverting this waste from landfills.

#### **Liquids Pipelines**

Liquids Pipelines has various energy savings initiatives in place, including the following:

##### **Edmonton office**

- Installed energy-efficient lighting
- Motion sensors installed in new meeting rooms to turn out lights when inactive
- Water chillers have been installed to create "plastic-water-bottle-free zones"
- Locker room renovations to promote health and wellness and walking and cycling to work
- Toner cartridges are recycled

##### **Calgary office**

- Printers/copiers use 30 per cent recycled paper and are set to default to 2-sided printing

- Light/motion sensors installed to control lighting
- Water chillers have been installed to create “plastic-water-bottle-free zones”
- Washroom renovations included low-flush toilets and sinks and hands-free flush and sinks for less water use
- Styrofoam-free kitchens
- New carpet tiles are made of recyclable materials
- Locker rooms to promote health and wellness and walking and cycling to work
- Low-flow showerheads

***Superior office***

- Light/motion sensors installed to control lighting
- Restrooms have low-flush toilets and sinks
- Styrofoam-free kitchens

**Gas Transportation**

GT has various energy savings initiatives in place, including the following:

***Houston Office***

- Paper recycling program
- Printers and copiers set to default to 2-sided printing
- Light/motion sensors to control lighting
- Styrofoam-free kitchen initiative
- Toner cartridges are recycled
- Aluminum cans recycled
- The Houston office is located in an LEED Gold rated and Energy Star Certified building.

***Springtown Office***

- Aluminum cans recycled
- Paper recycling program
- Toner cartridges are recycled

**Enbridge Gas Distribution (EGD)**

- Waste diversion rate for 2012 was 66.6 per cent; in addition to the recycling and organic programs, e-waste from EGD’s IT department, tires and wood skids are also diverted from landfill
- Program to recycle pens, permanent markers, highlighters and whiteboard markers
- Backup power for the data centre from the onsite fuel cell/turbo-expander installation
- EGD’s new state-of-the art Technology and Operations Centre, which opened in October 2012, is designed to meet Leadership in Energy and Environmental Design (LEED) gold level designation. Features include: solar panels to heat the building’s water; Light Emitting Diode (LED) lighting throughout; thermally efficient roof, walls and windows; low-profile indoor furniture for optimal access to daylight; and rain water is collected for landscape irrigation. When compared to a facility of similar use built to building code standards, the Centre has been designed to consume 78 per cent less natural gas; consume 68 per cent less electricity; consume 50 per cent less water; and produce 50 per cent less waste.

## **WATER**

### **EN8**

*Total water withdrawal by source.*

### **EN9**

*Water sources significantly affected by withdrawal of water.*

### **EN10**

*Percentage and total volume of water recycled and reused.*

Enbridge does not use water to transport liquid hydrocarbons or natural gas.

During new pipeline construction, Enbridge tries to avoid crossing waterways and wetlands. However, when we must cross them, any disturbances we cause during construction are temporary because we fully restore these areas to their previous states and use a variety of measures to minimize our impacts.

For example, in some instances when our pipelines have to cross water, we employ horizontal directional drilling to bore under water bodies and install thicker walled pipe. Other measures we take include trenching and encasing the pipe in concrete. We also time construction to cause the least impact—for example, during winter when water flow is slow or frozen and biodiversity is seasonally low.

When construction is completed, we conduct hydrostatic testing before the line becomes operational. This involves filling a section of the new line with water, generally withdrawn locally from the environment or from municipal sources when possible, and pressuring that section to check and confirm its functionality. In doing so, we follow company policy and regulatory standards and criteria, which include testing the water before releasing it back into the same watershed it came from or to a sanitary sewer when possible. In 2012, Enbridge Gas Distribution utilized approximately 642,000 litres of municipally treated water for the purposes of hydrostatic testing newly constructed pipelines. This water was then released back into the environment or removed offsite by a waste provider and disposed of in accordance with applicable regulations.

When a pipeline is operational, Enbridge's pipeline integrity programs regularly assess the line both internally, with in-line sensing devices (smart pigs) and externally, with sensing devices and test excavations.

### **Surface Water**

Enbridge has established standards and procedures for managing water runoff from our facilities and during pipeline construction. We have many controls in place and implement others as required by the project or relevant regulatory body. The controls used include berms and containment areas to prevent offsite contamination at facilities, as well as inspection and controlled discharge procedures.

### **Groundwater**

In 2012, Liquids Pipelines continued a system-wide groundwater monitoring program. This program provides regular monitoring of Enbridge facilities to proactively identify potential impacts to groundwater, allowing us to identify potential issues and maintain compliance with regulatory requirements.

Liquids Pipelines also continued its remediation efforts to manage groundwater contamination associated with Enbridge's Hardisty Caverns. Prior to Enbridge's acquisition of the facility, the clay liner used to contain the brine in cavern operations leaked. Enbridge operates deep recovery wells to extract the contaminated groundwater either for reuse in the brine pond as makeup water, or for disposal in an onsite disposal well. The recovery wells serve two purposes: (1) to slowly clean the groundwater by removing the contaminated water; and (2) to hydraulically contain the site, stopping further migration of the brine contamination. Operation of this system was ongoing in 2012.

In 2012, Enbridge continued operation of a groundwater remediation system at our Metiskow, Saskatchewan, station. This system is required to treat groundwater contamination identified at the site. It involves groundwater recovery, treatment and reinjection systems that are designed to contain and treat groundwater contamination.

Enbridge also continued to operate a groundwater recovery and treatment system at the site of a February 2007 leak near Exeland, Wisconsin. This system is successfully recovering groundwater from the site and preventing migration to a local creek. By mid-2011, the extent of groundwater impact had been reduced by 50 per cent.

Enbridge's Gas Transportation (GT) business unit uses small amounts of water for business purposes, primarily for steam generation, amine units, cooling towers and office buildings. Where water is used, GT sources it locally from onsite wells or municipal water supplies. Due to the relatively small volumes of water used by GT, no sources are significantly affected by the water that is withdrawn for use. All of GT's business processes that use water are closed loop systems, resulting in minimal water loss. At this time, GT does not track its total water use.

## **BIODIVERSITY**

### **EN11**

*Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.*

### **EN12**

*Description of significant impacts of activities, products and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas.*

### **EN13**

*Habitats protected or restored.*

### **EN14**

*Strategies, current actions and future plans for managing impacts on biodiversity.*

### **EN15**

*Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk.*

Enbridge views biodiversity conservation as an important part of responsible environmental management and routinely incorporates ways to avoid and conserve wildlife habitat into our project planning and maintenance activities.

In 2009, Enbridge announced a plan to stabilize our environmental footprint. Our Neutral Footprint commitments are designed to reduce Enbridge's environmental impact where it is felt most: on the trees we remove and the natural habitat we permanently alter when building new energy infrastructure, as well as the energy we use to power our operations.

*Please see below for more information on the "Tree for a Tree" and "Acre for an Acre" aspects of the Neutral Footprint commitments. For a complete summary of our Neutral Footprint commitments, please see Part 7 of section EN23-EN27 of this Environmental Performance chapter.*

#### **Enbridge's Approach**

Enbridge always conducts detailed environmental impact assessments for all of our new projects, not only to comply with regulations, but also to meet our own requirements. These assessments include reviewing potential routing alternatives to avoid, minimize, or mitigate our impact on sensitive areas. We also conduct environmental screenings prior to any work on the right-of-way to mitigate potential impacts associated with routine operating and maintenance activities, such as integrity digs.

After consulting with natural resource management agencies, Enbridge may, for example, determine that alignment changes to a pipeline could eliminate or greatly reduce short- and long-term construction impacts. Historically, such measures have enabled Enbridge to protect old-growth forests and avoid disturbing sensitive wetlands and endangered species habitats. An example of this occurred during our Athabasca Twinning Project where the line was re-routed to avoid a snake den.

Enbridge also evaluates water-crossings on a case-by-case basis to minimize impacts to rivers and streams. We incorporate environmental construction procedures into all projects and provide related training or guidelines to employees and contractors.

#### **Mapping Pipelines for Species at Risk**

In Canada, both Enbridge's Liquids Pipelines and Gas Distribution businesses are regulated under the Species at Risk Act (SARA), which aims to protect wildlife species and conserve biological diversity. Liquid Pipelines first mapped their Canadian mainline system in 2004, using digital mapping technology, to identify areas along parts of our right-of-way where there may be species at risk. We regularly update this information to ensure we are working with the most accurate and effective data. This enables environment staff to identify sensitive wildlife habitat at specific locations before we undertake projects or pipeline maintenance activities. Enbridge Gas Distribution (EGD) currently identifies areas where there may be species at risk based on the environmental screening and assessment process. Consultation with regulatory agencies is carried out and mitigation measures are implemented prior to construction or maintenance activities. EGD is currently working with other natural gas distribution companies in Ontario to develop a coordinated approach with regulatory agencies to ensure species at risk are identified and

protected.

In the U.S., Enbridge's mainline segments have digital data regarding threatened or endangered species that are protected under the Endangered Species Act. As well, when Enbridge undertakes major construction or maintenance activities, it incorporates appropriate avoidance measures or restrictions. In preparation for an expansion, Enbridge also surveys the area and takes appropriate measures to limit impact.

### ***Managing Vegetation***

Vegetation management activities at our facilities and on our pipeline rights-of-way focus on using the most environmentally-appropriate and economical ways of keeping our rights-of-way clear for inspection. Our vegetation management plans and procedures stipulate that the visible results and perceived impacts of vegetation management activities on adjacent landowners and the general public must be considered when those activities are being planned and implemented.

### ***Protecting Soils and Waterways***

We are committed to protecting the environmental integrity of soils and waterways in and around our operations, and we have led the development of best practices in preserving agricultural land. As part of this work, we are implementing practices that limit the long-term impact on cultivated lands when developing projects.

### ***Protecting Sensitive Habitats***

For projects, Enbridge analyzes various routing alternatives to determine whether these alternatives would avoid or minimize impacts to natural resources, reduce or eliminate engineering and constructability concerns, and avoid or minimize conflicts with existing or proposed residential and agricultural lands. The alternative analysis focuses on minimizing the length of the pipeline to the extent practicable, while also minimizing the environmental impacts to specific resources. At times, a pipeline route will traverse distinct natural communities. Therefore, Enbridge conducts surveys of the entire project route to identify sensitive natural and cultural resources such as wetlands, water bodies and plant/animal populations. Enbridge utilizes the survey results to identify areas requiring alternative construction techniques, timing restrictions to minimize impacts during breeding or spawning seasons for certain sensitive species, or route variations to minimize or avoid impacts to sensitive plant species. Certain features cannot be avoided and as such stringent conditions from regulators are applied and specific mitigation is set out and approved by various regulatory agencies.

Where sensitive habitats have been identified, Enbridge implements situation-specific operational plans and protocols to minimize impacts to sensitive species. Examples of this include measures to protect Boreal Caribou populations in the Northwest Territories and Alberta, moose habitat along the Athabasca Pipeline system, and the Karner Blue butterfly in Wisconsin. We restrict maintenance activities and implement special precautions to ensure our operations have minimal impact on these species.

Gas Distribution (GD) implements either environmental screening or environmental assessment (depending on project scope) to identify any features that may be impacted by construction or maintenance activities and puts into place mitigation measures to protect them. We use horizontal directional drilling when crossing beneath watercourses, and before doing so always obtains permits from respective conservation authorities and government agencies as required. It further ensures protection of watercourses through regular pipe inspections. GD has been working with various conservation authorities to have approved seed mixes for restoration activities in more environmentally sensitive areas, such as those adjacent to watercourses or wetlands. In 2012, Enbridge Gas Distribution did not conduct any activities in protected areas or areas of high biodiversity; and, apart from an easement on the western edge of Springwater Provincial Park, which is located near Midhurst, Ontario, Enbridge Gas Distribution does not have any pipe installed in environmentally sensitive areas.

In the U.S., some of Gas Transportation's pipelines are located in lakes/navigable waterways and within high bio-diverse land areas. Gas Transportation undertakes all activities in such a way as to ensure that it minimizes impacts and complies with regulations.

### ***Enbridge's Neutral Footprint Commitments***

As part of our Neutral Footprint commitments, Enbridge has committed to: planting a tree for every tree we remove to build new pipelines and facilities; and helping to conserve an acre (or hectare) of land for every acre of natural habitat we permanently alter to build new pipelines and facilities.

These measures will be implemented within five years of the impact occurring.

### **Tree for a Tree**

Enbridge will plant a tree for every tree we remove to construct or expand our facilities or rights-of-way. The trees Enbridge counts and therefore replaces will be of adequate size to be considered “merchantable timber” as defined by the relevant local regulator.

Enbridge will replace trees from either forested or non-forested land (such as brush/scrub, prairie, grassland, alpine, rangeland, meadows, pasture or cultivated land). We will plant them in such a way that we take into account the following priority considerations:

- Enbridge will plant trees to meet regulatory commitments and approval conditions.
- Enbridge will plant trees to maintain slope stability, control erosion, and meet reclamation guidelines and aesthetic requirements.
- Enbridge will plant trees to meet the needs of local communities.

We will not always replace trees in the immediate area of impact, but will take into account land availability, local desire and consent. Since the start of 2009 through to the end of the third quarter of 2013, we had removed approximately 595,000 trees and had planted approximately 804,000 tree seedlings.

*For the current status of our “Tree for a Tree” progress, please see our [Neutral Footprint dashboard](#).*

### **Acre for an Acre**

Enbridge will help conserve an acre of natural habitat for every acre that we permanently alter to build new pipelines and facilities. The natural habitat Enbridge helps to conserve could be forested land, wetlands or native prairie.

Enbridge will help conserve the land by working with the Nature Conservancy of Canada, The Conservation Fund in the U.S. (see below) and other organizations. As such, their guidelines and recommendations will determine how and where the land is conserved, and will ensure that it is of high ecological value.

The land Enbridge helps conserve may not be in the same area or region as the land that is impacted, and may not be “like for like.” Rather, Enbridge and our partners will make conservation decisions based on biological value and availability.

This commitment does not replace or negate Enbridge’s regulatory obligations to reclaim land when it is decommissioning an asset.

Since the beginning of 2009 through to the end of the third quarter of 2013, 2,932 acres of natural habitat have been disturbed and Enbridge has contributed to conserving over 51,500 acres. The surplus will be applied to future projects.

*For the current status of our “Acre for an Acre” progress, please see our [Neutral Footprint dashboard](#). For a complete summary of our Neutral Footprint commitments, please see Part 7 of section EN23-EN27 of this Environmental Performance chapter.*

*Nature Conservancy of Canada / The Conservation Fund*—In early 2010, Enbridge invested \$2.5 million in support of the Nature Conservancy of Canada’s work to preserve and protect important and sensitive natural habitats across Canada. Through this investment, some of the best remaining wildlife habitat in Canada is being conserved. The investment is particularly significant at this time because, thanks to matching funds from sources including the Government of Canada’s Natural Areas Conservation Program, our contribution of \$2.5 million will trigger a conservation impact of more than \$10 million.

Similarly, in the U.S. in late 2011, Enbridge invested US\$3 million in The Conservation Fund, which partners with community, government and corporate organizations to help them fulfill their conservation priorities. This partnership will allow us to meet our acre-for-an-acre commitment in the U.S.

In 2012, a major contribution from our Neutral Footprint budget supported the largest land conservation deal in Wisconsin history. Enbridge and the McKnight Foundation provided funding that allowed the Wisconsin Department of Natural Resources (DNR), the Lyme Timber Company and the Conservation Fund to secure 45,000 acres of forest land in Douglas, Bayfield, Burnett and Washburn counties in Wisconsin. This allowed for the establishment of the Brule-St. Croix Legacy Forest, which includes the headwaters of the St. Croix and Bois Brule rivers and contains dozens of small lakes and ponds. In exchange for the conservation easement payments, the Lyme Timber Company must keep the land undeveloped and open to public access—including for hunting, fishing and hiking—forever. The forest also will be open for sustainable forestry, including logging for the region’s wood products industry. The second phase—another 22,668 acres—is proposed for 2014.

## EMISSIONS, EFFLUENTS AND WASTE

### GHG EMISSIONS

#### EN16

Total direct and indirect GHG emissions by weight.

#### EN17

Other relevant indirect GHG emissions by weight.

#### Note regarding the tables below:

The term “direct” emissions refers to emissions (fugitive, combustion, vented) that result from activities associated with company-owned facilities and from company-owned vehicles and are also sometimes referred to as Scope 1 emissions.

The term “indirect” emissions refers to emissions from purchased electricity where the emissions occur at facilities owned by a third party and are sometimes referred to as Scope 2 emissions.

#### Liquids Pipelines (LP)

The tables below summarize total direct (Scope 1) and indirect (Scope 2) GHG emissions associated with Enbridge's LP operations in Canada and the U.S. The emissions are measured by tonnes of carbon dioxide equivalent (t CO<sub>2</sub>e). In addition, estimated Scope 1 GHG emissions for Vector Pipeline Ltd., which is operated by the U.S. Liquids business unit, are provided in a separate table below.

Scope 1 (t CO <sub>2</sub> e)	2012	2011	2010	2009
Liquids Pipelines—Canada	13,072	12,388	12,367	11,971
Liquids Pipelines—U.S. <sup>1</sup>	4,714	7,282	5,758	2,980
<b>Total</b>	<b>17,786</b>	<b>19,670</b>	<b>18,125</b>	<b>14,951</b>

1 The Scope 1 estimates for the U.S. subsidiaries include vehicle emissions and fugitives (CH<sub>4</sub> and CO<sub>2</sub>) from terminal operations. Line heater, fire pump, and emergency generator combustion-related GHG emissions are also included for Enbridge Energy, Limited Partnership. Currently, the Scope 1 inventory does not include emissions from space heating, water heating, and other small combustion sources; however, these sources are minor in terms of U.S. Liquids' total Scope 1 and 2 emissions profile.

2 The above data excludes emissions data for certain, smaller U.S. offices due to the unavailability of data at these sites.

Scope 2 (t CO <sub>2</sub> e)	2012	2011	2010	2009
Liquids Pipelines—Canada	1,183,013	1,114,698	1,138,296	1,103,801
Liquids Pipelines—U.S.	1,598,450	1,573,849	1,630,793	1,624,746
<b>Total</b>	<b>2,781,463</b>	<b>2,688,547</b>	<b>2,769,089</b>	<b>2,728,547</b>

Scope 1 (t CO <sub>2</sub> e)	2012	2011	2010	2009
Vector Pipeline L.P.	356,396	383,391	377,010	337,586

Table notes: The Scope 1 estimate for Vector Pipeline includes stationary combustion (primarily the gas-fired compressor turbines), vehicles and system vented and fugitive emissions. Scope 2 emissions for Vector Pipeline have not been estimated at this time, but would be comparatively minor relative to the company's Scope 1 emissions profile.

The above data excludes emissions data for certain, smaller U.S. offices due to the unavailability of data at these sites.

## Gas Transportation (GT)

GT implemented a GHG database in 2010 to calculate carbon dioxide equivalent emissions. GT's estimated emissions for 2012 were:

**Scope 1—Direct**—2,194,817 tonnes of carbon dioxide equivalent (t CO<sub>2</sub>e), compared with 2,175,400 tonnes in 2011. GT's Scope 1 estimate for 2012 combines combustion data calculations and estimates based on 2008 emissions data extrapolated to GT facilities extant in 2012. The GHG numbers in this CSR Report will not be the same as those reported by GT to the U.S. Environmental Protection Agency (U.S. EPA) in March 2013 for two main reasons: (1) the numbers in this report reflect emissions from all GT facilities, whereas the U.S. EPA only requires submissions from facilities that exceed reporting thresholds; and (2) the calculation method used for facilities not subject to EPA reporting is different than that used for facilities that are subject to EPA reporting requirements.

**Scope 2—Indirect**—204,936 t CO<sub>2</sub>e, compared with 311,846 t CO<sub>2</sub>e in 2011. The decrease in Scope 2 emissions is primarily due to further refinement of GT's electricity database.

<b>Scope 1 (t CO<sub>2</sub>e)</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>	<b>2009</b>
<b>Gas Transportation</b>	<b>2,194,817</b>	<b>2,175,400</b>	<b>1,020,388</b>	<b>1,077,900</b>
<b>Scope 2 (t CO<sub>2</sub>e)</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>	<b>2009</b>
<b>Gas Transportation</b>	<b>204,936</b>	<b>311,846</b>	<b>95,327</b>	<b>135,000</b>

## Gas Distribution (GD)

GD includes Enbridge Gas Distribution (EGD, in Ontario), as well as three smaller gas distribution companies: Enbridge Gas New Brunswick (in New Brunswick), Gazifère (in Quebec), and St. Lawrence Gas (in and upper New York State). Each of the three smaller companies' emissions is about 1 per cent of those of Enbridge Gas Distribution. However, Enbridge continues to track these emissions by tonnes of carbon dioxide equivalent (t CO<sub>2</sub>e).

<b>Scope 1—Direct Emissions (t CO<sub>2</sub>e)</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>	<b>2009</b>
<b>Gas Distribution</b>	<b>251,387</b>	<b>269,524</b>	<b>319,486</b>	<b>315,806</b>

Table note: A new quantification method was introduced in 2011 for buried pipe fugitive emissions. Prior emissions have not been re-stated and, therefore, cannot be compared.

<b>Scope 2—Indirect Emissions (t CO<sub>2</sub>e)</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>	<b>2009</b>
<b>Gas Distribution</b>	<b>2,872</b>	<b>2,164</b>	<b>2,616</b>	<b>2,653</b>

Table note: The Scope 1 and Scope 2 GHG numbers in these two tables differ by approximately 7 per cent from those we reported to the CDP. This is due to minor data entry changes we made in our carbon data management system since we submitted the data to the CDP.

## Renewable and Alternative Electricity Generation

The following summarizes total direct (Scope 1) and indirect (Scope 2) GHG emissions associated with Enbridge's renewable and alternative electricity generation business unit.

<b>Scope 1 (t CO<sub>2</sub>e)</b>	<b>2012</b>	<b>2011</b>
<b>Renewable and alternative electricity generation</b>	<b>480</b>	<b>1,340</b>

<b>Scope 2 (t CO<sub>2</sub>e)</b>	<b>2012</b>	<b>2011</b>
<b>Renewable and alternative electricity generation</b>	<b>778</b>	<b>892</b>

## Corporate

The following summarizes total direct (Scope 1) and indirect (Scope 2) GHG emissions associated with Enbridge's corporate offices.

<b>Scope 1 (t CO<sub>2</sub>e)</b>	<b>2012</b>	<b>2011</b>
<b>Corporate</b>	<b>2,341</b>	<b>2,509</b>

<b>Scope 2 (t CO<sub>2</sub>e)</b>	<b>2012</b>	<b>2011</b>
<b>Corporate</b>	<b>2,426</b>	<b>2,253</b>

Table notes: Prior to the 2011 reporting year, GHG data for Enbridge's corporate offices were included in the data of the Liquids Pipelines business unit.

Enbridge has not reported immaterial emissions associated with its offices in two of its Calgary buildings.

## EN18

*Initiatives to reduce GHG emissions and reductions achieved.*

### **Carbon Reduction**

Enbridge recognizes that climate change is a critical global issue. Through our [Climate Change Policy](#), we acknowledge that dealing with climate change is a shared responsibility with implications for citizens, governments and business. We recognize that meaningful GHG reductions will require governments to collaborate with both industry and the consuming public to establish clear, realistic GHG emissions objectives, public policies and effective regulations.

A sustainable path for addressing climate change will be characterized by public policies that establish a cost for carbon dioxide emissions and compliance options that focus on promoting both near-term reductions and the advancement of technology for larger, future reductions.

### **Our Targets**

As part of our commitment to conducting business in an environmentally sustainable way, historically we have set targets to lower our Canadian direct GHG emissions.

In 2005, Enbridge achieved our corporate target to reduce our Canadian direct GHG emissions by 15 per cent below 1990 levels. We actually achieved an 18 per cent reduction.

Enbridge subsequently set a new Canadian operations reduction target for the 2010 inventory year of a 20 per cent reduction in direct GHG emissions below 1990 levels and, in 2011, we determined that we had achieved a 21 per cent reduction below 1990 levels, primarily through upgrading facilities and equipment.

Enbridge continues to evolve our Carbon Management Strategy that will include further actions to reduce our own direct emissions. As the majority of our direct emissions emanate from our Canadian Gas Distribution and Services and U.S. Gas Transportation business units, we are focused on finding ways to reduce those emissions. As such, for our Enbridge Gas Distribution (EGD) business unit in Canada (but excluding EGD's storage operations), we have set a direct emissions intensity target of 5 per cent reduction based on 2011 emissions and number of customers (i.e. the metric is tonnes of carbon dioxide equivalent per number of customers) to be achieved by 2015 (i.e. about a 1 per cent per year reduction, which is consistent with our previous target performance for this business unit). Direct emissions make up the majority of emissions for our EGD business unit (see EN 16/17).

Enbridge will set future targets for reducing direct emissions from our assets once we have secured more accurate inventory data to help us establish a more robust baseline.

With regards to completing an emissions inventory, Enbridge has designed and installed an Emissions Data Management System (EDMS). Phase 1, covering GHG emissions, went into operation in the fourth quarter of 2012 and is currently being tested. We expect Phase 2, which will manage criteria air contaminant emissions data, to be operational by the third quarter of 2013. The system will facilitate compliance with emissions reporting requirements in both Canada and the U.S.

Enbridge's Gas Transportation (GT) business unit in the U.S. has set a target of creating a comprehensive GHG emissions estimation methodology across all of its facilities for the 2015 calendar year using Enbridge's newly created EDMS. Using a 2015 baseline, GT will determine whether methane emissions reductions are achievable and if so will set reduction targets.

### **Enbridge Gas Distribution's GHG Reduction Initiatives**

Since the early 1990s, Enbridge Gas Distribution (EGD) in Ontario has undertaken many initiatives to reduce GHG emissions from its natural gas distribution operations. The largest of these operational initiatives historically has been the multi-year, multi-million dollar cast iron pipe replacement program, which was started in the early 1990s and was completed in 2012. Through this program, EGD replaced approximately 1,800 kilometres of aging cast iron and bare steel pipe with coated steel and plastic pipe and reduced annual GHG emissions by approximately 122,000 tonnes of carbon dioxide equivalent.

Ongoing efforts to save energy and reduce GHG emissions from line heater fuel use—for example, the installation of new heater technologies and application of improved temperature control strategies—also continue to yield reductions.

EGD's management of GHG emissions from its operations extends to many other activities that are more difficult to quantify. For example, emissions from third-party damages are reduced through public awareness campaigns, the Ontario One-Call service, our work through the Ontario Common Ground Alliance and installation of excess flow

valves on all new service line installations. Also, newer station designs now incorporate more welded connections, reducing the number of threaded or flanged connections where fugitive emissions can occur.

Approximately 95 per cent of EGD's light-duty fleet vehicles, as well as six of its heavy-duty dump trucks, run on natural gas, reducing EGD's GHG emissions by 460 tonnes of carbon dioxide equivalent per year compared to operating them on gasoline and diesel. Also, EGD continues to try to show leadership through continued efforts to have its buildings become LEED compliant, as is the case with its new Training Centre located in Markham, Ontario.

### **Carbon Dioxide Sequestration**

Carbon capture and sequestration (CCS) involves capturing carbon dioxide from large industrial sources before it is emitted into the atmosphere. Once captured, carbon dioxide can be safely and permanently stored in deep geological formations or injected into mature oil reservoirs to enhance oil recovery.

Enbridge has been involved in several initiatives in Canada that have been investigating the feasibility of the long-term commercial sequestration of carbon dioxide in deep saline aquifers.

Carbon dioxide capture, pipelining and sequestration developments are widely considered to be one of the most immediate, feasible and meaningful ways to reduce GHG emissions on a large scale and address the challenges posed by climate change.

These initiatives could play a major role in advancing industry and government's knowledge of carbon dioxide capture and sequestration.

#### ***Project Aquistore (Saskatchewan)***

Enbridge is a partner in Project Aquistore, a collaborative effort among government, industry and research institutions to demonstrate that storage of carbon dioxide in deep geologic formations is a safe, effective solution for GHG emissions reduction.

This integrated carbon capture, transportation, injection and storage project will see carbon dioxide captured from a source in southeast Saskatchewan. This is targeted to begin in 2014. Approximately 500 to 1,000 tonnes per day will be transported via pipeline for injection into a nearby deep saline formation at 2,000 to 3,000 metres in depth. Results of the project will be available for the benefit of future CCS projects, government policy and regulation development, and for large stationary industries to consider geological storage as an option for mitigating GHG emissions.

The project proponent is Petroleum Technology Research Centre and contributing partners include Sustainable Development Technology Canada, CCRL, SaskEnergy, Enbridge, the Government of Saskatchewan, SaskPower and Schlumberger.

#### ***Project Pioneer (Alberta)***

In April 2012, Project Pioneer's industry partners announced they will not proceed with this CCS project, which was to have been Canada's first fully-integrated carbon capture and storage project involving retro-fitting a coal-fired electricity generating plant.

Project Pioneer was a joint effort by TransAlta Corporation, Capital Power L.P., Enbridge Inc., and the federal and provincial governments to demonstrate the commercial-scale viability of CCS technology.

The first step and an essential part of the project was to prove the technical and economic feasibility of CCS through a front end engineering and design (FEED) study before making any major capital commitments.

Following the conclusion of the FEED study, the industry partners determined that, although the technology works and capital costs were in-line with expectations, the market for carbon sales and the price of emissions reductions were insufficient to allow the project to proceed.

Enbridge brought to Project Pioneer expertise in the design and construction of pipeline infrastructure, as well as extensive knowledge in carbon dioxide sequestration.

#### ***CO<sub>2</sub> Slurry Project (Alberta)***

Enbridge was leading an industry consortium to build a carbon dioxide slurry pipeline in Alberta. In 2012, a study concluded that the project was not economic at this time.

## **OZONE DEPLETING SUBSTANCES**

### **EN19**

*Emissions of ozone-depleting substances by weight.*

While Enbridge continues to use halocarbon-containing equipment (in some vehicles, drinking water fountains, refrigeration and air conditioning systems), we no longer have any infrastructure containing a significant quantity of ozone depleting substances. Enbridge had no reportable releases in 2011.

Liquids Pipelines has an ozone-depleting Substances Environmental Management Plan in place for its Canadian operations. The plan includes phase-out of halon-containing fire extinguishing equipment and a commitment to find alternatives to minimize Enbridge's use of other ozone-depleting substances. Enbridge reviews the plan every three years and updates it as necessary to reflect changes in our inventory and changes in applicable legislation.

Enbridge Gas Distribution does not have ozone-depleting substances in its fire suppressant equipment and reported zero emissions of ozone-depleting substances in 2011.

## **EMISSIONS**

### **EN20**

*NO, SO and other significant air emissions by type and weight.*

#### **Enbridge's Impacts**

The major air emissions released by Enbridge facilities include methane, carbon monoxide, nitrogen oxides (NO<sub>x</sub>) and volatile organic compounds (VOCs). Other contaminants released, but in much smaller quantities, include sulphur dioxide (SO<sub>2</sub>), hydrogen sulphide and particulate matter and hazardous air pollutants such as hexane.

We work to keep air emissions from our operations below regulated limits. In some cases, we have exceeded regulatory requirements and have installed environmentally friendly technologies in our facilities that reduce air contaminant emissions. The largest source of VOC emissions from Enbridge's Liquids Pipelines operations is from tank storage.

#### **Reporting Criteria Air Contaminants**

Criteria air contaminants (CAC) are a group of common air pollutants released from sources, including incineration, industrial production, fuel combustion and transportation vehicles. Enbridge has established programs that define our roles, responsibilities and timelines for reporting our CAC emissions to various government agencies in Canada and the U.S.

In Canada, Liquids Pipelines and Enbridge Gas Distribution track and report annual CAC emissions under the National Pollutant Release Inventory. The air contaminants covered under the regulation include NO<sub>x</sub>, SO<sub>2</sub>, VOCs, carbon monoxide and particulate matter. In the U.S., both Enbridge Liquids Pipelines and Enbridge's Gas Transportation business unit monitor and report on CAC emissions in compliance with state and federal regulations.

#### **Liquids Pipelines**

Enbridge and other industry partners established an ambient air monitoring network to monitor the air quality in and around the tank farm at Hardisty, Alberta. The stations collect and monitor the air quality both continuously and on the National Air Pollution Surveillance schedule. In addition to the air monitoring stations, Enbridge conducts semi-annual head space air sampling on each storage tank to ensure emission-control devices are functioning.

Enbridge is also a member of the Strathcona Industrial Association (SIA), which owns and operates an air monitoring network in the City of Edmonton and Strathcona County. The stations continuously monitor the air quality around Enbridge's Edmonton Terminal.

In the U.S., Enbridge tracks and reports to the Environmental Protection Agency's Toxic Release Inventory and to state regulators on VOC emissions for Liquids Pipelines terminals.

Liquids Pipelines has a rigorous maintenance program in place that includes regular inspections of emission control devices and repair or replacement of them to ensure they meet regulatory criteria.

#### **Gas Transportation**

Enbridge's Gas Transportation business unit is continually looking for opportunities to upgrade its gas facilities and pipelines in ways that contribute to operating, environmental and safety goals. One example is acid gas injection,

which uses advanced technology to compress acid gas, primarily hydrogen sulphide and carbon dioxide, and inject the gases into suitable underground reservoirs, thereby avoiding emissions to the atmosphere.

GT opened its second acid gas injection well near the Aker Treating Plant in 2006. In 2012, the facility injected 28,613.9 tonnes of carbon dioxide and avoided 264.9 tonnes of sulphur dioxide that would have resulted from a traditional gas treating facility.

The following criteria pollutant emissions were reported by the GT facilities that are required to provide emission inventories:

Gas Transportation (tonnes)	2012	2011	2010	2009
CO	1,926	1,816	2,085	2,299
NO <sub>x</sub>	2,795	3,094	3,266	3,745
VOCs	1,647	1,405	1,811	1,044
SO <sub>2</sub>	540	311	764	648

### Enbridge Gas Distribution

In Canada, Enbridge Gas Distribution (EGD) reports annual criteria air contaminant emissions under the National Pollutant Release Inventory (NPRI). The air contaminants covered under the regulation include NO<sub>x</sub>, SO<sub>2</sub>, VOCs, carbon monoxide and particulate matter. In 2012, EGD reported on two locations—Chatham and Corunna, both of which are natural gas compressor stations. Emissions are calculated using emission factors or site/equipment specific data.

Enbridge Gas Distribution (tonnes)	2012	2011	2010	2009
CO	90	152	86	123
NO <sub>2</sub>	110	323	246	199
VOCs	16	22	15	9

## EFFLUENTS

### EN21

*Total water discharge by quality and destination.*

Enbridge does not use water to transport liquid hydrocarbons or natural gas.

We occasionally acquire and discharge water to hydrostatically test the integrity of new or existing pipelines and tanks. Since existing pipeline sections have transported liquid petroleum or natural gas, we analyze and treat this test water, as needed, before returning it to the environment. Water returned to source meets discharge criteria established by local regulatory agencies.

All of Gas Transportation's business processes that use water are closed loop systems, resulting in minimal water loss. At this time, GT does not track its total water use. GT also generates "produced water" from its processing operations. This water is disposed of according to local and federal requirements by injection into disposal wells.

*Please see the Water section (EN8) in this Environmental Performance chapter for more information.*

## **WASTE**

### **EN22**

*Total weight of waste by type and disposal method.*

The bulk of Enbridge's waste consists of non-hazardous wastes such as paper, scrap metals, package materials and construction-related materials.

Enbridge promotes consistent waste management practices across our businesses.

Overall, Enbridge makes every effort to reduce and minimize our waste volumes, regardless of hazard classification, through measurement and management programs at our various facilities. We also try to find beneficial ways to reuse waste by-products.

The development of waste management tracking and training programs helps employees not only meet regulations, but more effectively recover waste.

Following are some examples of Enbridge's waste management and minimization practices:

- Liquids Pipelines' operations in the U.S. provide employees across all of its operating areas site-specific guidance to help ensure sound waste management handling and disposal.
- Liquids Pipelines' Edmonton Facilities Operations team has:
  - Implemented a garbage-bag reduction program in all downtown Edmonton buildings, and to lessen the number of garbage bags thrown away each day by the cleaners, we have asked them to dump the garbage instead and only replace the bags if there is wet garbage
  - Implemented a blue-bag recycling program in the Enbridge Place and Enbridge Tower buildings
  - Switched out standard products offered for kitchen and cleaning (e.g., dish soap, cloths, wipes) with only green alternatives and we are expanding this into other areas such as pens, folders, etc. where possible.)
  - Implemented a TeraCycle program—recycling pens to be up cycled into products for resale
  - Begun providing dishware and flatware for all newly renovated floors to discourage use of disposable products such as paper cups and plates, plastic cutlery, etc.
- Enbridge's Gas Transportation business unit recycles used lube oil from its engines.
- Enbridge Gas Distribution reports liquid and solid hazardous waste and liquid industrial non-hazardous waste to the Ontario Ministry of the Environment's Hazardous Waste Information Network. These registerable wastes are generated through operation of EGD's facilities, as well as through its field operations.

## **SPILLS AND RELEASES / INITIATIVES TO MITIGATE ENVIRONMENTAL IMPACTS OF PRODUCTS AND SERVICES**

### **EN23**

*Total number and volume of significant spills.*

### **EN24**

*Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III and VIII, and percentage of transported waste shipped internationally.*

### **EN25**

*Identity, size, protected status and biodiversity value of water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff.*

### **EN26**

*Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation.*

### **EN27**

*Percentage of products sold and their packaging materials that are reclaimed by category. [Note: Not relevant to Enbridge]*

**Note to readers:** In this EN23-27 section, we report on our approach, performance and actions being taken regarding: spills and releases; pipeline and facility integrity; risk mitigation; innovation; and industry leadership—firstly, on a company-wide basis, and secondly, by Enbridge's three pipeline operating business units—Liquids Pipelines (LP); Gas Transportation (GT); and Gas Distribution (GD), the core of which is Enbridge Gas Distribution (EGD). In response to EN26, we also report on: EGD's demand-side management (DSM) programs, which are designed to help our customers use energy wisely; and Enbridge's Neutral Footprint commitments, through which we are counteracting our environmental impacts within five years of their occurrence.

This section is divided into seven main parts, as follows:

- Part 1: Industry Perspective
- Part 2: Enbridge—Company-wide
- Part 3: Liquids Pipelines
- Part 4: Gas Transportation
- Part 5: Gas Distribution
- Part 6: EGD's Demand-side Management Programs
- Part 7: Enbridge's Neutral Footprint Commitments

#### **Definitions of terms used in this section:**

- A "spill" refers to liquids, and a "release" refers to gases.
- A "reportable spill or release" is defined as a spill or release that is large or significant enough to require Enbridge to formally notify a regulatory agency.
- A "significant spill" is defined as any off-site release of a commodity greater than 100 barrels (bbls) or that entails clean-up costs of \$1,000,000 or more.
- A "commodity" is a product transported in a pipeline, such as crude oil or natural gas.
- "Onsite spills" refers to spills that occurred at Enbridge facilities. Most onsite spills are completely contained within our facilities and are quickly cleaned up with minimal or no environmental impact.
- "Offsite spills" refers to spills that occurred on Enbridge rights-of-way or are not located on Enbridge property.
- Gas Transportation releases and spills may occur due to corrosion, damages (third party or company), equipment malfunction, or unpermitted activity. A reportable release or spill will include incidents that result in a

reportable quantity (RQ) being exceeded. The RQ could be a federal or state threshold. RQs apply to liquids, solids and gases.

- Gas Distribution releases pertain only to releases due to damages (third party or company) or to venting/purging activities that are reported to the environmental regulatory body.

## ***PART 1: INDUSTRY PERSPECTIVE***

Pipelines are a safe and reliable mode of oil and natural gas transport.

- The **Association of Oil Pipelines** states: “In addition to their efficiency, pipelines also have important environmental and safety benefits. Compared to other inland transport modes, pipelines do not crowd our highways and rivers and they produce negligible air pollution. Pipelines also have a lower spill rate per barrel (bbl) of oil transported than competing modes of transportation, namely trucks and barges.” [Ref.: <http://www.aopl.org/aboutPipelines/>].
- As reported by the **American Petroleum Institute**, “From 1999-2009, the number of spills from onshore liquid petroleum pipelines was reduced by about 60 per cent while volumes spilled were reduced by more than 40 Per cent.” [Ref.: American Petroleum Institute, “Facts About Pipeline Safety and Canadian Crude,” Jan. 4, 2012, <http://bit.ly/GKbr2m>].
- The **Canadian Energy Pipeline Association (CEPA)** states: “Between 2002 and 2011, CEPA member companies were able to transport oil and natural gas with a 99.999 per cent safety record.” [Ref.: <http://www.cepa.com/about-pipelines/maintaining-safe-pipelines>].

## ***PART 2: ENBRIDGE—COMPANY-WIDE***

### **Becoming a Highly Reliable Organization**

As the operator of one of the world’s largest and most complex energy delivery systems, Enbridge’s top priorities are safety and operational reliability.

Industry incidents, such as Enbridge’s oil spill in Marshall, Michigan, in July 2010, and the subsequent responses and expectations from regulatory bodies, have caused us to reexamine and enhance our work practices to further prevent incidents, and improve environmental, worker and public safety.

Specifically, we are adopting the mindset of industries such as aerospace, airlines, nuclear and chemical processing, where there is refusal to accept that any incident is inevitable or acceptable. These industries, and now Enbridge, strive to become what is known as High Reliability Organizations (HROs), where the consequences of failure are top of mind, disciplined processes are developed, implemented and continuously improved, and strong safety cultures are cultivated.

Toward this end, Enbridge has adopted the ambitious goals of zero incidents and zero injuries, and is on a Path to Zero by stepping up our efforts to reduce operational risks. This includes efforts to further prevent spills and releases from our energy transportation and distribution systems. We have reported the actions we are taking to be an industry leader in pipeline systems integrity throughout this section.

### **Putting Spills and Releases in Perspective**

The majority of spills and releases that Enbridge experiences are:

- Small volume, i.e. less than 10 barrels (bbls) each
- Within Enbridge facilities, such as pump stations and terminals, and are contained within those industrial facilities and do not enter the natural environment
- Discovered soon after they occur, which allows for quick response and clean-up, and result in limited impact

As part of Enbridge’s efforts to continually improve our operations, we record and address even small releases that do not require regulatory reporting.

Spills and releases are infrequent relative to the volume of products that Enbridge transports. For example, over the past 10 years, Enbridge’s Liquids Pipelines business unit has delivered approximately 13,000,000,000 (13 billion)

barrels (bbls) of crude oil and liquids, and has safely delivered 99.999 per cent of that volume. With that said, no spill or release is acceptable to Enbridge. To continuously improve the operational reliability of our system, Enbridge will continue to implement preventative measures and thoroughly investigate every release and apply lessons learned.

### **Preventing Spills and Releases**

Enbridge implements rigorous measures during the design, construction and operation of our pipelines to prevent spills and releases from occurring. These measures include meeting or exceeding all special design requirements for areas such as road, river and creek crossings; avoiding environmentally sensitive areas; and investing in safety and integrity programs to monitor pipeline conditions, and mitigate issues. While these measures contribute to reducing the risk of a release, they cannot eliminate it. To address this residual risk, we have comprehensive spill and release response plans and environmental mitigation plans in place. Enbridge takes every incident seriously, regardless of the size or location of a spill or release.

*A discussion of Enbridge's ongoing initiatives to prevent spills and releases is provided in the Pipeline and Facility Integrity / Risk Mitigation section below.*

### **Responding to Spills and Releases**

When Enbridge experiences a spill or release, our highest priority is the safety and protection of people and the environment. Our response and mitigation plans are designed to minimize public and environmental impacts by facilitating quick response, containment and clean-up. These plans for remediation and reclamation are developed with the input of affected stakeholders and environmental regulators. Enbridge strives to address all regulator and stakeholder requirements, and to restore impacted areas to a state that is acceptable to the local community. Each release is investigated to determine causes, and recommendations for prevention and improvement are incorporated into our Integrity Management programs.

We are enhancing our incident management capabilities enterprise-wide. The aim is to consistently capture, report, and manage activities to resolve incidents and reduce the likelihood of a reoccurrence across the company. This integrated approach and use of common methodologies will enable us to better share information between our business units and benchmark our performance against other organizations.

In responding to oil spills, Enbridge typically takes the following steps:

- **Containment**—Enbridge's first order of business is to minimize environmental impact through containment. Simply put, the smaller the area that is impacted, the less damage is done and the easier it is to clean up.
- **Removal**—Enbridge works to capture and safely remove the oil from the environment, and takes great care to keep it from spreading to uncontaminated vegetation, water or soil.
- **Recovery**—Enbridge recovers a high percentage of the oil and injects it back into our pipelines.
- **Disposal**—Enbridge disposes of contaminated water, soil and vegetation at appropriate waste disposal facilities. We establish what needs to be removed based on a comprehensive clean-up plan, environmental testing and monitoring, physical inspection and guidance from government regulators.
- **Rehabilitation**—Enbridge works closely with experts to minimize impacts on wildlife, and assists with the rehabilitation of animals that have come in contact with oil. Also, rehabilitation plans for water, soil and vegetation are developed and executed with the input of affected stakeholders and environmental regulators.
- **Applying lessons learned**—After determining the cause or causes of a release, Enbridge implements corrective actions and applies lessons learned to the wider system and shares our learnings with the pipeline industry.

In responding to natural gas releases, Enbridge typically takes the following steps:

- Identify the location of the leak
- Ensure the safety of public, employees, and the environment
- Isolate the leak
- Repair and verify the repair has corrected the problem
- Remediate
- Apply lessons learned and share learnings with the natural gas industry

A discussion of Enbridge's ongoing initiatives to mitigate the environmental impacts of our services is provided in the Pipeline and Facility Integrity / Risk Mitigation section below.

## 2012 REPORTABLE COMMODITY SPILLS AND RELEASES—COMPANY-WIDE

Company-wide, Enbridge had a total of 85 reportable commodity (liquids) spills in 2012 totaling approximately 10,224 barrels (bbls), broken down as follows—Liquids Pipelines: 10,178 bbls; Gas Transportation: 46 bbls; Gas Distribution: 0 bbls. In addition, Gas Transportation had one gas release totaling 4.25 million standard cubic feet (MMSCF), which met the reportable incident criteria of the U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA).

Of the total commodity (liquids) spills:

- 68 of them or approximately 80 per cent had a volume of 10 bbls or less
- 66 of them or approximately 78 per cent occurred at Enbridge facilities (“onsite”)
- 19 of them or approximately 22 per cent occurred on Enbridge rights-of-way or not located on Enbridge property (“offsite”)

### REPORTABLE COMMODITY SPILLS—COMPANY-WIDE: 2012 CONSOLIDATED DATA

	0-1 bbls	2-10 bbls	11-100 bbls	>100 bbls
Onsite	44	11	8	3
Offsite	8	5	4	2
Sub-total	52	16	12	5

Total 85

### REPORTABLE COMMODITY SPILLS—COMPANY-WIDE: FIVE-YEAR CONSOLIDATED DATA

Year	Total Number of Spills	Total Spills Volume (bbls)
2012 <sup>1</sup>	85	10,224 <sup>2</sup>
2011	94	2,366
2010	91	34,258
2009	103	8,441
2008	92 <sup>3</sup>	2,842

1 Please note that in previous CSR reports, Enbridge included non-commodity (e.g. brine) spills in its company-wide spills statistics. For 2012 and in all future CSR reports, Enbridge is reporting only spills of commodities (i.e. hydrocarbon products such as crude oil transported in an Enbridge pipeline) in its company-wide spills statistics. Previous years' statistics have not been adjusted to reflect this change.

2. The volume reported includes 4,246 bbls of crude oil product released to a tank roof that did not result in any environmental damage. However, since the release was reported to the regulator, we have included it in the total spills volume.

3 Adjusted down from the 93 spills reported in Enbridge's 2009 CSR Report because one Gas Distribution planned and permitted release of water in 2008 was incorrectly counted as a spill.

## PIPELINE AND FACILITY INTEGRITY / RISK MITIGATION

Enbridge strives to be a North American leader in pipeline and system facility integrity. Our goal is to prevent all spills and releases from our energy transportation and distribution systems. These goals are underpinned in our [Environment, Health and Safety Policy](#), which states that “our goal is to have no accidents and to cause no harm to the environment.”

Enbridge invests heavily, every year, in pipeline integrity management and maintenance. Our company-wide capital investment in systems integrity and maintenance in 2012 was approximately \$2.0 billion. In 2013, we expect it to reach approximately \$2.4 billion. In 2012 Enbridge's Liquids Pipelines business unit alone conducted approximately 170 in-line inspections and approximately 2,800 integrity digs.

Pipeline integrity management and maintenance encompasses the tools, technologies and strategies needed to ensure that pipeline networks have the strength and operating fitness to perform safely, reliably and in an environmentally responsible manner. As part of this discipline, Enbridge:

- Follows environmentally sound practices

- Takes a proactive approach to pipeline inspection and repair
- Invests in advanced leak and damage prevention and pipeline integrity management technologies
- Implements rigorous monitoring programs, which include the use of sophisticated in-line inspection tools that identify features in pipelines
- Implements preventive maintenance programs, including inspection and repair digs
- Participates in industry forums to share and exchange knowledge
- Pursues and supports technology research
- Contributes to the development of national pipeline safety standards and industry recommended practices
- Supports state and provincial excavation One-Call efforts to reduce the risk of third-party damage to pipelines and enforcement of Call Before You Dig and three-digit (811) One-Call systems for excavators
- Implements public awareness programs to keep property owners, neighbours and contractors along Enbridge's rights-of-way informed about our pipeline system and remind them of their obligation to call before digging
- Conducts emergency exercises to train employees and external stakeholders should an emergency occur
- Sets integrity performance targets for our Liquids Pipelines, Gas Transportation and Gas Distribution business units and ties performance to employee compensation
- Reports leaks or spills from our pipelines in accordance with the requirements of regulatory authorities in Canada and the U.S.
- Investigates all spills, leaks and releases to determine the root cause and incorporate findings into Enbridge's prevention programs to minimize future risk

Enbridge's full range of ongoing pipeline and facility integrity initiatives falls within three broad categories:

- Integrity and Reliability
- Safety and the Environment
- Emergency Preparedness and Response

*Enbridge's efforts within each of these three categories are discussed in general below. Details of activities carried out by Enbridge's business units are discussed in their respective sections below.*

## **1. FOCUS ON INTEGRITY AND RELIABILITY**

### **Design, Materials and Construction**

Enbridge's focus on pipeline integrity and reliability begins at the planning, design and construction stages. Rigorous processes and practices are implemented on all major projects during these stages, some of which include:

- A rigorous, multi-disciplinary route selection process that identifies pipeline corridors and line locations that achieve an acceptable balance of engineering, environmental and economic considerations
- Standards for engineering and design, including meeting all special design requirements for areas such as road, river and creek crossings
- Standards for materials procurement, including selection of pipeline materials, corrosion inhibiting coatings, and cathodic protection
- Construction practices that identify and mitigate potential environmental impacts from construction activities and also pay close attention to environmentally sensitive areas and at-risk species.

### **Monitoring and Preventive Maintenance**

Enbridge believes that pipeline safety and reliability begins with prevention. This means monitoring and mitigating conditions that can cause pipeline failures in order to minimize failures. This includes using advanced leak and release detection technologies, and taking a proactive approach to pipeline testing and repair. The following are some of Enbridge's monitoring and prevention measures:

#### ***Detecting Leaks***

Enbridge's leak detection capabilities are designed to meet and exceed the requirements of the National Energy Board's Onshore Pipeline Regulations, 1999; the Canadian Standards Association's CSA Z662/Annex E; the U.S.

Department of Transportation's CFR 49 Part 195; and the American Petroleum Institute's API 1130.

Enbridge uses the latest technologies for leak detection, and the methods we employ to detect leaks fall into three categories, each with a different focus and featuring differing technology, resources and timing. These categories include: monitoring; visual surveillance and odour reports; and predictive modeling. Used together, these methods provide overlapping and comprehensive leak-detection capabilities.

### ***Combating Corrosion***

Due to environmental factors such as the presence of water or bacteria, and the products transported, steel pipelines can corrode internally and/or externally. Enbridge mitigates the threat of corrosion by:

- Using high-quality materials and anti-corrosion coatings that are specified during the design phase of the pipeline
- Using cathodic protection (a low-level electric current applied to the pipe, or sacrificial anodes connected directly to the pipe) to inhibit external corrosion of underground pipelines
- Using modeling to predict corrosion growth rates along pipelines
- Using specialized corrosion inhibitors injected directly into the crude fluid being shipped to address internal corrosion
- Scheduling regular monitoring and in-line inspections to check for corrosion
- Using in-line devices known as "pigs" to clean and inspect pipelines from the inside
- Scheduling excavation and repair programs identified by in-line inspections
- Ensuring that all product transported does not exceed the maximum water and sediment content in our tariff

Enbridge continues to pursue new methods to prevent or manage corrosion. Currently, we are helping to lead research and development that will further cathodic protection, coating science, in-line inspection technologies, and improved methods to monitor and mitigate internal corrosion.

### ***Managing Cracks***

Cracking is a phenomenon that can occur in metals, including steel pipelines. Cracking occurs at locations along a pipeline where the necessary conditions exist. These conditions include a pre-existing initiation point in the pipe surface, a fluctuation in stress in the pipe, and, in some cases, an environment that promotes a cracking mechanism. While it is common for these conditions to exist individually, it seldom occurs that these conditions all combine on the pipeline system to result in a crack that might affect the pipeline operation. Enbridge monitors the pipeline system and carries out activities to reduce the potential for cracking to occur.

Enbridge manages cracks through the life cycle of a pipeline—from design and pipe manufacture through operations. Cracking is considered during new pipeline design, including factors such as potential pressure cycling on a pipe when determining required pipe characteristics. Newly manufactured pipe is inspected for cracking through non-destructive testing techniques. Mill inspections are performed to ensure that the highest quality pipe is manufactured for use. Construction practices limit the potential of stress in a pipeline that could create cracking. Pipelines are monitored to gauge potential impact of operations and the environment on the initiation or propagation of cracks.

Enbridge is committed to being at the forefront of technological developments and research relating to the cracking phenomenon and its diagnosis. These efforts have resulted in rigorous Enbridge programs for monitoring and managing cracking, with the key activity being the use of ultrasonic in-line inspection technologies for our liquids pipelines. Over the past 15 years, Enbridge has influenced the development of advanced inspection technologies and field evaluation methods within the industry. We also continue to explore the use of new inspection science and techniques and actively participate in a variety of industry forums that are focused on cracking.

### ***Managing Damages***

Mechanical damage describes conditions on a pipeline such as dents, gouges, strain, scrapes, etc. that can be created by a variety of outside forces such as rocks, impact from equipment during construction, or impact from third-party excavating equipment while the pipeline is in service. These types of conditions may result in either a penetration of the pipeline at the time of occurrence or the initiation and growth of a crack within the area of mechanical damage over time.

Managing mechanical damage requires the integration of data from several inspection technologies, including caliper tools (deformation sizing), metal-loss tools, and crack tools, as each of them provides detail that can be used to detect and characterize these conditions. Through sponsorship and technical leadership of joint

industry research projects, Enbridge has actively pursued improvements to both in-line inspection technologies and engineering models that characterize the pipe condition. This work has provided the industry with improved methods of managing mechanical damage to pipelines.

### ***Inspecting Pipelines***

Sophisticated in-line inspection (ILI) technology is a vital element in Enbridge's pipeline integrity program.

We use sensitive ILI tools to detect, characterize and size features and gather information about the frequency and location of pipeline anomalies.

We then further investigate these findings by carrying out investigative digs in the field. Each dig involves digging up a section of buried line to examine and, if needed, repair and recoat the pipe and rebury the line. Before beginning this work, we complete screening tests to identify environmental issues and the measures needed to minimize impacts to land, vegetation and wildlife.

Although most anomalies discovered are minor and do not threaten system integrity and reliability, all findings are analyzed, monitored through periodic inspections and mitigated. In addition, Enbridge has a team focused on Advanced Tool Development that evaluates new or advanced ILI tool developments, including the operationalization of these new technologies.

### ***Patrolling Pipelines***

Prevention depends on frequent inspections to identify potential trouble spots along pipeline rights-of-way. Using aircraft, land vehicles or foot patrols, Enbridge regularly monitors major pipeline routes to identify potentially damaging activities, such as unauthorized digging and construction, and then takes action to mitigate them.

### ***Monitoring Depth***

Enbridge has implemented a pipeline depth monitoring program to ensure that major pipelines are covered by the appropriate amount of soil. To monitor pipeline depth, we use specialized electronic equipment that locates and records the pipeline depth for these pipelines every 50 metres. In addition to monitoring the pipeline depth, we also use a global positioning system (GPS) to record pipeline coordinates and observe right-of-way conditions, such as terrain, land use, damages or deficiencies.

### ***Monitoring Facilities***

Enbridge is committed to ensuring that all of our facilities, including pump stations and terminals, are operated and maintained in a safe, responsible manner. This is accomplished through the use of: design standards; equipment and construction specifications; commissioning, operating and maintenance procedures; and targeted inspections.

## **Long-Term Infrastructure Planning**

Through the various monitoring measures, Enbridge evaluates the condition of our pipeline systems to identify and select the optimal methods of ensuring long-term integrity and reliability. Methods considered include pipe replacement, pipeline rehabilitation (coating replacements), continued in-line inspections, and/or repairs. The analysis considers factors such as ease and safety of implementation, economic evaluations, and operational expectations—all with the requirement that integrity, reliability and safety will not be compromised.

## **2. FOCUS ON SAFETY AND THE ENVIRONMENT**

Enbridge is committed to achieving a strong record in safety, environmental stewardship and regulatory compliance. We work closely with federal, provincial and state regulators and authorities to ensure that pipelines and facilities are built, operated and maintained with the utmost regard for the protection of the public and environment.

### **Public Safety**

Public awareness of pipeline activity is a vital element of pipeline safety. Enbridge ensures that emergency officials and residents along our pipeline routes are well informed of all pipeline activities and safety procedures. This is done through ongoing open and transparent consultation and communication.

### **Environmental Mitigation**

When Enbridge experiences a spill or release, our highest priority is the safety and protection of people and the environment. Our response and mitigation plans are designed to minimize public and environmental impacts by facilitating quick response, containment and clean-up. These plans for remediation and reclamation are developed

with the input of affected stakeholders and environmental regulators. Enbridge strives to address all regulator and stakeholder requirements, and to restore impacted areas to a state that is acceptable to the local community. Each release is investigated to determine causes, and recommendations for prevention and improvement are incorporated into our Integrity Management programs.

### **3. FOCUS ON EMERGENCY PREPAREDNESS AND RESPONSE**

While Enbridge's pipeline and system integrity initiatives described above contribute to reducing the risk of spills, leaks and releases and mitigating their impacts, these measures cannot completely eliminate the risk. Therefore, Enbridge has comprehensive emergency preparedness and response and environmental mitigation plans in place to respond rapidly and completely if an emergency does occur.

In a company-wide initiative, the Enbridge Enterprise Emergency Response Team (E<sup>3</sup>RT) was created, trained and exercised in 2012. The cross-business-unit team was created to respond to large-scale events anywhere in North America that would require more resources than a single region or business unit could provide. An E<sup>3</sup>RT response exercise was conducted September 19-20, 2012, in Houston and was attended by over 100 participants, regulators and stakeholders.

Employees throughout Enbridge's business units in Canada and the U.S. participate in regular emergency response drills and simulations to test and improve procedures. These range from tabletop exercises, where employees discuss responses to various scenarios, to full-scale deployment exercises with local emergency agencies, using equipment to practice recovery and clean-up in various terrains and on water, as applicable.

Moreover, all of our operating facilities maintain regular contact with communities and first responder organizations to keep them up to date and coordinated with Enbridge's operations and contingency plans.

#### **Enbridge Safe Community Program**

Strong relationships with emergency responders in Enbridge's areas of operation throughout North America are a top priority.

One of Enbridge's flagship community investment programs is our Safe Community Program, which provides monetary grant support for first responders, police agencies, fire-fighters, emergency medical services and other related health providers who would respond to emergency situations in or near communities located along Enbridge's pipeline rights-of-way.

The grant support helps eligible organizations acquire new safety-related equipment, obtain professional training and deliver safety education programs in their communities.

Since the program's inception in 2002, grants to first responder organizations in Canada and the U.S. total \$5.7 million. This is helping to make the lives of more than eight million people safer.

#### **Emergency Responder Education Program**

The Enbridge and Vector Pipeline Emergency Responder Education Program was rolled out in the U.S. in December 2012 to more than 8,000 emergency response agencies; and in Canada in April 2013 to approximately 800 first response agencies.

The online training program features 3-D, interactive graphics to help first responders better visualize response to pipeline incidents. Content includes the basics of natural gas and crude oil pipeline operations, how to safely handle products transported by pipelines, including those operated by Enbridge, pipeline emergency response tactics and pipeline emergency scenarios.

Additionally, in 2013, Enbridge is rolling out an in-person outreach component of the program, as well as developing a new training module that targets 911 dispatch centres covering the areas in which we operate and fire departments in close proximity to our pipelines and facilities. As of July 2013, approximately 900 emergency responders, Enbridge employees, and other interested parties had registered to access the online training; and more than 400 had completed the training.

The program material is based on Pipeline Emergencies, an industry-leading pipeline emergency response training program developed by the National Association of State Fire Marshals (NASFM) in the U.S. The NASFM materials were adapted to provide information specific to pipelines operated by Enbridge. The program was also developed utilizing feedback received from a 2011 survey of emergency response agencies that have received grants through Enbridge's Safe Community Program.

#### **Response**

When an emergency occurs, Enbridge carries out emergency response procedures to shut down and isolate the impacted pipe, notify the appropriate government and regulatory agencies, contain the substance as appropriate, and manage potential environmental and safety impacts.

In addition, Enbridge works closely with emergency first responders, landowners, regulatory agencies and other concerned parties to develop any necessary remediation and monitoring plans.

Enbridge also conducts root-cause incident investigations and reviews the effectiveness of the incident response. We share lessons learned within the company and with industry and local responders.

## **SPILL COSTS**

### **Line 6B Spill (near Marshall, Michigan)—July 2010**

Enbridge Energy Partners (EEP) continues to perform necessary remediation, restoration and monitoring of the areas affected by the release in July 2010 of approximately 20,000 barrels (bbls) of crude oil on Enbridge's Line 6B pipeline near Marshall, Michigan. All of the initiatives EEP is undertaking in the monitoring and restoration phase are intended to restore the affected area to the satisfaction of the appropriate regulatory authorities and local residents.

As of September 30, 2013, EEP's total cost estimate for the Line 6B crude oil release was US\$1,035 million (\$167 million after-tax attributable to Enbridge), which is an increase of US\$215 million (\$30 million after-tax attributable to Enbridge) compared with the December 31, 2012 estimate. This total estimate is before insurance recoveries and excludes additional fines and penalties, which may be imposed by federal, state and local government agencies, other than the Pipeline and Hazardous Materials Safety Administration (PHMSA) civil penalty of approximately US\$3.7 million, which was paid in the third quarter of 2012. On March 14, 2013, EEP received an order from the EPA (the Order) which defined the scope requiring additional containment and active recovery of submerged oil relating to the release. EEP submitted its initial proposed work plan required by the EPA on April 4, 2013 and resubmitted the work plan on April 23, 2013. The EPA approved the Submerged Oil Recovery and Assessment (SORA) work plan with modification on May 8, 2013. EEP incorporated the modification and submitted an approved SORA on May 13, 2013. The Order states the work must be completed by December 31, 2013.

The US\$175 million increase in the total cost estimate during the three-month period ended March 31, 2013 was attributable to additional work required by the Order. The US\$40 million increase during the three month period ended June 30, 2013 was attributable to further refinement and definition of the additional dredging scope per the Order and all associated environmental, permitting, waste removal and other related costs. The actual costs incurred may differ from the foregoing estimate as EEP completes the work plan with the EPA related to the Order and works with other regulatory agencies to assure its work plan complies with their requirements. Any such incremental costs will not be recovered under EEP's insurance policies as the costs for the incident at September 30, 2013 exceeded the limits of its insurance coverage.

Expected losses associated with the release included those costs that were considered probable and that could be reasonably estimated at September 30, 2013. Despite the efforts EEP has made to ensure the reasonableness of its estimates, there continues to be the potential for EEP to incur additional costs in connection with this release due to variations in any or all of the cost categories, including modified or revised requirements from regulatory agencies, in addition to fines and penalties and expenditures associated with litigation and settlement of claims.

### **Line 6A Incident (in Romeoville, Illinois)—September 2010**

A release of crude oil from Line 6A of EEP's Lakehead System was reported in an industrial area of Romeoville, Illinois on September 9, 2010. EEP estimates that approximately 9,000 barrels (bbls) of crude oil were released, of which approximately 1,400 bbls were removed from the pipeline as part of the repair. Some of the released crude oil went onto a roadway, into a storm sewer, a waste water treatment facility and then into a nearby retention pond. All but a small amount of the crude oil was recovered. EEP completed excavation and replacement of the pipeline segment and returned it to service on September 17, 2010. EEP continues to monitor the areas affected by the crude oil release for any additional requirements; however, the cleanup, remediation and restoration of the areas affected by the release have been completed.

On October 21, 2013, the National Transportation Safety Board publicly posted their final report related this release, which states the probable cause was erosion caused by a leaking water pipe resulting from an improperly installed third-party water service line below EEP's oil pipeline.

In connection with this crude oil release, the cost estimate as of September 30, 2013 remains at approximately US\$48 million (\$7 million after-tax attributable to Enbridge). EEP has the potential of incurring additional costs in connection with this crude oil release, including expenditures associated with litigation. EEP is pursuing recovery of the costs associated with the Line 6A crude oil release from third parties; however, there can be no assurance that any such recovery will be obtained.

## PART 3: LIQUIDS PIPELINES

### 2012 REPORTABLE COMMODITY SPILLS AND RELEASES

In 2012, Liquids Pipelines transported more than 1,800,000,000 (1.8 billion) barrels (bbls) of crude oil and liquids on its systems in Canada and the U.S. and recorded 77 reportable liquid spills, leaks or releases totaling approximately 10,178 bbls.

(In Canada, pipeline companies are required to report any product that leaves their pipelines system. The Canadian reporting requirements apply to pipeline assets under the jurisdiction of the National Energy Board (NEB) and the Alberta Energy Regulator (AER). In the U.S., the Pipeline and Hazardous Materials Safety Administration (PHMSA) requires companies to report spills above 5 bbls.)

Of Liquids Pipelines' 77 spills:

- 61 of them or approximately 79 per cent had a volume of 10 bbls or less;
- 65 of them or approximately 84 per cent occurred at Enbridge facilities ("onsite"); and
- 12 of them or approximately 16 per cent occurred on Enbridge rights-of-way or were at least partially located outside of the facility boundary ("offsite").

For reports on Liquids Pipelines' significant commodity spills in 2012 and the first half of 2013, please see the section below titled *Significant Commodity Spills Summary—Liquids Pipelines—January 2012 to July 2013*.

#### LIQUIDS PIPELINES—2012 REPORTABLE COMMODITY\* SPILLS BY VOLUME AND LOCATION

	0-1 bbls	2-10 bbls	11-100 bbls	> 100 bbls
Onsite	44	10	8	3
Offsite	5	2	3	2
Sub-total	49	12	11	5
Total	77			

\* Please note that in previous CSR reports, Liquids Pipelines included non-commodity (e.g. brine) spills in its spills statistics. For 2012 and in all future CSR reports, Liquids Pipelines is reporting only spills of commodities (i.e. hydrocarbon products such as crude oil transported in an Enbridge pipeline) in its spills statistics.

#### LIQUIDS PIPELINES—VOLUME OF TOTAL REPORTABLE COMMODITY\* SPILLS

Year	Total Number of Spills	Total Spills Volume (bbls)
2012	77	10,178**
2011	58	2,283.5
2010	80	34,122
2009	89	8,353
2008	80	2,681

\* Please note that in previous CSR reports, Liquids Pipelines included non-commodity (e.g. brine) spills in its spills statistics. For 2012 and in all future CSR reports, Liquids Pipelines is reporting only spills of commodities (i.e. hydrocarbon products such as crude oil transported in an Enbridge pipeline) in its spills statistics. Previous years' statistics have not been adjusted to reflect this change.

\*\* The volume reported includes 4,246 bbls of crude oil product released to a tank roof that did not result in any environmental damage. However, since the release was reported to the regulator, we have included it in the total spills volume.

## **2012 NTSB REPORT**

In July 2012, the U.S. National Transportation Safety Board (NTSB) published its Accident Report, which included the results of its investigation into Enbridge's Line 6B crude oil spill that occurred near Marshall, Michigan, in July 2010, and its recommendations for Enbridge, the U.S. Secretary of Transportation, the U.S. Pipeline and Hazardous Materials Safety Administration, the American Petroleum Institute, the Pipeline Research Council International, the International Association of Fire Chiefs and the National Emergency Number Association. The NTSB's recommendations for Enbridge included:

- Revising our integrity management program to ensure the integrity of our hazardous liquid pipelines
- Establishing a program to train control centre staff as teams, semiannually, in the recognition of and response to emergency and unexpected conditions that includes supervisory control and data acquisition system indications and Material Balance System software
- Incorporating changes to our leak detection processes to ensure that accurate leak detection coverage is maintained during transient operations, including pipeline shutdown, pipeline startup and column separation
- Providing additional training to first responders to ensure that they (1) are aware of the best response practices and the potential consequences of oil releases and (2) receive practical training in the use of appropriate oil-containment and recovery methods for all potential environmental conditions in the response zones
- Reviewing and updating our oil pipeline emergency response procedures and equipment resources to ensure that appropriate containment equipment and methods are available to respond to all environments and at all locations along the pipeline to minimize the spread of oil from a pipeline rupture
- Updating our facility response plan to identify adequate resources to respond to and mitigate a worst-case discharge for all weather conditions and for all pipeline locations before the required submittal in 2015

Enbridge began work to alleviate the spill and its repercussions immediately following its occurrence, and has since implemented all of the recommendations in the 2012 NTSB report. We have undertaken additional initiatives in pipeline safety and integrity, leak detection, control centre training and procedures, emergency response protocols, and public engagement and awareness programs. We are making significant investments in new technology and innovation with particular emphasis on in-line inspection tools and leak detection.

We also further strengthened executive oversight of safety with the creation of the new role of Senior Vice President, Enterprise Safety & Operational Reliability. This role, which reports directly to Enbridge's President and CEO, is accountable for defining and executing on an enterprise-wide vision, culture and set of integrated programs and policies.

Our goal remains focused and unwavering: to be the industry leader across all of the key dimensions of operations and safety.

## **PREVENTION, MONITORING AND MITIGATION**

Integrity management at Liquids Pipelines incorporates three focus areas: prevention, monitoring, and mitigation. Prevention focuses on proactive activities that reduce the likelihood of an integrity concern. Monitoring focuses on the assessment of current condition. Mitigation focuses on activities to maintain the designed operating capabilities of the pipeline.

### **Prevention Measures**

Liquids Pipelines' prevention measures to combat corrosion include the application of protective coatings on a pipe, the use of cathodic protection, monitoring of quality of products transported on our system, and the use of cleaning and chemical inhibitors where required.

Liquids Pipelines' prevention measures to manage cracking include the use of protection coatings and cathodic protection, pressure cycle management, and ensuring that high-quality pipe is ordered, manufactured, and installed. To manage potential strain on the pipeline, routes are selected that assure a suitable terrain, and the placement of pipe in the ground is carefully monitored. To manage damage to the pipelines once they are installed, Enbridge has third-party damage prevention programs in place, such as One-Call programs.

### **Monitoring Measures**

Liquids Pipelines has monitoring measures in place to ensure accurate and timely assessment of the integrity condition of the pipelines we manage.

Measures used by Liquids Pipelines to achieve comprehensive diagnostic capability include: use of the most technically advanced inspection technologies available called in-line inspection (ILI) technologies; hydrotesting the

pipeline during pipe manufacturing and commissioning; using on-line sensors to provide real-time information of pipe operating conditions; performing surveys of the terrain, including locations under water bodies; and non-destructive testing at targeted inspection sites.

### **Mitigation Measures**

If mitigation is indicated through the condition monitoring processes, Liquids Pipelines uses both temporary and permanent measures to assure the safety of the pipeline. Mitigation measures applied by LP include: pressure restrictions; pipe reinforcement repairs; pipe cut-out repairs; pipe segment replacement; the addition of pipe supports; and implementing strain relief.

In 2012, LP conducted approximately 170 in-line inspections and approximately 2,800 integrity digs. According to annual reports reported to PHMSA in the U.S., Enbridge is responsible for approximately 40 per cent of all the inspections performed by the pipeline industry.

### **Facilities**

Liquids Pipelines has a team of subject-matter experts in Engineering, Operations and Integrity guiding a leak reduction program for the network of facilities throughout its system, including pump stations and terminals. The team identifies and implements opportunities for improvement at all pump station and terminal locations. In addition to those initiatives, targeted inspections of the components within the facilities occur on an ongoing basis to assure the integrity of our assets.

## ***EMERGENCY PREPAREDNESS AND RESPONSE***

2012 saw increased activity and significant progress across Enbridge's Liquids Pipelines business unit regarding emergency and security management. Key areas of progress included:

### **Resourcing**

Building on new leadership that was put in place, the Liquids Pipelines' Emergency and Security Management department now has dedicated resources to support emergency plan creation and maintenance, including project support personnel and a Team Lead position to support the onboarding and leadership of regional emergency response coordinators.

### **Programs**

Liquids Pipelines' Emergency and Security Management department initiated development of the Emergency & Security Management System (ESMS) as part of Liquids Pipelines' overall Integrated Management System (IMS). IMS is a unified and cohesive system that will provide the framework to drive Liquids Pipelines to meet or exceed leading industry standards, and ensure that quality, consistency, repeatability, accountability, continual improvement, and effective risk management are embedded in every area of the Liquids Pipelines business unit.

Development of the ESMS will continue in 2013. The ESMS establishes accountabilities and responsibilities for the emergency management and asset security functions, detailing expectations of management and describing how the workforce implements the system to fulfill emergency management and asset security obligations with respect to the Enbridge Vision and core values. The system is designed to focus energy and resources on recognizing, understanding, and managing emergency management and asset security risks.

Liquids Pipelines' Security department completed development of a Security Management Plan, which will be rolled out in 2013. The plan identifies security requirements, elevated tiers, and vulnerability assessment criteria.

### **Plans**

Enbridge's emergency and crisis preparedness plans are designed to minimize the impact of an incident and comply with regulatory requirements.

In August 2013, Liquids Pipelines' U.S. operations entered a new era in emergency response when it introduced its new Integrated Contingency Plans (ICP). The ICP follows an industry recognized format for response planning and is based on the Incident Command System (ICS), which promotes an integrated and coordinated response. Our ICP received its five-year approval from the U.S. Department of Transportation (U.S. DOT)/Pipeline and Hazardous Materials Safety Administration (PHMSA) in July 2013. Enbridge's ICP is the first and only industry plan to undergo an extensive review process, which included the U.S. Environmental Protection Agency, the U.S. Coast Guard and Canada's National Energy Board.

The ICP addresses the gaps identified in the National Transportation Safety Board report on our 2010 Line 6B incident and strengthens our emergency response capabilities to any incident that might occur on our pipelines.

## **Capability**

Enbridge places emergency response equipment along our pipeline system. We decide where to locate that equipment based on several criteria, including targeted rapid response times. During 2012, Liquids Pipelines' Emergency Management team worked with an external consultant and regional representatives to identify additional emergency response equipment requirements to enhance Tier 1 response capabilities. Equipment sourcing and purchasing will continue into 2013.

## **Training and Exercises**

Significant training was completed across Liquids Pipelines in the implementation of enhanced Incident Command System (ICS) training for individuals across the business unit who could fill leadership roles during an incident. Over 1,000 participants were trained in ICS levels 100, 200 and 300—three days of focused content.

In 2012, Liquids Pipelines held a total of 287 exercises, including drills and equipment deployment events, across its system in Canada and the U.S. In January 2012, Liquids Pipelines held a full-scale exercise at the Straits of Mackinac in Michigan in conjunction with the U.S. Coast Guard. The exercise tested our local plans in the area and reinforced our new ICS training program.

## **INNOVATION**

Enbridge's Liquids Pipeline (LP) business unit is involved in numerous activities that improve the safety and reliability of our pipeline operations. In 2012, LP actively participated in, led or sponsored approximately 180 research and development (R&D) projects in the general areas of leak detection and pipeline integrity. The projects that focused on leak detection involved investments of almost \$3.4 million, while those focused on pipeline integrity involved investments of over \$4 million. Many of the other projects fall under Enbridge's involvement with the Pipeline Research Council International (PRCI), in which LP has traditionally invested about \$300,000 a year.

LP selects R&D projects based on the ability of a project to impact the prevention, monitoring or mitigation of integrity threats, including corrosion, cracking, and deformation (e.g. dents or strain in the pipe). The projects pertain to areas as varied as aerial surveillance, fibre optics, in-line leak detection tools, on-water leak detection technologies, pipeline coatings, corrosion prevention, defect assessment, reliability-based design, facilities integrity and in-line inspection tool development.

LP works with in-line inspection vendors to continuously improve existing inspection technologies and to investigate opportunities to apply pipeline technologies that are used in other industries. In 2012, LP commissioned an in-line inspection vendor to create a dual-diameter inspection tool capable of inspecting multiple pipe diameters for both crack and corrosion. This R&D project has enabled LP to launch a single in-line inspection tool to perform pipeline condition assessment that historically would require the use of four individual in-line inspection tools.

## **INDUSTRY LEADERSHIP**

Enbridge's Liquids Pipelines (LP) business unit is a leader in the pipeline industry in both Canada and the U.S. It exhibits its leadership through the many associations and committees it either participates in or plays a leading role in, including:

- Association of Oil Pipelines (AOPL)
- American Petroleum Institute (API)
- American Society of Mechanical Engineers (ASME)
- Canadian Energy Pipeline Association (CEPA)
- Canadian Standards Association (CSA)
- Edison Welding Institute (EWI)
- Interstate Natural Gas Association of America (INGAA)
- National Association of Corrosion Engineers (NACE)
- Program of Energy Research and Development (PERD)
- Pipeline Research Council International (PRCI)
- Petroleum Technology Alliance of Canada

Examples of LP's leadership roles in these associations include its participation in the API Pipeline Leadership Committee, the CEPA Board of Directors, the CSA's Strategic Steering Committee, and the PRCI Board (member and past-president).

Through participating in technical committees and working groups, LP contributes to improving codes and standards, enhancing the current body of knowledge about pipelines, and identifying focus areas for research and development. Efforts of the technical committees and associations help us promote a “zero spill” culture, within LP, within Enbridge as a whole, and within the greater pipeline community.

### ***SUMMARY OF SIGNIFICANT COMMODITY SPILLS—LIQUIDS PIPELINES—JANUARY 2012 TO JULY 2013***

Note: Enbridge defines “significant spill” as any commodity off-site spill that is greater than 100 barrels (bbls) or entails clean-up costs of \$1,000,000 or more. The significant spills in 2012 profiled below are accounted for in the tables included in both Part 2: Enbridge—Company-Wide and Part 3: Liquids Pipelines of this EN23-27 section.

#### ***Near Elk Point, Alberta***

On June 18, 2012, approximately 230 m<sup>3</sup> (1,446 bbls) of crude oil leaked at Enbridge's Elk Point Pump Station on Line 19 (Athabasca Pipeline) near the town of Elk Point, Alberta.

At approximately 5:41 a.m. MST on June 18, Enbridge's monitoring system detected a drop in pressure indicating a possible oil release on Line 19. At 5:51 a.m. MST, the Enbridge pipeline control centre initiated a shutdown of the line and isolation of Elk Point Pump Station. Enbridge immediately contacted local emergency response organizations and regulatory agencies, and we notified civic authorities. The area was secured and clean-up operations began immediately. There was no risk to public health or safety. No water or wildlife was impacted.

The release was largely contained within the pumping station site. Approximately 200 m<sup>3</sup> (1,258 bbls) were contained on the Enbridge site and approximately 30 m<sup>3</sup> (188 bbls) was released on an adjacent landowner's field.

Line 19 was safely restarted on the afternoon on June 18. However, the line was again shut down the afternoon of June 19 on the order of Alberta's Energy Resources Conservation Board (ERCB) as the ERCB and Enbridge continued their investigation. With the approval of the ERCB, Line 19 was safely restarted at approximately 23:30 MST on June 19, while the Elk Point Pump Station remained isolated and shut down pending investigation and completion of clean up and repairs. The cause of the release appeared to be a failure of a flange gasket in the pumping station. The flange gasket was replaced, all other gaskets were tested and station piping was fully inspected.

After receiving approval from the ERCB, Enbridge safely restarted the Elk Point Pump Station on June 24, and normal operations resumed.

Site cleanup was conducted in compliance with all applicable government regulations and Enbridge's own stringent standards for safety and the environment. All contaminated soil has been removed from onsite and offsite areas and disposed of at an approved waste management facility. A groundwater and surface water monitoring program has been implemented to confirm the absence of impacts to groundwater and surface water in the area of the release.

#### ***Near Grand Marsh, Wisconsin***

On July 27, 2012, Enbridge Energy Partners reported a release of crude oil from Line 14 on its Lakehead System near Grand Marsh, Wisconsin.

Within minutes of detecting a pressure drop on the line, operators at the Enbridge Pipelines Control Centre shut down and isolated the line. Enbridge emergency crews were promptly deployed to the site.

The oil was contained in a field. The initial estimate of the volume released was approximately 190.8 m<sup>3</sup> (1,200 bbls). No one was injured. Enbridge's immediate focus was to keep our workers and the public safe as we worked to remove the oil and clean up the site. Enbridge notified and worked with emergency officials and the appropriate regulators.

On July 30, 2012, the Pipelines and Hazardous Materials Safety Administration (PHMSA) issued a Corrective Action Order with conditions to return Line 14 to service, and on August 1, 2012, PHMSA issued an amendment to the Corrective Action Order with additional restart conditions. Enbridge submitted the Restart Plan to PHMSA on August 1 and the Lakehead Plan to PHMSA on August 2. The Lakehead Plan describes improvements that will be made in operational areas on the Lakehead System along with other initiatives, many of which were already under way. PHMSA approved the amended return to service plan on August 6, 2012, and Enbridge safely restarted Line 14 on August 7, 2012.

At the time of preparing this report, the cause of the release had not been determined and was being investigated. The Wisconsin Department of Natural Resources had approved the Cleanup Plan and Enbridge was conducting cleanup and site restoration in compliance with all government regulations and our own stringent safety and environmental standards. Although there had been no groundwater impact, we were monitoring nearby drinking wells as a precaution.

***Near Cheecham, Alberta***

On June 22, 2013, Enbridge reported a release of light synthetic crude oil on our Line 37 pipeline approximately two kilometres north of Enbridge's Cheecham Terminal, which is located approximately 70 kilometres (45 miles) southeast of Fort McMurray, Alberta. Line 37 is part of Regional Oil Sands System and connects facilities in the Long Lake area to the Cheecham Terminal. We estimated the volume of the release at approximately 1,300 bbls, caused by unusually high water levels in the region which triggered ground movement on the right-of-way.

Enbridge notified the Alberta Energy Regulator and worked with them, as well as Alberta Environment, government officials and local Aboriginal communities to ensure the situation was resolved safely.

On July 11, 2013, Line 37 returned to service at reduced operating pressure. Normal operating pressure was restored on Line 37 on July 29, 2013, after finalization of geotechnical analysis. Industry and environmental regulators have been to the site of the release and we have been providing regular updates on status of the clean-up, repair and remediation. At the time of writing this report (August 1), the majority of oil released from Line 37 had been recovered.

As a precaution, on June 22, 2013 we shut down the pipelines that share a corridor with Line 37, including the Athabasca, Waupisoo, Wood Buffalo and Woodland pipelines. The southern segment of the Athabasca pipeline was returned to service at normal pressure on June 23, 2013, with the northern segment returned to service on June 30, 2013, at reduced operating pressure following completion of extensive engineering and geotechnical analysis. Full service on the northern segment of the Athabasca pipeline was restored on July 11, 2013. The Waupisoo pipeline between Cheecham and Edmonton restarted on June 25, 2013, at normal operating pressure. The Wood Buffalo pipeline was restarted on July 2, 2013, at reduced pressure pending completion of further geotechnical analysis in the incident area and, on July 19, 2013, the Wood Buffalo pipeline was returned to normal operating pressure.

## REPORTABLE SPILLS AND RELEASES HISTORY—LIQUIDS PIPELINES

Over the past 10 years, Enbridge's Liquids Pipelines business unit has delivered almost 13,000,000,000 (13 billion) barrels (bbls) of crude oil and liquids with a safety record of 99.9993 per cent. Most of Liquids Pipelines' spills are less than one bbls and occur inside pump stations ("onsite") where any spilled oil is readily contained and recovered without entering the natural environment. Some of these spills are also non-commodity products, such as hydraulic fluid, that are not the result of loss of containment of the pipeline commodities being transported.

LIQUIDS PIPELINES—VOLUME OF TOTAL REPORTABLE SPILLS COMPARED WITH TOTAL DELIVERY VOLUME—2003 TO 2012					
Year	Total Number of Spills (Onsite / Offsite) <sup>1</sup>	Total Spills Volume (bbls) (Onsite / Offsite) <sup>1</sup>	Total Annual Delivery Volume (bbls)	Percentage of Annual Delivery Volume Safely Delivered (%)	Percentage of Annual Delivery Volume Safely Delivered (%) excluding Onsite <sup>1</sup> Spill Volumes
2012 <sup>2</sup>	77 (65 / 12)	10,178 (6,939 / 3,239)	1,800,052,959	99.9994	99.9996
2011	58 (50 / 8)	2,284 (637 / 1,646)	1,641,262,240	99.9999	99.9999
2010	80 (61 / 19)	34,122 (2,710 / 31,412)	1,487,709,454	99.9977	99.9998
2009	89 (83 / 6)	8,353 (6,524 / 1,829)	1,333,947,614	99.9994	99.9995
2008	80 (72 / 8)	2,681 (2,587 / 94)	1,256,268,675	99.9998	99.9998
2007	59 (52 / 7)	13,756 (902 / 12,854)	1,199,657,322	99.9989	99.9999
2006	62 (54 / 8)	5,434 (3,177 / 2,258)	1,198,602,588	99.9995	99.9998
2005	70 (63 / 7)	9,825 (9,448 / 377)	1,060,531,358	99.9991	99.9991
2004	64 (45 / 19)	3,114 (318 / 2,796)	1,123,230,798	99.9997	99.9999
2003	58 (41 / 17)	6,377 (6,142 / 235)	867,686,223	99.9993	99.9993
TOTAL	697 (586 / 111)	96,124 (39,384 / 56,740)	12,968,949,231	99.9993 (average over 10 years)	99.9997 (average over 10 years)

1 "Onsite" refers to spills that occurred at Enbridge facilities. Most onsite spills are completely contained within the company's facilities and are quickly cleaned up with minimal or no environmental impact. "Offsite" refers to spills that occurred on Enbridge rights-of-way or outside Enbridge property.

2 Please note that in previous CSR reports, Enbridge included non-commodity (e.g. brine) spills in its company-wide spills statistics. For 2012 and in all future CSR reports, Enbridge is reporting only spills of commodities (i.e. hydrocarbon products such as crude oil transported in an Enbridge pipeline) in its company-wide spills statistics. Previous years' statistics have not been adjusted to reflect this change.

## **ENBRIDGE'S LIQUIDS PIPELINES SPILLS AND RELEASES PERFORMANCE COMPARED WITH CANADA AND U.S. PIPELINE INDUSTRY**

### **Canada (2002-2009)**

Comparing Enbridge's Liquids Pipelines performance to that of the rest of the Canadian pipeline industry, in the period 2002 to 2009 (2009 being the last year for which National Energy Board (NEB) statistics are available):

#### Miles of Crude Oil Pipelines Operated

- From 2003 to 2009, Enbridge operated approximately 64 per cent of the NEB-regulated pipelines in Canada.
- While Enbridge increased the number of kilometres of crude oil pipelines that we operate by approximately 17 per cent over the past 10 years, the rest of the Canadian pipeline industry decreased its number by approximately 21 per cent between 2003 and 2009.
- The information in the table below is for federally regulated pipelines only and does not include provincially regulated pipelines.

<b>KILOMETRES OF HYDROCARBON LIQUID PIPELINES—CANADA—NATIONAL ENERGY BOARD (NEB) REGULATED</b>					
<b>Year</b>	<b>Enbridge</b>	<b>Rest of Canadian Industry</b>	<b>Total Industry*</b>	<b>Enbridge Share</b>	<b>Rest of Canadian Industry Share</b>
2012	10,680	4,797**	15,477	69%	31%
2011	10,680	4,797**	15,477	69%	31%
2010	10,680	4,797**	15,477	69%	31%
2009	9,645	4,797	14,442	64%	33%
2008	9,194	6,521	15,715	56%	44%
2007	9,134	5,234	14,368	62%	38%
2006	9,138	6,428	15,566	57%	43%
2005	9,138	5,131	14,269	62%	38%
2004	9,141	5,871	15,012	59%	41%
2003	9,138	6,107	15,245	58%	42%

\* Total Industry data based on NEB "Focus on Safety and Environment 2000-2009" report

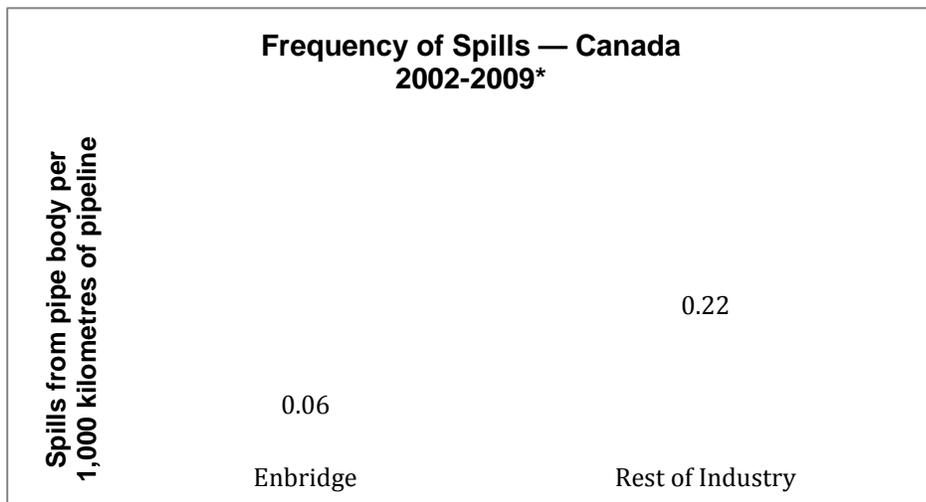
\*\* 2010-2012 Industry Data not available, 2009 data used for 2010-2012

Frequency of Spills Comparisons

- Enbridge experienced 0.5 spills (including pipe body and operational spills) per 1,000 kilometres of pipeline, compared with an average of 7.43 spills (including pipe body and operational spills) per 1,000 kilometres of pipeline for the rest of the liquids pipeline industry in Canada (i.e. the rest of the industry not including Enbridge). In other words, Enbridge’s pipe body and operational spill frequency was approximately 93 per cent better than that of the rest of the industry. Note: A “pipe body” spill is a spill that originates from the body of the pipe. An “operational spill” is a spill that originates from a pipeline component such as a flange, valve, pump or storage tank.

\* These data pertain to pipe body AND operational spills (spills that originate from pipeline components such as flanges, valves, pumps or storage tanks). The data include spills of 1.5 m<sup>3</sup> (9.43 bbls) or more. “Frequency of Spills” refers to the number of events. This comparison is based on data that Enbridge and other liquids pipeline operators submitted to Canada’s Transportation Safety Board (TSB). The data for the industry as a whole are available through Canada’s National Energy Board (NEB). At the time of publishing this report, data were available only up to and including 2009. The data pertain only to the liquids pipelines in Canada that are federally regulated (i.e. the liquids pipelines that cross provincial or national boundaries). In Enbridge’s case, the data pertain to our Enbridge Pipelines Inc., Westspur, Southern Lights and Norman Wells pipelines. This bar graph shows the relationship between Enbridge’s pipe body and operational spill frequency ratio and that of the rest of the federally-regulated Canadian liquids pipeline industry.

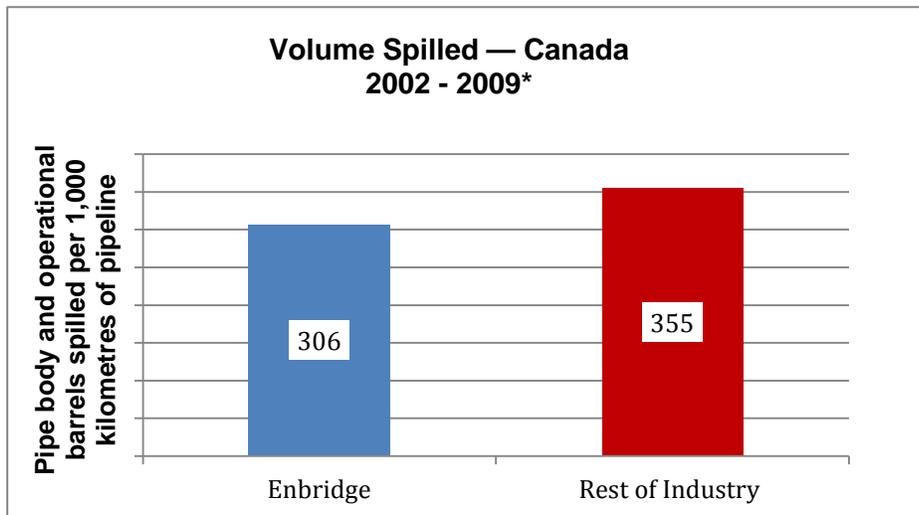
- Enbridge experienced 0.06 spills (including only pipe body spills) per 1,000 kilometres of pipeline, compared with an average of 0.22 spills (including only pipe body spills) per 1,000 kilometres of pipeline for the rest of the liquids pipeline industry in Canada. In other words, Enbridge’s pipe body spill frequency was about 70 per cent better than that of the rest of the industry.



\* These data pertain to pipe body spills only. Operational spills (spills that originate from pipeline components such as flanges, valves, pumps or storage tanks) are excluded from the data. The data include spills of 1.5 m<sup>3</sup> (9.43 bbls) or more. "Frequency of Spills" refers to the number of events. This comparison is based on data that Enbridge and other liquids pipeline operators submitted to Canada's Transportation Safety Board (TSB). The data for the industry as a whole are available through Canada's National Energy Board (NEB). At the time of publishing this report, data from the NEB were available only up to and including 2009. The data pertain only to the liquids pipelines in Canada that are federally regulated (i.e. the liquids pipelines that cross provincial or national boundaries). In Enbridge's case, the data pertain to our Enbridge Pipelines Inc., Westspur, Southern Lights and Norman Wells pipelines. This bar graph shows the relationship between Enbridge's pipe body spill frequency ratio and that of the rest of the federally-regulated Canadian liquids pipeline industry.

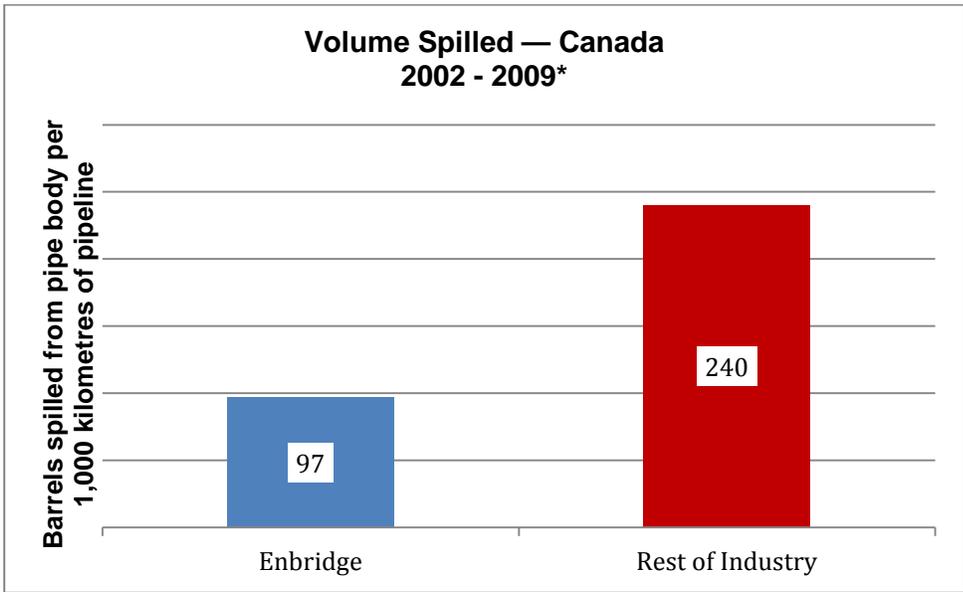
**Volume Spilled Comparisons**

- Enbridge spilled 306 bbls of liquids (including both pipe body and operational spills) per 1,000 kilometres of pipeline, compared with an average of 355 bbls of liquids (including both pipe body and operational spills) per 1,000 kilometres of pipeline for the rest of the Canadian liquids pipeline industry. In other words, Enbridge's pipe body and operational spill volume was about 14 per cent better than that of the rest of the industry.



\* These data pertain to pipe body AND operational spills (spills that originate from pipeline components such as flanges, valves, pumps or storage tanks). The data include spills of 1.5 m<sup>3</sup> (9.43 bbls) or more. "Frequency of Spills" refers to the number of events. This comparison is based on data that Enbridge and other liquids pipeline operators submitted to Canada's Transportation Safety Board (TSB). The data for the industry as a whole are available through Canada's National Energy Board (NEB). At the time of publishing this report, data were available only up to 2009. The data pertain only to the liquids pipelines in Canada that are federally regulated (i.e. the liquids pipelines that cross provincial or national boundaries). In Enbridge's case, the data pertain to our Enbridge Pipelines Inc., Westspur, Southern Lights and Norman Wells pipelines. This bar graph shows the relationship between Enbridge's pipe body and operational spill frequency ratio and that of the rest of the federally regulated Canadian liquids pipeline industry.

- Enbridge spilled 97 bbls of liquids (including only pipe body spills) per 1,000 kilometres of pipeline, compared with an average of 240 bbls of liquids (including only pipe body spills) per 1,000 kilometres of pipeline for the rest of the Canadian liquids pipeline industry. In other words, Enbridge's pipe body spill volume was about 60 per cent better than that of the rest of the industry.



\* These data pertain to pipe body spills only. Operational spills (spills that originate from pipeline components such as flanges, valves, pumps or storage tanks) are excluded from the data. The data include spills of 1.5 m<sup>3</sup> (9.43 bbls) or more. "Frequency of Spills" refers to the number of events. This comparison is based on data that Enbridge and other liquids pipeline operators submitted to Canada's Transportation Safety Board (TSB). The data for the industry as a whole are available through Canada's National Energy Board (NEB). At the time of publishing this report, data from the NEB were available only up to and including 2009. The data pertain only to the liquids pipelines in Canada that are federally regulated (i.e. the liquids pipelines that cross provincial or national boundaries). In Enbridge's case, the data pertain to our Enbridge Pipelines Inc., Westspur, Southern Lights and Norman Wells pipelines. This bar graph shows the relationship between Enbridge's pipe body spill frequency ratio and that of the rest of the federally-regulated Canadian liquids pipeline industry.

## U.S. (2003-2012)

Comparing Enbridge's Liquids Pipelines performance in the U.S. to that of the rest of the U.S. pipeline industry, in the period 2003 to 2012:

### Miles of Crude Oil Pipelines Operated

- According to data from the U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA), between 2010 and 2012, Enbridge operated approximately 11.7 per cent of the pipelines in the U.S.
- While Enbridge increased the number of miles of crude oil pipelines that we operate by approximately 39 per cent over the past 10 years, between 2003 and 2011 (the 2012 mileage is based on 2011 figures), the rest of the U.S. pipeline industry increased its number by approximately 11 per cent.

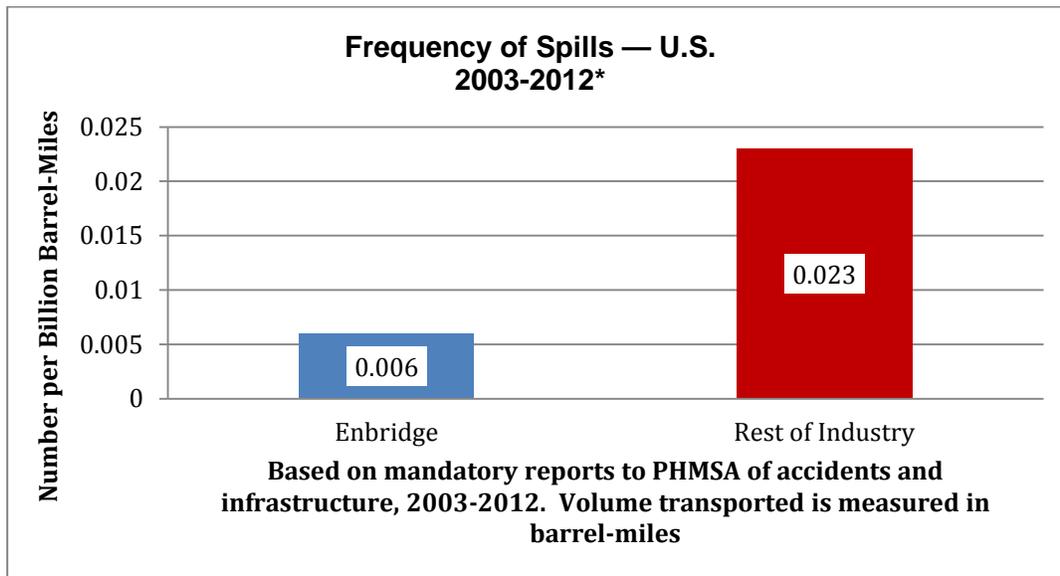
<b>MILES OF CRUDE OIL PIPELINES OPERATED—UNITED STATES—ONSHORE CRUDE OIL PIPELINE MILES*</b>					
<b>Year</b>	<b>Enbridge</b>	<b>Rest of U.S. Industry</b>	<b>Total Industry*</b>	<b>Enbridge Share</b>	<b>Rest of U.S. Industry Share</b>
2012*	5,892	44,445	50,337	11.7%	88.3%
2011	5,892	44,445	50,337	11.7%	88.3%
2010	5,834	43,622	49,456	11.8%	88.2%
2009*	5,228	40,664	45,892	11.4%	88.6%
2008	5,228	40,664	45,892	11.4%	88.6%
2007	4,788	39,733	44,521	10.8%	89.2%
2006	4,800	37,808	42,608	11.3%	88.7%
2005	4,934	37,320	42,254	11.7%	88.3%
2004	4,251	40,171	44,422	9.6%	90.4%
2003	4,251	40,171	44,422	9.6%	90.4%

\* Mileage data from PHMSA 7000-1.1

\*\* 2012 mileage based on 2011; 2009 mileage based on 2008

Frequency of Spills Comparison

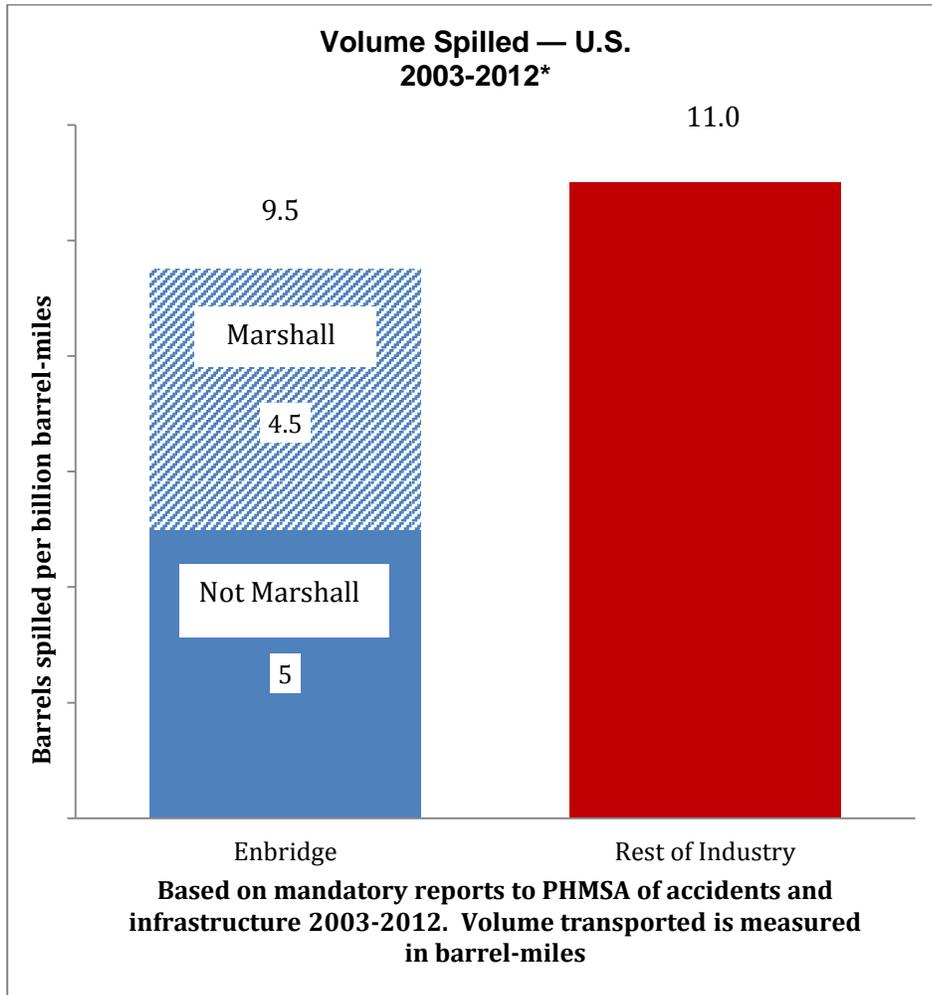
- Enbridge experienced 0.005 spills per billion barrel-miles, compared with an average 0.021 spills per billion barrel-miles for the rest of industry. In other words, Enbridge's spill frequency was about 75 per cent better than that of the rest of the industry.
- While Enbridge compares favourably in terms of spill frequency to the rest of the U.S. liquids pipeline industry, it is important to note that the entire industry is improving. The number of annual spills that the U.S. liquids pipeline industry (onshore) experienced along their rights-of-way over the three-year period of 2008 to 2010 was 60 per cent less than the number that the industry experienced over the three-year period of 1999 to 2001. (Source: U.S. pipeline industry's voluntary Pipeline Performance Tracking System)



\* Spills from onshore pipelines, including valve sites. Spills that took place within stations or terminals on company property are excluded from the data. The data include spills of five barrels (bbbls) or more, or those involving a release to water, death, injury, fire explosion or damages exceeding US \$50,000; for smaller spills, operators were not required to specify the part of the system, such as onshore pipelines, including valve sites until 2010. "Frequency of Spills" is the number of events. "Volume Transported" refers to the total amount of petroleum liquids shipped in the U.S. between 2003 and 2012 in billion barrel-mile units. This bar graph shows the relationship between Enbridge's spill frequency per volume transported and that of the rest of the U.S. liquids pipeline industry. This comparison is based on data available through PHMSA's databases for its mandatory accident and mileage reports from operators (Forms 7000-1 and 7000-1.1).

Volume Spilled Comparison

- Due to the spill volumes associated with Enbridge’s 2010 Marshall spill, Enbridge’s spill volume between 2003 and 2012 was comparable to the average spill volume of the rest of the U.S. liquids pipeline industry (i.e. not including Enbridge).



\* Spills from onshore pipelines, including valve sites. Spills that took place within stations or terminals on company property are excluded from the data. The data include spills of five barrels (bbls) or more, or those involving a spill to water, death, injury, fire explosion or damages exceeding US \$50,000; for smaller spills, operators were not required to specify the part of the system, such as onshore pipelines, including valve sites until 2010. "Volume Spilled" is the number of bbls spilled. "Volume Transported" refers to the total amount of petroleum liquids shipped in the U.S. between 2003 and 2012 in billion barrel-mile units. The resulting bar graph shows the relationship between Enbridge’s spill ratio and that of the industry. This comparison is based on the data available through U.S. Department of Transportation databases for its mandatory accident and mileage reports from operators (Forms 7000-1 and 7000-1.1).

## PART 4: GAS TRANSPORTATION

### Notes to the tables in this section:

- Unless otherwise noted, the data include spills experienced by the natural gas transmission, gathering, processing and trucking operations of Enbridge Energy Partners, L.P. and by Enbridge Offshore operated by Enbridge Inc.
- The data also include the liquid spills from the gas transmission pipelines and the limited number of liquids pipelines that are operated by Enbridge's Gas Transportation (GT) business unit.
- 1 barrel (bbl) = 0.159 cubic metres or 42 U.S. gallons (all liquid products).
- Gas releases are measured in MMSCF (million standard cubic feet).

### 2012 REPORTABLE SPILLS

In 2012, Gas Transportation (GT) had eight reportable spills totaling 46.07 bbls in its pipelines division and had no reportable spills in its trucking division. Seven of the eight spills were categorized as offsite (totaling 36.07 bbls) and the remaining one spill (totaling 10 bbls) was contained onsite. Three of the eight spills involved one bbl or less, four of the spills involved 2-10 bbls and one spill involved 12 bbls.

#### GAS TRANSPORTATION—2012 REPORTABLE SPILLS BY VOLUME AND LOCATION

	0-1 bbls	2-10 bbls	11-100 bbls	> 100 bbls
Onsite	0	1	0	0
Offsite	3	3	1	0
Sub-total	3	4	1	0
<b>Total</b>	<b>8</b>			

### REPORTABLE SPILLS HISTORY

The following table summarizes GT's total reportable spills over the past five years, from 2008 to 2012, by volume.

#### GAS TRANSPORTATION—VOLUME OF TOTAL REPORTABLE SPILLS

Year	Total Number of Spills	Total Spills Volume (bbls)
2012	8	46
2011	11	47
2010	7	35
2009	13	88
2008	9	159

### 2012 REPORTABLE RELEASES

GT had one reportable gas release that met PHMSA's incident reportable criteria. It was categorized as offsite and totaled 4.25 million standard cubic feet (MMSCF).

#### GAS TRANSPORTATION—2012 REPORTABLE RELEASES BY VOLUME AND LOCATION

	0-5 MMSCF
Onsite	0
Offsite	1
<b>Total</b>	<b>1</b>

## REPORTABLE RELEASES HISTORY

The following table summarizes GT's total reportable releases over the past two years, by volume:

### GAS TRANSPORTATION—VOLUME OF TOTAL REPORTABLE RELEASES

Year	Total Number of Releases	Total Volume (MMSCF)
2012	1	4.25
2011	0	0

## MITIGATION

Enbridge is committed to zero spills and releases, and in an effort to attain this goal, planning for GT's Facility Spill Reduction Team began in 2012. The team has been tasked with analyzing the data on facility spills, identifying root causes, and developing actionable plans to significantly reduce the number of facility spills.

In addition, GT formed a North Texas Risk Reduction Team in order to effectively reduce the number of releases in that area. Although these releases are small, occur in mainly rural areas and are non-reportable, Enbridge is committed to zero releases and reducing risk.

## INNOVATION

- GT is currently working on proposals with a third-party provider regarding a smart coating that can detect hydrogen and is being modified for hydrogen sulfide (H<sub>2</sub>S). The coating, which can be applied as a standard facility- and aboveground-piping paint, reacts in real time with any emissions passing across the paint and acts as an early warning system to those in the area.
- In 2013, GT invested in Smart Pipe Company Inc., which develops, manufactures and installs non-bonded fibre-wrapped high-density polyethylene (HDPE) liner that can be slip-lined up to a few miles through existing pipe in lieu of complete replacement using traditional steel pipe. This liner will be a great advancement in areas where there are pipelines in wetlands or in the case of pipe involved in horizontal directional drilling that cannot be replaced with standard construction either due to access or permitting.
- Enbridge's Alternative & Emerging Technology department and GT are working on new bandwidth wireless technologies to maintain better communications with remote pipeline sites.
- GT is investigating the Halfwave ART (acoustic reduction technology) in-line inspection tool. Similar to EMAT (electro-magnetic acoustic transducer) or ultrasonic, the Halfwave ART does not require sensors touching pipe wall and does not require a liquid couplant to transmit.
- If a large gas leak occurs over a short period of time, the risk of an explosion can be significant. To mitigate potential consequences, GT is working with Stanford Research Institute (SRI) and Pipeline Research Council International (PRCI) to perform full-scale tests to evaluate the performance of blast mat material that would mitigate the consequences produced by the rupture of a natural gas pipeline. The blast mat material would be an easy-to-apply coating material that could be sprayed on any building that is within a certain area of a pipeline right-of-way. In addition, SRI is developing a special type of blast mitigation material that could envelop a pipeline underground. This could also be used in high-consequence areas (HCAs) and would effectively minimize a blast from a rupture below ground. GT originated this research project, which can be used industry-wide to identify viable concepts for mitigating this sort of damage.

## INDUSTRY LEADERSHIP

Stemming from the various innovations listed above, Gas Transportation is providing leadership through integration of technology research and usage across Enbridge business units. GT is continuing to work with Enbridge's Joint Business Unit Integrity Council, the Alternative & Emerging Technology department, the Liquids Pipelines business unit, and Enbridge Gas Distribution in comparing procedures, technologies, projects and paths forward to a more successful execution of initiatives.

## PART 5: GAS DISTRIBUTION

Enbridge's Gas Distribution (GD) business unit services over two million customers through an extensive network of distribution, transmission and storage assets. This includes more than 35,000 kilometres of mains, more than two million services, more than 40 gate stations, and more than 100 billion cubic feet (BCF) of storage facilities. The majority of these assets are located in Ontario and are operated by Enbridge Gas Distribution (EGD). Other assets are located in Quebec, New Brunswick and upstate New York and are operated by the affiliate companies of Gazifère (GAZ), Enbridge Gas New Brunswick (EGNB) and Niagara Gas Transmission Ltd. (NGTL), respectively.

### 2012 REPORTABLE SPILLS AND RELEASES

#### Spills

GD experienced 13 reportable spills in 2012 in Ontario totaling approximately 497 bbls of liquid substances, as summarized in the table below. GD reported these spills to the Spills Action Centre of the Ontario Ministry of Environment, and all impacted areas were restored in a timely manner with no further actions required.

#### GAS DISTRIBUTION—2012 REPORTABLE SPILLS BY VOLUME AND LOCATION OF SPILL

	0-1 bbls	2-10 bbls	11-100 bbls	> 100 bbls
Onsite	1	0	0	0
Offsite	9	1	1	1
Sub-total	10	1	1	1
Total	13			

The one onsite spill involved approximately 5 millilitres of mercaptan (non-commodity odourant). The spill was contained and the waste picked up for proper disposal.

Another spill was of approximately 100 litres of oily water during an excavation that was cleaned up using a vacuum truck.

Also, a spill of approximately 75,000 litres of water was reported from a water main during construction activities. A vacuum truck was used to remove sediment from a storm sewer, and a backhoe, shovels and brooms were used to clean up the roadway of muddy water.

The remaining reported spills were from bentonite releases as a result of horizontal directional drilling (HDD) activity.

#### Releases

GD also reports to both the Ontario Ministry of the Environment and the Ontario Technical Standards and Safety Authority releases of natural gas as a result of planned venting and purging activities, and from excavation damages. In 2012, GD reported three instances of planned venting/purging activities, and had approximately 1,550 third-party damages. (We plan to report the volumes of natural gas associated with these releases in future Corporate Social Responsibility reports.)

### REPORTABLE SPILLS HISTORY

The following table summarizes GD's total reportable liquids spills over the past five years, from 2008 to 2012, by volume.

#### GAS DISTRIBUTION—VOLUME OF TOTAL REPORTABLE SPILLS\*

Year	Total Number of Spills	Total Spills Volume (bbls)
2012	13	497
2011	25	35
2010	4	101
2009	1	0.02
2008	3	2

\* Please note that the GD spills volumes reported in the table above do not include natural gas release volumes associated with planned venting and purging activities or from excavation damages. We plan to report these natural gas release volumes in future CSR reports.

## MITIGATION

Specific examples of efforts that GD is taking to mitigate the risk of spills and releases are discussed below:

- **FOCUS ON INTEGRITY AND RELIABILITY**

### Monitoring and Preventative Maintenance

#### *Detecting Leaks*

GD has enhanced its knowledge of the characteristics of its distribution system through targeted risk studies of assets. This has allowed it to better prioritize leak surveys and repair response based on risk levels. New protocols have been established and implemented for conducting condition-based leak surveys, and inspections are done through mobile and walking surveys.

Also, the average repair time of leaks classified as “B” leaks (leaks that are recognized as being non-hazardous at the time of detection but require scheduled repair based on probable future hazard or to avoid calls from the public) was reduced to an average repair time of four months, versus GD’s standard repair within 15 months of discovery.

#### *Managing Damages*

GD’s largest operational threat is third-party damage to natural gas pipeline infrastructure. Preventing these damages improves worker and public safety, as well as the integrity of GD’s distribution assets.

A key prevention measure is to provide information about underground infrastructure to individuals interested in excavating—before they conduct any excavations.

As such, a significant achievement in 2012 related to damage prevention was the passage into law of the Ontario *Underground Infrastructure Notification System Bill*, which requires all underground utility operators to participate in Ontario One-Call, a call centre that provides information to potential excavators in Ontario.

GD will continue to work with government stakeholders toward developing and implementing regulations to drive the effectiveness of the bill in reducing risk to Ontarians. The regulations are expected to be implemented by the end of 2013.

Also in 2012, GD implemented a High Risk Excavation Program where damage prevention inspectors proactively engage with contractors performing excavations that have traditionally resulted in multiple damages (e.g. deep excavation work such as sewer and water main work).

GD continues with its Sewer Safety Program, which was introduced in 2010. This program addresses “cross bores,” which are inadvertent intersections of natural gas pipelines with sewer service lines created when natural gas was installed using trenchless technology. When a blocked sewer is being cleared outside the walls of buildings by municipal sewer operators, plumbers, drain cleaners or the general public, there is the potential to damage a natural gas line. The program includes industry and public education regarding the risk, and the provision of free sewer safety inspections when blocked sewers require cleaning beyond the foundation walls.

Through these efforts and others, GD has been successful in reducing normalized damages per thousand locate requests, as well as absolute damages. The following table illustrates the improvements that Enbridge Gas Distribution, specifically, has made over time.

	2008	2009	2010	2011	2012
Total # of damages	2,102	2,104	1,987	1,711	1,550
Total # of locates	379,851	400,696	401,980	497,148	519,092
# of damages per 1,000 locates	5.5	5.3	4.9	3.4	3.0

#### *Inspecting Pipelines*

GD’s integrity management program is an integral part of reducing integrity-related risks. As required by the Technical Standards and Safety Authority (TSSA), GD completed inspections of mainlines operating above 30 per cent Specified Minimum Yield Strength (SMYS) at the end of 2012. No systemic risks were identified from the in-line inspections findings, except for one pipeline for which EGD has applied to the Ontario Energy Board for Leave to Construct a new, larger pipeline as a replacement.

Inspections conducted resulted in immediate and scheduled repairs to the pipelines. Pipelines are re-inspected on a seven-year cycle, or as required by engineering analysis.

### ***Long-term Infrastructure Planning***

In 2012, GD completed its first Asset Plan, which outlines GD's approach and capital requirements to optimally managing distribution pipelines through systematic analysis of growth, reinforcement, relocation and system integrity requirements. The approach includes capital investment requirements over a 10-year period and it informs GD's Long-range Plan. Two accomplishment in 2012 were the completion of the replacement of all cast iron and all bare steel mainlines, both top integrity risks. GD will update the Asset Plan annually.

- ***FOCUS ON SAFETY AND THE ENVIRONMENT***

#### ***Public Awareness***

GD strives to increase awareness and educate the public on natural gas safety. Specifically, in 2012, EGD expanded its stakeholder notification process to include addresses within 200 metres of vital mains (i.e. mains that are vital to operational reliability). The notification process is modeled after the National Energy Board's (NEB) stakeholder notification requirements for NEB mains.

In 2012, EGD also devised a comprehensive strategy for customer equipment safety management in an effort to reduce the risk of injury and damage with improperly installed or maintained end-use equipment. EGD targeted long-term-care homes. Safety issues were identified, such as poor venting and lack of carbon monoxide monitors. This initiative revealed more issues than anticipated and has provided guidance to increase our outreach. EGD will continue to conduct safety evaluations for other targeted customer segments in 2013 and beyond.

- ***FOCUS ON EMERGENCY PREPAREDNESS AND RESPONSE***

#### ***Response***

Timely response to incidents is critical to ensuring the safety of the public. EGD set out to reduce its response time and since June 2012, EGD has maintained a 45-minute response rate more than 90 per cent of the time. The previous response rate was 60 minutes.

Also, proper coordination between EGD and external parties when responding to emergencies is critical to reducing the risk of damage and injury. First responder notification is now done for every damage. Further, EGD is taking a risk-based approach to prioritize fire department training to focus on those departments that would benefit most from natural gas awareness training.

## ***INNOVATION***

GD actively seeks and participates in industry research consortiums—specifically, with NYSEARCH and the Gas Technology Institute—for new technologies that support the safe and reliable distribution of natural gas. For example, the objective of the EGD's Right-of-Way (ROW) Protection Program is to review available high-pressure-pipeline-monitoring technologies to protect against excavation damages. Currently, EGD is involved in the development of a video analytics-based intelligent damage prevention system trial, as well as an embedded sensor-based damage prevention system.

Another example is EGD's involvement in the development and testing of a cathodic protection (CP) monitor, a device that stores CP readings within a completely encapsulated device suitable for direct burial. A handheld reader is used to retrieve the readings electronically from above ground without requiring a direct connection. The benefits of this technology include identification of stray currents and other sources of CP interference, and eliminating the exposure of workers to traffic while taking readings using current methods.

## ***INDUSTRY LEADERSHIP***

GD strives to lead and influence changes in the industry to improve worker and public safety, and to protect the environment.

In 2012, EGD strongly influenced the passing of the *Ontario Underground Infrastructure Notification System Act*, into law. Under this legislation, all underground utility operators are required to participate in Ontario One-Call, a call centre that provides answers to third-parties wanting to excavate for any reason in Ontario. The legislation is important for both GD and EGD because their largest operational threat is third-party damage to natural gas pipeline infrastructure, and because the best way to prevent this damage is by providing information about underground infrastructure to individuals wanting to excavate. With the passing of the legislation, excavators can get easily get the information they need with just one call. Ontario was the first of Canada's provinces and territories to pass such legislation.

EGD is also actively involved in developing effective regulations for this legislation, targeted for implementation by the end of 2013.

Regarding the Sewer Safety Program, which is also discussed above, while the Ontario Technical Standards and Safety Authority has issued a legal requirement for all pipeline licence holders to have effective sewer cross bore risk mitigation programs in place, EGD's program is considered industry-leading and as a result other natural gas distribution utilities in the province have been following EGD's lead.

In addition, EGD demonstrated its industry leadership in 2012 by eliminating its top integrity risk with the abandonment of all cast iron and bare steel mains within the distribution system. When natural gas distribution systems (as well as sewer and water systems) were initially installed in the early to mid-19<sup>th</sup> and 20<sup>th</sup> centuries, the materials used were often cast iron and bare steel. Over time, cast iron becomes brittle and can crack and bare steel corrodes, which can lead to leaks. EGD recognized the risk of these materials early, and has replaced the cast iron and bare steel in its system with coated steel and plastic pipe. Between the start of the pipe replacement program in the early 1990s and its completion in 2012, EGD replaced approximately 1,800 kilometres of cast iron in Toronto. This is a considerable accomplishment given the challenges of performing such work in a densely populated urban environment.

Lastly, in 2012, EGD opened the doors to its state-of-the-art Technology and Operations Centre (TOC) in Markham, Ontario. The purpose of the TOC is to provide comprehensive theoretical and hands-on training on the use of procedures, critical tools and equipment for workers. The facility consists of 100,000 square feet of office space, and 20,000 square feet of classrooms and practical training labs. The highlight of the TOC is a one-acre outdoor "Streetscape" where employees are trained on real-life simulations in a safe and controlled environment. The Streetscape replicates an urban community with full-sized roads and scaled-down buildings that represent residential, commercial and small industrial districts, along with typical utility infrastructure. The entire facility is designed as a Leadership in Energy Environmental Design (LEED) gold facility, which realizes 46 per cent energy and 50 per cent water reductions and 70 per cent waste diversion compared to a typical facility of similar use. The facility also uses rain water harvesting for irrigation, and operates grey water systems that reduce the burden on municipal water supply. The TOC is an industry-leading facility that demonstrates EGD's commitment to safety and the environment.

## ***PART 6: EGD'S DEMAND-SIDE MANAGEMENT PROGRAMS***

Enbridge is committed to helping customers use energy wisely. Enbridge Gas Distribution (EGD) has a range of demand-side management (DSM) programs designed to meet the needs of our customer groups and market sectors. From homeowners to large industrial facilities, and everything in between, EGD encourages, educates, facilitates and incentivizes customers to adopt energy-savings equipment and operating practices to reduce consumption of natural gas.

EGD does this by:

- Conducting energy audits of residential homes and commercial and industrial facilities to identify opportunities to improve energy efficiency
- Providing financial rebates and incentives to encourage them to adopt energy-saving equipment and practices;
- Working with industry and trade associations in various sectors—such as schools, hotels/motels, construction, automotive, food and beverage, and pulp and paper—to promote DSM programs and contribute to industry standards and best practices
- Holding design charrettes to support and educate builders on higher efficiency building options before a shovel hits the ground at a new build site
- Partnering with governments, suppliers and equipment manufacturers to invest in new energy-efficient

technologies that benefit ratepayers and enhance the competitiveness of EGD's business

- Participating in consumer and community events to promote and ensure that program opportunities are well publicized and accessible to all consumers, including low-income earners
- Ensuring that all of EGD's incentives and rebate offers are available on the website for fast and easy review and downloading

In 2012, EGD's DSM programs saved approximately 62 million cubic metres<sup>1</sup> of natural gas, which is enough to supply approximately 24,000 homes<sup>2</sup> with natural gas for a year.

Since 1995, EGD's DSM programs have cumulatively delivered about 7.1 billion cubic metres of natural gas savings (the equivalent of enough gas to supply approximately 2.76 million homes for one year<sup>2</sup>) and net energy savings to customers of about \$2.3 billion. Through these DSM activities, EGD has helped its customers avoid approximately 13.4 million tonnes of carbon dioxide emissions<sup>3</sup>.

1 2012 natural gas m<sup>3</sup> savings are in the process of being audited, and are subject to final regulatory approval and clearance of accounts with the Ontario Energy Board.

2 Assumes that a typical residential customer uses 2,568 m<sup>3</sup> of natural gas per year to heat their home and water.

3 Assumes that 1.89 kgs of carbon dioxide are emitted for each m<sup>3</sup> of gas that is consumed.

### **Contributing to DSM Policy and Conservation Activities**

As a recognized DSM leader in the natural gas industry, EGD is frequently invited to provide advice on DSM policy and programming. EGD is seen as a model of success in achieving measurable results in conservation activities and has often been recognized in both Canada and internationally for its role in developing effective policy frameworks, cooperation with stakeholders, innovative programming, and significant results. For example, EGD's market transformation programs are focused on facilitating fundamental changes that result in greater market shares for energy-efficient products and services. In one recent example, EGD is actively promoting the use of Drain Water Heat Recovery technology. In most homes, the second largest energy expense is for heating water. However, rather than have all the heat disappear down the drain with the water, these recovery units extract the heat and transfer it back to the cold water going into a home's water heater. This can lead to reduced hot water costs for a homeowner. In Ontario, EGD played an instrumental role in having this technology added to the revised provincial building code, thus providing builders another option for meeting the code.

EGD will continue to research our customers' needs and marketplace trends, and design new approaches and programs in consultation with our stakeholders, thereby delivering value to our customers, shareholders and the environment.

## ***PART 7: ENBRIDGE'S NEUTRAL FOOTPRINT COMMITMENTS***

In 2009, Enbridge announced an ambitious plan to stabilize our environmental footprint.

Our Neutral Footprint commitments are designed to reduce Enbridge's environmental impact where it is felt most: on the trees we remove and the natural habitat we permanently alter when building new energy infrastructure, as well as the energy we use to power our operations.

Through the program, we are counteracting our environmental impacts within five years of their occurrence by:

- Planting a tree for every tree we remove to build new pipelines and facilities ("Tree for a Tree")
- Helping to conserve an acre of natural habitat for every acre we permanently alter to build new pipelines and facilities ("Acre for an Acre")
- Generating a kilowatt hour of renewable energy for every kilowatt hour of additional energy our operations consume ("Kilowatt for a Kilowatt")

Our Neutral Footprint commitments are voluntary and are applied and integrated into all of our projects and operations. By meeting these commitments, we will stabilize Enbridge's environmental footprint at January 2009 levels.

### **Our "Tree for a Tree" Commitment**

Enbridge will plant a tree for every tree we remove to construct or expand our facilities or rights-of-way. The trees Enbridge counts and therefore replaces will be of adequate size to be considered "merchantable timber" as defined by the relevant local regulator.

Enbridge will replace trees from either forested or non-forested land (such as brush/scrub, prairie, grassland, alpine,

rangeland, meadows, pasture or cultivated land). We will plant them in such a way that we take into account the following priority considerations:

- Enbridge will plant trees to meet regulatory commitments and approval conditions;
- Enbridge will plant trees to maintain slope stability, control erosion, and meet reclamation guidelines and aesthetic requirements; and
- Enbridge will plant trees to meet the needs of local communities.

We will not always replace trees in the immediate area of impact, but will take into account land availability, local desire and consent.

#### **Our “Acre for an Acre” Commitment**

Enbridge will help conserve an acre of natural habitat for every acre that we permanently alter to build new pipelines and facilities. The natural habitat Enbridge helps to conserve could be forested land, wetlands or native prairie.

Enbridge will help conserve the land by working with the Nature Conservancy of Canada, The Conservation Fund in the U.S. and other organizations. As such, their guidelines and recommendations will determine how and where the land is conserved, and will ensure that it is of high ecological value.

The land Enbridge helps conserve may not be in the same area or region as the land that is impacted, and may not be “like for like.” Rather, Enbridge and our partners will make conservation decisions based on biological value and availability.

This commitment does not replace or negate Enbridge’s regulatory obligations to reclaim land when we are decommissioning an asset.

#### **Our “Kilowatt for a Kilowatt” Commitment**

Enbridge is committed to generating a kilowatt hour of renewable energy for every kilowatt hour of additional energy our operations consume above 2008 levels (January 1, 2009, being the start date for applying our Neutral Footprint commitments). We will fulfill this commitment within five years of the additional energy consumption.

Each year, Enbridge will compile the forecasted power consumption for Enbridge’s company-wide operations. Any net increase in power consumption will be counterbalanced by our investments in economically viable renewable energy production. Enbridge will address growth in our electricity consumption on a five-year rolling basis consistent with the long-range planning horizon.

Enbridge’s investments in new renewable power generation will, at a minimum, be proportional to the growth in electricity consumption by our operations, beginning January 1, 2009. Because Enbridge’s electricity consumption fluctuates from year to year, we base this commitment on our long-term consumption forecast.

#### **Neutral Footprint—Progress Report**

As of September 30, 2013, we are exceeding our Neutral Footprint objectives, as follows:

- 135 per cent of our “Tree for a Tree” commitment (594,925 trees removed; 804,010 tree seedlings planted)
- 1,758 per cent of our “Acre for an Acre” commitment (disturbed 2,932 acres of natural habitat; helped conserve 51,543 acres, with the surplus of 48,611 to be applied to future projects)
- 105 per cent of our “Kilowatt for a Kilowatt” commitment (by the end of 2012, we were forecasting that our power consumption will grow by 3,609 GWh by 2015, while power generated from our renewable energy assets (both existing and under construction) will be 3,795 GWh)

In 2012, Enbridge invested approximately \$5 million toward meeting our Neutral Footprint commitments. We meet our Neutral Footprint commitments with the help of environmental/conservation partners and employee volunteers, dispersing the funding across Canada and the U.S.

For example, in 2012, a major contribution from our Neutral Footprint budget supported the largest land conservation deal in Wisconsin history. Enbridge and the McKnight Foundation provided funding that allowed the Wisconsin Department of Natural Resources (DNR), the Lyme Timber Company and the Conservation Fund to secure 45,000 acres of forest land in Douglas, Bayfield, Burnett and Washburn counties in Wisconsin. This allowed for the establishment of the Brule-St. Croix Legacy Forest, which includes the headwaters of the St. Croix and Bois Brule rivers and contains dozens of small lakes and ponds. In exchange for the conservation easement payments, the Lyme Timber Company must keep the land undeveloped and open to public access—including for hunting, fishing and hiking—forever. The forest also will be open for sustainable forestry, including logging for the region’s wood products industry. The second phase—another 22,668 acres—is proposed for 2014.

*For the current status of our Neutral Footprint progress, please see our [Neutral Footprint dashboard](#).*

## COMPLIANCE

### EN28

*Monetary value of significant fines and total number of non-monetary sanctions for noncompliance with environmental laws and regulations.*

Enbridge manages compliance with laws and regulations through system controls and regular reviews that include training and awareness, adopting best practices, inspections and third-party audits. We consider any regulatory notification or penalty to be important and expect our employees and contractors to fully comply with all regulatory, legislative and permit requirements. Regulatory notifications are formal written notices by regulators that Enbridge may not be adhering to legal, regulatory or permit requirements. Examples include enforcement actions, summonses, charges, stop and control orders, Notices of Violation (NOVs), and formal warnings. In the event that Enbridge's performance falls short of this expectation, we carry out rigorous reviews and institute corrective actions, as we did for each non-compliance issue noted below.

#### Liquids Pipelines

On July 2, 2012, Enbridge's Liquids Pipelines (LP) business unit received a Notice of Probable Violation (NOPV) from the U.S. Pipeline and Hazardous Materials Safety Administration (PHMSA) related to the 2010 Line 6B crude oil release near Marshall, Michigan, which indicated a civil penalty of approximately US\$3.7 million. Enbridge paid the penalty proposed by PHMSA in the third quarter of 2012.

LP did not receive any fines for environmental issues in Canada in 2012, although 19 events for LP overall (Canada and the U.S.) involved formal notification from regulatory agencies.

Also, in October 2012, Ontario's Ministry of the Environment informed Enbridge that it would be investigating violations of Enbridge's Sarnia Terminal storm water Environmental Compliance Approval (ECA), which regulates the discharge of storm water from Sarnia Terminal. In July 2013, the Ministry of Environment issued a summons to Enbridge, alleging non-compliance with conditions of the ECA.

#### Gas Transportation

As of May 15, 2013, Enbridge's Gas Transportation (GT) business unit in the U.S. had received 16 NOVs covering 2012 calendar year. Fines paid in 2012 for all the NOVs that were closed in that year totaled approximately US\$15,447. As of May 15, 2013, there were three open NOVs issued to GT in the 2012 calendar year that had yet to be closed. Fines (if any) for these three NOVs will be included in Enbridge's 2014 CSR Report.

#### Enbridge Gas Distribution

Enbridge Gas Distribution (EGD) received no notifications, fines or orders for non-compliance with environmental regulations in 2012.

### COMPANY-WIDE REGULATORY NOTIFICATIONS AND FINES

	2012	2011	2010	2009	2008
Regulatory Notifications <sup>1</sup>	35	24 <sup>2</sup>	25	25	14
Regulatory Fines Incurred (thousands of Canadian dollars)	\$3,714.6 <sup>3</sup>	\$29.7	\$1,176 <sup>4</sup>	\$1,159.3 <sup>5</sup>	\$59.9

1 Enbridge responded promptly to address the concerns associated with all notifications.

2 Includes 19 NOVs for GT and 5 NOVs for LP. Please note that in Enbridge's 2012 CSR Report we incorrectly reported that GT had 20 NOVs in 2011 and that LP had none.

3 Includes payment by Enbridge of the US\$3,699,200 civil penalty levied in 2012 by the U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) regarding the Line 6B pipeline release in 2010 near Marshall, Michigan.

4 Includes US\$1-million settlement agreement with the Wisconsin Department of Justice for air compliance violations received at Enbridge's crude oil pipeline breakout storage terminal at Superior, Wisconsin. Many of the violations were self-reported by Enbridge to the Wisconsin Department of Natural Resources after Enbridge discovered them during the course of a facility audit. Since then, Enbridge has corrected the issues or is in the process of correcting them.

5 A settlement regarding three NOVs issued by the Wisconsin Department of Natural Resources was reached in January 2009 and included a US\$730,000 fine and a US\$370,000 statutory assessment. The NOVs pertained to environmental infractions that Enbridge allegedly committed while constructing its Southern Access pipeline in 2007.

## **TRANSPORT**

### **EN29**

*Significant environmental impacts of transporting products and other goods and materials used for the organization's operations and transporting members of the workforce.*

Enbridge Gas Distribution (EGD) has the largest natural gas vehicle fleet in Canada, with over 597 of its 785 vehicles running on low-emission fuel. By converting these vehicles to natural gas, EGD has reduced carbon dioxide emissions from its fleet.

EGD also helps its customers to convert their vehicle fleets to operate on natural gas. These fleets include garbage collection trucks, arena ice cleaning machines, and forklift trucks. In 2012, three garbage collection companies committed to operating 100 trucks using natural gas in their fleets. This market will continue to grow as operators see the significant environmental and cost advantages of operating vehicles on natural gas. Through the use of natural gas in vehicles, EGD as well as its customers have reduced their fleet emissions of carbon dioxide by an estimated combined total of 3,300 tonnes annually.

In addition to using low-emission fuel, EGD is taking further actions to reduce vehicle emissions. This includes replacing older trucks with newer ones that meet stricter emissions standards. EGD has also reduced the fleet size by standardizing vehicle designs and building versatility into its fleet. For jobs where previously three trucks would have been required, each with its own capabilities, EGD has built three different job functions into one truck.

EGD also operates seven natural gas vanpools for its employees living in the Greater Toronto Area who commute to work at its Victoria Park offices in Toronto. Each vanpool can hold eight passengers and a driver. In total the program saves about 300 tonnes of carbon dioxide annually. Employees benefit by reducing their vehicle fuel and maintenance costs, lowering stress, having preferred parking at the EGD office and having pride in knowing that they are doing their part for the environment and to relieve traffic congestion.

## **TOTAL ENVIRONMENTAL PROTECTION EXPENDITURES**

### **EN30**

*Total environmental protection expenditures and investments by type.*

Enbridge spends hundreds of millions of dollars annually on environmental assessment, protection and other initiatives. While some of these actions are mandatory, such as impact assessments and reporting of operational emissions, many others are voluntary, such as tree-planting, conserving natural habitats, and public disclosures about our environmental, social, and economic performance.

Enbridge's environmental activities include:

- Systems integrity and maintenance (approximately \$2.0 billion company-wide in 2012, and approximately \$2.4 billion company-wide in 2013)
- Emissions Data Management System (approximately \$5 million invested in 2011/12)
- Tree planting (approximately \$0.45 million invested in 2012)
- Conservation of natural habitat (approximately \$0.83 million invested in 2012)
- GHG management and reporting
- GHG auditing
- Groundwater monitoring
- Site containment / drainage
- Environmental seminars for staff
- Environmental Management System audit
- Earth Week Campaign
- Soil assessments

- Sponsorships of environmental groups (e.g. Ducks Unlimited; Trout Unlimited; Pheasants Forever; etc.)
- Corporate Social Responsibility reporting
- Waste management (e.g. minimization, reuse, and recycling)
- Participation in industry association activities
- Compliance with all applicable regulatory requirements
- Regulatory reporting
- Government approvals
- Aquatic assessments
- Geo-technical assessments
- Contaminated soil management
- Environmental assessments

# SOCIAL PERFORMANCE

**“Enbridge’s success will always be rooted in treating people fairly and with respect.”** – *Karen Radford, Executive Vice President, People and Partners*

It is widely recognized that for a company to stay in business and grow it needs more than regulatory permits or licenses from governments and other formal decision makers. It also requires less formal social approval and acceptance from local communities and other stakeholders. Earning that “social license” to operate and grow can require a company to exceed regulatory requirements in order to meet changing public expectations.

Public concern and focus on safety, operational and environmental incidents in the energy industry in North America has intensified dramatically in recent years. This focus has manifested itself in increased scrutiny by governments, regulators, landowners, the media, shareholders, local communities and the general public. In some instances it has also manifested itself in organized campaigns of opposition to specific projects or activities that can affect Enbridge’s reputation.

Enbridge is determined to meet heightened public expectations regarding transparency, accountability and performance. When public concerns are raised about our projects and operations, we endeavour to listen and respond in ways that address the issues involved, and to provide opportunities for a broad range of stakeholders to benefit from our activities.

## **Health and Safety**

While Enbridge is striving to be a North American leader in pipeline and system facility integrity, process safety, and environmental responsibility, we’re also striving to be a leader in human health and safety.

Our goal is to establish a world-class safety culture within Enbridge—one that targets zero incidents and zero injuries, and where our safety priority is engrained in the minds of our employee and contractor workforce.

We’ve taken steps within and made structural changes to our company to ensure we’re fostering a culture that proactively identifies and mitigates risks across the whole organization and is constantly focused on our top priorities—safety and operational reliability.

For example, to further reinforce Enbridge’s safety culture and improve health and safety performance throughout the organization, in January 2012 we implemented Lifesaving Rules and training for all Enbridge employees and contractors; and in April 2013 we enacted Health & Safety Principles to guide our safety actions, policies, procedures and culture and which define specific actions and behaviours that all Enbridge employees and contractors are obliged to follow.

Enbridge had no employee fatalities in 2012. However, we were deeply saddened by an incident in which a contractor’s employee died on February 28, 2012, on the Woodland Pipeline construction project in northern Alberta. The individual sustained a fatal injury when the side boom he was operating flipped over into a ditch while he was helping prepare for a tie-in weld. Since this incident, Enbridge has required all contractors working on our projects to install roll-over protective systems (ROPS) on their side booms. Additionally, all side booms are to undergo pre-mobilization inspections prior to being put into service at Enbridge worksites. Enbridge has also created industry-wide pipeline construction safety roundtable groups in both the U.S. and Canada. Both contractors and owners are represented in these industry groups, whose focus is on improving the safety culture in mainline construction.

At Enbridge, all safety incidents, whether regulatory recordable or not, are reported to local supervisors, as well as to our Health & Safety Department for tracking, trending and communications regarding potential lessons learned.

## **Aboriginal and Native American Relations**

Aboriginal communities in Canada and Native American communities in the U.S. comprise some of Enbridge’s most important neighbours and partners.

Enbridge recognizes the history, uniqueness and diversity of Aboriginal and Native American peoples. We also recognize that positive relationships with them, based on mutual respect and trust, will help them and us realize our respective aspirations and will help Enbridge to reach our strategic business objectives.

The principles that guide our relations with Aboriginal and Native American people are set out in our [Aboriginal & Native American Policy](#). The goal of the policy is to help achieve mutually beneficial relations with Aboriginal and Native American communities in proximity to, or in some significant way affected by, Enbridge's operations. The policy and supporting guidelines are designed to ensure a consistent, thorough approach to consultation and engagement with Aboriginal and Native American people.

The Enbridge Northern Gateway Pipelines Project's Education and Training Fund is just one example of a program that aligns with our Aboriginal & Native American Policy. The fund, which was originally set at \$1.5 million, has been supporting flexible, community-based training specific to the pipeline and construction sector since its establishment in 2011. Based on community interest and successful initiatives, in December 2012, the project increased the fund to \$3 million. In 2012 and the first quarter of 2013 the project committed over \$900,000 of the total \$3 million toward skills development and community education initiatives.

### **Community and Landowner Relations**

Enbridge knows that our neighbours during construction of a project will also be our neighbours for the many years that the project will be in operation, and we look for and welcome the opportunity to invest in long-term collaborative relationships with all the communities located near our operations and along our rights-of-way across North America.

Through our Public Awareness Programs, we have a scheduled communication process through which landowners, communities and other key stakeholders are kept informed about our operations and related initiatives and issues; and we seek comments from the affected public and address questions and concerns. These programs are focused on raising awareness of pipelines and operating facilities in communities, the importance of calling a local One-Call centre (in Canada) or 811 (in the U.S.) before any digging project, and how to recognize the warning signs of a potential pipeline emergency and what to do—or what not to do—in response.

We rolled out the Enbridge and Vector Pipeline Emergency Responder Education Program in the U.S. in December 2012 to nearly 8,000 emergency response agencies; and in Canada in April 2013 to approximately 800 emergency response agencies. The four-hour online training program includes the basics of natural gas and crude oil pipeline operations, how to safely handle products transported by pipelines, including those operated by Enbridge, pipeline emergency response tactics and pipeline emergency scenarios. Additionally, in 2013, Enbridge is rolling out an in-person outreach component of the program for fire departments in close proximity to our pipelines and facilities. We are also developing a training module targeting 911 dispatch centres that cover our operating areas.

### **Community Investments**

We believe investing in our communities is an essential part of being a good neighbour and is a contributing factor in maintaining our social license to operate. For example, in 2012, our enterprise-wide community investment expenditure totaled \$16.5 million, which we invested in more than 750 charitable, non-profit, and community organizations.

By investing with our dollars in six focus areas—Lifelong Learning; Community Leadership; Natural Legacy/Neutral Footprint; Arts & Culture; School Plus; and Safe Community—in 2012, Enbridge was able to support organizations that contribute to the economic and social development of communities across our operating regions in Canada and the U.S.

For example, the Enbridge School Plus Program, which we developed in partnership with the Assembly of First Nations (AFN), supports enriched programming and extracurricular activities in First Nations schools near major Enbridge pipeline routes in Canada. The overall goal of the program is to encourage First Nations youth to stay in school by assisting schools in offering sports activities, music or arts programs, field trips and school clubs. Since 2009, the program has enriched the education of more than 10,000 youth in more than 90 schools by providing more than \$3 million in grants in support of educational programming.

**SOCIAL—GOALS AND PERFORMANCE**

<b>Social Scorecard Results</b>				
<b>SAFETY</b>				
<b>Objectives</b>	<b>2012 Results</b>	<b>2011 Results</b>	<b>Details available in GRI Performance Indicator Section</b>	<b>Challenges</b>
<p>Strive for zero accidents, injuries or incidents</p>	<p>In 2012, one incident claimed the life of an employee of a contractor.<sup>1</sup></p> <p>The enterprise-wide Lost-day Rate in 2012 was 0.32 lost-days injuries per 200,000 hours worked, compared with 0.18 in 2011. The 2012 rate compares to the six-year historical average of 0.30.</p> <p>The enterprise-wide Total Recordable Injury Frequency was 1.27 recordable injuries per 200,000 hours worked, compared with 0.97 in 2011. The 2012 rate is slightly better than the six-year average of 1.48.</p> <p>In early 2013, created the new role of Senior Vice President, Enterprise Safety &amp; Operational Reliability, which reports directly to Enbridge’s President and CEO and is accountable for the leadership and oversight of safety, operational reliability, and environmental protection policies and practices across the enterprise.</p> <p>In January 2012, Enbridge implemented Lifesaving Rules across the enterprise, an initiative designed to reduce and eliminate fatalities within</p>	<p>In 2011, one incident claimed the life of a contractor.<sup>2</sup></p> <p>The enterprise-wide Lost-day Rate in 2011 was 0.18 lost-days injuries per 200,000 hours worked, compared with 0.28 in 2010.</p> <p>The enterprise-wide Total Recordable Injury Frequency was 0.97, which was an improvement from 2010 and significantly better than the five-year average of 1.54.</p>	<p>Labour Practices and Decent Work—Goals and Performance LA7</p>	<p>Maintaining the best possible health and safety practices in a time of significant growth for Enbridge</p>

	<p><b>Enbridge's operations.</b></p> <p><b>In April 2013, Enbridge enacted Health &amp; Safety Principles, which are fundamental expectations for all employees and contractors and guide our safety actions, policies, procedures and culture.</b></p> <p><b>In 2012, Enbridge took the lead in creating industry-wide pipeline construction safety roundtable groups in both the U.S. and Canada. With representatives from both contractors and owners, these groups are focused on improving the safety culture in mainline construction.</b></p>			
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<sup>1</sup> On February 28, 2012, a contractor's worker on the Woodland Pipeline Project suffered a fatal injury when the side boom he was operating flipped over into a ditch while helping prepare for a tie-in weld. Enbridge has conducted an internal investigation into the incident and cooperated fully with the emergency officials and regulators in their incident investigation. Since this incident, Enbridge has required all contractors working on our projects to install roll-over protective systems (ROPS) on their side booms. Additionally, all side booms are to undergo pre-mobilization inspections prior to being put into service at Enbridge worksites.

<sup>2</sup> On October 11, 2011, there was a fatality at Enbridge Gas Distribution Inc. involving a contractor carrying out landscaping work in Mooretown, Ontario.

Social Scorecard Results (continued)				
HUMAN RESOURCES				
Objectives	2012 Results	2011 Results	Details available in GRI Performance Indicator Section	Challenges
<p>Attract the best talent and develop, engage, and retain workforce</p> <p>Sustain levels of employee engagement (Maintain “Best Employer Status” at 65% or higher)</p> <p>Develop and implement a robust recruitment strategy</p> <p>Refresh Enbridge values statement, including a rollout and communication strategy; leverage and sustain a robust Employee Value Proposition to assist with recruitment and retention</p> <p>Create/implement an enterprise-wide Leadership Development Program to broaden the leadership base and accelerate the pace of leadership development</p> <p>Enhance succession management practices within business units and across the enterprise</p>	<p>Enterprise-wide employee engagement score from the 2012 Employee Perspectives Survey: 79% (The Perspective survey is run every 2 years and is next scheduled for 2014.).</p> <p>Recruited 3,682 new employees and provisioned contractors</p> <p>Enbridge values statement successfully launched in 2012; Employee Value Proposition articulated and soft launch planned for 2013 with immediate integration into recruitment process and Leadership Development Principles.</p> <p>Development of Leadership Development Program completed in 2012; launch in June 2013 ; approximately 980 leaders will complete the training in 2013.</p> <p>New succession management tool developed; launched in spring 2013. A new talent assessment process/tool was also developed and</p>		<p>Engagement: Labour Practices and Decent Work—Goals and Performance—Employee Communications</p> <p>Turnover: LA2</p> <p>Average Learning &amp; Development expenditure: LA10</p>	<p>Recruitment: ability to source, recruit, integrate, manage and develop people requires accelerated timelines and different approaches</p> <p>Retention: ability to retain employees given continued growth; increasingly constrictive and tighter competitive markets; number of individuals eligible for retirement; reputational impact of public controversy over some projects</p> <p>Leadership capacity and capability: ensuring appropriate leadership capacity for both operational oversight and developing/mentoring individuals; broadening and deepening our leadership pool more quickly and consistently</p> <p>Sustain levels of employee development</p> <p>Workforce planning: ability to accurately forecast workforce numbers and skills required to successfully deliver business objectives; maintaining an appropriate work/life balance)</p>

<p>Maintain employee turnover rate; <u>Target</u>: maintain voluntary turnover in the range of 2% to 4.5% <u>Target</u>: keep new-hire voluntary turnover in the range of 3.5% to 6.5%</p> <p>Maintain employee training investment at a market-competitive level; <u>Target</u>: between 1.25% and 1.5% of salary costs</p>	<p>launched in 2013 to supplement succession planning.</p> <p>Voluntary turnover as a percentage of total workforce population: 3.7%; new-hire voluntary turnover rate: 4.8%.</p> <p>Average expenditure per employee on learning and development: \$1,595; Expenditure as a percent of salary costs: 1.4%.</p>	<p>Voluntary turnover as a percentage of total workforce population: 3.7%.</p> <p>Average expenditure per employee on Learning &amp; Development: approximately \$1,360. Expenditure as a percentage of salary costs: 1.24%.</p>		
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Social Scorecard Results (continued)				
COMMUNITY AND LANDOWNER RELATIONS / ABORIGINAL AND NATIVE AMERICAN RELATIONS				
Objectives	2012 Results	2011 Results	Details available in GRI Performance Indicator Section	Challenges
<p>Transparent, proactive and frequent communication</p> <p>Opportunities for communities to benefit from relationships with Enbridge</p>	<p>As part of our Safe Community Program, we launched the Enbridge and Vector Pipeline Emergency Responder Education Program, a free training program for all emergency responders within our areas of operation, providing them the information they need to safely and effectively respond to a pipeline emergency.</p> <p>Northern Gateway Pipelines Project increased funding to its Education and Training Fund to \$3 million from \$1.5 million to support pipeline, oil and gas and construction sector training initiatives in British Columbia and Alberta.</p> <p>Enbridge Gas Distribution donated \$100,000 to the Fire Marshal's Public Fire Safety Council in Ontario to provide 20 volunteer and composite fire departments each with a \$5,000 credit to purchase educational materials for enhancements in life-saving firefighting techniques.</p> <p>The 2012 Enbridge School Plus Program funded 37 eligible First Nations schools, and benefited over 6,990 First Nations youth. Enbridge also expanded School Plus to include communities along the Enbridge mainline right-of-way in Ontario and Quebec, and along the proposed</p>	<p>Through our Safe Community Program, began developing an interactive training program for emergency responders to cover all elements of our operations.</p> <p>The 2011 Enbridge School Plus Program funded 32 eligible schools and benefited over 4,290 youth.</p> <p>Northern Gateway Pipelines Project launched a \$1.5-million Education and Training Fund to support flexible community-based training specific to the pipeline and construction sector.</p>	<p>SO1, SO9, SO10—Community and Landowner Relations; Aboriginal &amp; Native American Relations</p>	<p>Meeting communities' and stakeholders' diverse needs and expectations</p> <p>Changing public expectations regarding risk management and approval processes for energy infrastructure</p>

	<p>Northern Gateway Pipelines Project right-of-way in Alberta. The expansion brings the number of eligible schools to 91.</p> <p>Offer of ownership to Aboriginal communities along the proposed Northern Gateway Pipelines Project right-of-way closed on May 31, 2012.</p> <p>Enbridge achieved a Silver Level certification from the Canadian Council for Aboriginal Business in its Progressive Aboriginal Relations program (PAR)—becoming the first pipeline company in Canada to be certified under the PAR program.</p> <p>Through construction of a number of Enbridge pipeline expansion/extension projects, Aboriginal communities and member-owned businesses realized an economic benefit of approximately \$89.5 million.</p>			
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Social Scorecard Results (continued)				
COMMUNITY PARTNERSHIPS AND INVESTMENTS				
Objectives	2012 Results	2011 Results	Details available in GRI Performance Indicator Section	Challenges
Invest in building sustainable communities, focusing on six areas: Lifelong Learning; Community Leadership; Natural Legacy/Neutral Footprint; Arts & Culture; School Plus; and Safe Community	<p>Invested approximately \$16.5 million in more than 750 charitable, non-profit, and community organizations.</p> <p>In 2012, our enterprise-wide Enbridge VIP Program, which supports the volunteer efforts of our employees, has engaged more than a 1,000 employees and contributed \$342,000 and over 2,595 hours to the community. Since the program's debut in 2010, over 2,200 employees from across the enterprise have participated in the program, resulting in \$622,000 and more than 7,000 hours being contributed to the community.</p>	Invested \$13 million in more than 550 charitable, non-profit and community organizations.	SO1, SO9, SO10—Community Partnerships and Investments	<p>Ensuring the greatest returns on investment</p> <p>Ensuring that investments truly help communities be sustainable</p> <p>Highly diverse communities and needs</p>

## MATERIALITY

Enbridge's 2013 CSR Report primarily focuses on material issues, i.e. those CSR-related subjects that we have determined are of highest interest to stakeholders and to Aboriginal and Native American groups and have the highest impact on the company.

The matrix below illustrates the Social Performance subject areas that we have deemed to be material to Enbridge, our stakeholders and Aboriginal and Native American groups, ranging from less material in the lower left corner and increasing in material importance up to the right corner, where the subjects of highest interest to our stakeholders and highest impact for the company are listed.

Social Materiality Matrix				
		Low	Medium	High
Stakeholder Interest	High		<ul style="list-style-type: none"> <li>Employee wellness</li> </ul>	<ul style="list-style-type: none"> <li>Training and development</li> <li>Employee compensation</li> <li>Employee engagement</li> <li>Succession management</li> <li>Injury rates</li> <li>Stakeholder engagement</li> <li>Landowner relations</li> <li>Process safety management</li> <li>Contractor safety management</li> <li>Emergency response</li> <li>Aboriginal rights</li> </ul>
	Medium	<ul style="list-style-type: none"> <li>Career transition services</li> </ul>	<ul style="list-style-type: none"> <li>Diversity</li> <li>Discrimination</li> <li>Pay equity</li> <li>Disease prevention/Industrial hygiene</li> <li>Aboriginal traditional knowledge</li> </ul>	<ul style="list-style-type: none"> <li>Employee turnover</li> <li>Performance management</li> <li>Recruitment</li> <li>Community development and investment</li> <li>Facility maintenance</li> </ul>
	Low	<ul style="list-style-type: none"> <li>Unions</li> <li>Child labour/Forced labour</li> </ul>	<ul style="list-style-type: none"> <li>Internal stakeholder engagement</li> </ul>	<ul style="list-style-type: none"> <li>Absenteeism</li> </ul>
		Business Impact		

Listed below by chapter and/or report section are the Social Performance subject areas that we have deemed to be most material to Enbridge our stakeholders, and Aboriginal and Native American groups:

<b>Material Subject Areas</b>	
<b>Social Performance</b>	
<b>Material subject</b>	<b>Details available in report section</b>
Training and Development	Social Performance chapter, Part 1 → Labour Practices and Decent Work → Training and Awareness  LA10, LA11  HR3
Employee Compensation	Social Performance chapter, Part 1 → Labour Practices and Decent Work → Total Compensation  LA3, LA14  EC1
Employee Engagement	Social Performance chapter, Part 1 → Labour Practices and Decent Work → Talent Management; Employee Perspectives Survey
Succession Management	Social Performance chapter, Part 1 → Labour Practices and Decent Work → Talent Management; Succession Management
Injury Rates	LA7, LA8
Stakeholder Engagement	Governance, Commitments and Engagement → Stakeholder Engagement
Landowner Relations	Social Performance chapter, Part 3 → SO1 → Community and Landowner Relations
Process Safety Management	Social Performance chapter, Part 1 → Labour Practices and Decent Work → Goals, Approach and Performance → Health and Safety Management  See also: Environmental Performance chapter → EN23-EN27
Contractor Safety Management	Social Performance chapter, Part 1 → Labour Practices and Decent Work → Goals, Approach and Performance → Health and Safety Management
Emergency Response	Social Performance chapter, Part 1 → Labour Practices and Decent Work → Goals, Approach and Performance → Health and Safety Management  Social Performance chapter, Part 3 → SO1 → Community and Landowner Relations  See also: Environmental Performance chapter →

	EN23-EN27
Aboriginal Rights	Social Performance chapter, Part 3 → SO1 → Aboriginal and Native American Relations

**Note to readers:** This Social Performance chapter is divided into four main parts, as follows:

- Part 1: Labour Practices and Decent Work
- Part 2: Human Rights
- Part 3: Society
- Part 4: Product Responsibility

## ***SOCIAL PERFORMANCE, PART 1: LABOUR PRACTICES AND DECENT WORK***

### ***GOALS, APPROACH AND PERFORMANCE***

Enbridge believes that people are the basis of our success and the foundation of our vision of being North America's leader in delivering energy. Enbridge recognizes that engaging a highly skilled workforce will be critical to us as we move toward achieving our business goals.

In 2012, the Human Resources (HR) Leadership Team updated Enbridge's HR strategy to ensure it continues to be aligned with our current and anticipated business needs.

Enbridge is growing and expanding quickly. In 2012, we had a net increase to our workforce of 900 permanent employees (full time and part time). At the end of the year, we had 7,820 permanent employees (full time and part time) in Canada and the U.S., as well as 245 temporary employees and 2,119 provisioned contractors who support seasonal and project work associated with specific projects. Moreover, in 2013, Enbridge's workforce (employees plus contractors) is expected to continue to grow and our new HR strategy is designed to address this rapid growth. As of March 31, 2013, we had just under 8,000 permanent employees and more than 2,300 temporary and contract workers in Canada and the U.S.

HR's key initiatives in 2012 were: launching Enbridge values; executing the resourcing strategy; building change management capacity; talent management; and performance management.

In 2013, HR's new initiatives are: succession planning and talent assessment, launching the leadership development program; and HR process reliability.

Included below are details on these and other ongoing HR initiatives.

#### **Enbridge Values**

Enbridge is building on our foundation of operating excellence by adhering to a strong set of core values—Integrity, Safety and Respect—that reflect what is truly important to us as a company in support of our communities, the environment, and each other. These values represent a constant guide by which we make our decisions, as a company and as individual employees, every day.

The Enbridge values are communicated to existing and new employees and are modeled through our behaviours.

Enbridge's value statement is:

*Enbridge employees demonstrate Integrity, Safety and Respect in support of our communities, the environment and each other.*

#### ***Integrity***

- Maintain truth in all interactions
- Do the right thing; do not take the easy way out
- Take accountability for our actions, without passing blame to others
- Follow through on commitments

#### ***Safety***

- Relentlessly ensure the safety of our communities, customers, contractors, partners and employees
- Take a proactive approach to identifying and preventing safety issues

- Take immediate action when a safety issue is identified
- Continually seek ways to improve safety performance

### ***Respect***

- Value the contributions of others
- Take the time to understand the perspective of others
- Treat everyone with unfailing dignity

### ***Supporting our Communities***

- Support Enbridge's effort in strengthening the communities in which we live and work
- Support the volunteerism efforts of our fellow employees

### ***Supporting the Environment***

- Consider the potential short and long term environmental impacts before proceeding with any activity
- Consistently strive toward a neutral footprint on the environment

### ***Supporting Each Other***

- Share knowledge and experience to help others
- Encourage individual development of each other
- Work collaboratively to achieve common goals

Over the next few years, we will apply these behavioural statements to all of our HR programs and services, including recruitment, succession planning, and performance management.

### **Establishing a World-class Safety Culture**

Enbridge's goal is to establish a world-class safety culture—one that targets zero incidents and where our safety priority is engrained throughout our employee and contractor workforce.

In April 2013, we enacted Health & Safety Principles to guide our safety actions, policies, procedures and culture. All employees are responsible for knowing these Principles and using them as a basis for their day-to-day actions.

The Enbridge Health & Safety Principles are:

- All injuries, incidents, and occupational illnesses can be prevented
- All operating exposures can be controlled
- Management is accountable for safety performance
- All employees/contractors are responsible for safety
- Assessment and improvement are a must
- We promote off-the-job health and safety for our employees 24/7

The Health & Safety Principles are fundamental expectations for all employees and contractors. They define our Path to Zero incidents, injuries and occupational illness—a workplace in which safety is everyone's responsibility, leadership is accountable for safety performance, continuous improvement is required, hazards are controlled and our commitment to caring extends beyond the workday.

Whereas our enterprise-wide values of Integrity, Safety and Respect help define who we are and lay the foundation for how we approach our business, the Health & Safety Principles make our core value of Safety real. They outline our expectations and employee obligations regarding health and safety at Enbridge.

The Principles complement Enbridge's six Lifesaving Rules, which we introduced in January 2012. The Lifesaving Rules are:

- **Hazard Management:** Always ensure an analysis of potential hazards has been completed and proper authorization received prior to starting the work.
- **Driving Safety:** Only drive a vehicle or operate equipment when not under the effect of alcohol or any substances that cause impairment.
- **Confined Space Entry:** Always follow procedures for Confined Space Entry.
- **Ground Disturbance:** Always follow procedures for locating, positively identifying and excavating buried facilities.
- **Isolation of Energized Systems:** Always follow procedures for Lockout / Tag-out.
- **Reporting of Safety-Related Incidents:** Always report significant safety related incidents.

Whereas the Health & Safety Principles outline how we think about health and safety at Enbridge and define our philosophy and approach, the Lifesaving Rules are concrete and absolute. Backed up by detailed policy and procedure, the Lifesaving Rules define specific actions and behaviors that all Enbridge employees and contractors are obliged to follow.

For Enbridge, safety isn't just a priority. It's our way of life. It's a core value that makes us Enbridge.

### **Resourcing Strategy**

The HR department launched a comprehensive resourcing strategy in 2011 to address the significant workforce growth that Enbridge is experiencing. In 2012, Enbridge executed the strategy. Key accomplishments related to this strategy include:

- The hiring/sourcing of approximately 3,700 employees and contractors. The dedicated recruitment team that was designed and staffed in 2011 continues to provide leaders with beginning-to-end support in all their recruiting endeavours
- Modified Enbridge's Employee Referral Program by increasing award amounts and opening the program to contractors
- Developed targeted resourcing tools for Enbridge's frequently recruited/challenging positions
- Enhanced the New Hire Survey by expanding it to be collected enterprise-wide, and sent out on a quarterly basis. This survey helps determine why recent hires chose Enbridge and how they found out about our company and our employment opportunities
- Had a cross-business unit team look at opportunities for harmonizing/standardizing recruitment processes across Enbridge

### **Building Change Management Capacity**

In a company growing as quickly as Enbridge, change is a part of our day-to-day life, so it is necessary to continue building Enbridge's in-house change-management capacity.

Historically, our business has relied on external consultants to manage our change initiatives. To address the challenges with this approach and to enhance our ability to lead and manage changes, HR introduced in 2011 a standard, in-house change management methodology in Enbridge Gas Distribution. Then, in 2012, Enbridge's corporate headquarters began to build a similar in-house change management team of specialists to assist with managing large- and medium-scale change initiatives. These teams are now supporting significant business-related projects. Senior leaders and teams across the enterprise have yielded positive feedback and have reinforced the importance of this work and the value it adds to the business.

### **Talent Management**

Talent management is a fundamental focus at Enbridge and a critical component of the value proposition we offer to employees. Strong talent management processes also support Enbridge's success during periods of growth and change such as the one we are now experiencing, and ensure a seamless transition when we lose experienced employees due to retirement. Enbridge's commitment to effective people management practices, including employee recognition, identification of high-potential and succession candidates, enhanced employee development and career planning, have contributed to securing Enbridge's position as an employer of choice within the various markets in which we operate.

Enbridge's leaders actively manage the attraction, retention, development and transition of our workforce, with

support from the Human Resources department. Their work focuses on employee engagement, leadership and employee development, succession and career management, mentorship, managing performance, and knowledge transfer.

Enbridge is committed to advancing our culture of leadership and employee development at all levels in the organization. Succession management is a significant focus as we seek to attract, develop, engage, retain and promote leaders of today and tomorrow. Senior-level succession management was another area of focus in 2011, and resulted in a broader range of job rotations across multiple business units and functions. Enbridge also continued to enhance our leadership and employee development programs in 2011, with a particular focus on expanding our mentorship, project management and leadership programs. In 2012, Enbridge developed a company-wide leadership development program that was launched in 2013.

In addition to offering a broad array of in-house and external leadership and employee development programs, Enbridge offers a Tuition Reimbursement Program, which provides financial support to employees who advance their education through external learning programs in support of their current and future careers at Enbridge. Enbridge also offers a company-wide scholarship program to help employees' children access post-secondary education in the field of their choice.

### **Performance Management**

Performance management at Enbridge is central to our ability to meet our business objectives and manage and sustain a high-performance workforce. Leaders help employees contribute to Enbridge's business success by developing performance objectives that are aligned with Enbridge's strategic business goals. Leaders provide regular performance feedback to employees to guide their performance, work planning and ongoing development in each performance year. Leaders are also accountable for working collaboratively with employees to address future development requirements through the creation of individual development plans.

Effective performance management ensures strong performance, provides an opportunity for leaders to recognize and reward performance, and gives leaders the information they need to support employees' ongoing development with a view to skills and career advancement.

*For more information, please see GRI Performance Indicator LA12 in this section, below.*

### **Succession Management**

A strong succession management program is one key to sustaining consistent, long-term growth and success. Our Succession Management Project seeks to design and implement enhancements to the enterprise-wide succession management process, including:

- Implementing a more rigorous talent-review structure, process, and tool
- Synchronizing timing of succession planning enterprise-wide
- Expanding succession management to all parts of the enterprise
- Standardizing the succession discussion process

This initiative is a top priority for Enbridge's senior leadership team.

### **HR Process Reliability**

This project seeks to review and analyze systems and processes following the enterprise-wide implementation in 2012 of the hrCORE HR management system to ensure stabilization and realize our planned effectiveness and efficiency. Project scope will include:

- Workforce planning
- Department and cost-centre management
- Position management
- Time and labour stabilization
- Security stabilization
- Data clean-up/reporting
- Payroll efficiencies
- Carry-forward work from hrCORE stabilization project

### **Leadership Development**

This project will provide a framework for investing in and developing leaders in all company locations. We are seeking

consistent, best-in-class leadership across Enbridge, and we will articulate a common vision for what it means to be a leader in the company. In attracting, developing, and retaining top leaders and high-potential employees, we seek to achieve a consistent leadership experience for all employees across Enbridge.

### **Cultural Assessment**

Through this project, we will seek to understand if there are any gaps between what we believe our corporate culture should be and what our corporate culture currently is. This work is of particular importance given Enbridge's recent growth, recent economic shifts, and the number of new employees joining Enbridge in 2012. Scheduled to begin in 2014, this project will include an assessment of senior leaders, an analysis of the assessment's outputs, and action planning if gaps are identified.

### **Diversity/Inclusion and Equal Opportunity**

Enbridge is increasingly capitalizing on the talents of a diverse workforce from the broadest range of backgrounds, life and work experiences, and perspectives.

Our Liquids Pipelines business unit committed to adding two full-time positions to advance Enbridge's Diversity/Inclusions strategy, and we have also established a Diversity/Inclusion Committee representing all business units to explore the development of this strategy company-wide. This involves both keeping in compliance with federally regulated acts, as well as moving Enbridge from a compliance paradigm to one in which we embrace diversity and inclusion as organizational strengths, and seek to broaden the talent pool, enhance programs and policies aimed at employee retention and engagement, and unlock the innovative potential of diverse teams.

As part of our Diversity/Inclusion strategy, we initiated the following programs and activities in 2012:

- Development of a policy framework for the establishment of Employee Resource Groups. Women@Enbridge is Enbridge's longest-standing Employee Resource Group, with a mission to provide networking and learning opportunities for women at Enbridge. It was rolled out throughout the company in 2007, is well subscribed to by employees, and is an ongoing success. Another Employee Resource Group, Femenin (Females in Engineering), has been active in professional development of female engineers at Enbridge. Other Employee Resource Groups in development for 2013 include: LGBTA (Lesbian, Gay, Bi-gendered, Transsexual and Allies); Parent Employee Resource Group; and Young Professionals. All Employee Resource Groups are required to develop a business case that aligns with Enbridge business objectives
- Continued support of internationally educated professionals through communication courses and linkages with the Association of Professional Engineers and Geo-Scientists of Alberta's office for integration of international talent
- 'Duty to Accommodate' workshops, and resource development for colleagues on making the workplace more accessible
- Establishment of the Aboriginal Employment committee, a collaboration between Enbridge's Human Resources and Aboriginal Affairs departments to increase Aboriginal representation and successful integration in Enbridge's workforce
- Regular offerings in the Edmonton office of the Diversity Champions workshop, which examines the required competencies to move to a fully inter-culturally competent organization. In this course, participants gain analytical and practical tools to work successfully across cultural diversity and differences in a safe, effective and respectful way. Participants explore concepts of diversity and inclusion, understand why this area of competency is increasingly important to organizations, and identify ways in which individuals and teams collaborate together to maximize the value and potential of a diverse workplace
- The Advisor, Special Projects, is a position specifically created to increase the representation of adults with disabilities in our Edmonton office
- Partner with CAREERS: The Next Generation to employ Aboriginal youth in high school, enabling them to earn both high school credit and apprentice during available hours. A non-profit organization, CAREERS is raising youth awareness of career options and helping students earn while they learn through internship

### **Total Compensation**

Enbridge has a full array of compensation and benefit programs designed to attract and retain talent. In addition to base salary, almost all regular (union and non-union) employees participate in an annual incentive plan, which rewards performance relative to a combination of predefined targets established at company, business unit and

individual levels. Mid-term incentive plans are also extended to management-level roles.

On the benefits side, Enbridge offers a comprehensive selection of life, health and dental coverage, along with defined-benefit and defined-contribution pension plan options. Enbridge reviews these programs regularly to maintain our competitive position and to ensure they are meeting employees' needs.

Enbridge's total compensation programs continue to evolve to meet business needs. Beyond delivering a competitive level of total compensation, the programs' design and flexibility will be critical in helping us respond to changing workforce demographics and the evolving needs of employees.

*For more information, please see section LA3 of this Social Performance chapter, below.*

### **Positive Work Environment**

Enbridge is committed to developing and maintaining a diverse and inclusive work environment, and promotes a healthy and positive work environment.

Enbridge's policies affirm our strong commitment to treating all employees with dignity and respect. Enbridge also subscribes to the principles of a fair and equitable work environment.

Enbridge's work environment promotes a diversity of roles and enriched job experience through project work, secondment opportunities, cross-business unit mobility and participation on cross-functional teams. Enbridge also supports employees who are interested in actively contributing to the communities in which they live and work, through a variety of volunteer opportunities and through our annual employee-led United Way campaign. Employees who significantly contribute to their communities on their own time are recognized annually and, under our Volunteers in Partnership program, a donation is made by Enbridge to their respective charities. Enbridge's energy4everyone (e4e) offers another opportunity for employees to donate their time to participate in project delivery in locations such as Costa Rica, Ghana, Nicaragua, Peru, and Tanzania. The e4e initiative seeks to implement practical and sustainable solutions to improve access to energy for communities in need. Enbridge has established an Employee Volunteer Assignment to give our employees the opportunity not only to implement an e4e project, but also to promote a better understanding of e4e, the energy challenges faced by communities in need, and how e4e-sponsored projects are designed to offer sustainable, long-term solutions to communities in need.

The value of mentoring and being mentored contributes to a positive work environment. Enbridge's mentorship programs, both internal and external, offer an additional opportunity for us to support employees in their roles and enhance their workplace experience. Enbridge's internal mentoring program now operates across the enterprise.

We regularly recognize our employees' achievements through a range of formal activities and programs, including service awards, monetary gifts and recognition through internal communications channels and creating opportunities for challenging assignments.

### **Employee Communications**

Enbridge continues to enhance our employee communications practices to ensure that employees are informed of business information, company developments and career opportunities by using the most appropriate communications tools and through the active support of supervisors who communicate with their teams.

Effective communications ensure that employees are informed about Enbridge and are engaged in their work, particularly during times of growth and change. Enbridge's leaders seek to foster an environment committed to open and frank communication.

Enbridge continues to use a number of one-way and two-way communications vehicles to regularly exchange information with employees. Among these are:

- *elink*, the Enbridge Intranet, which was significantly improved in 2007 and 2008 in response to employee feedback and was recognized in 2009 by the Neilson Norman Group as being one of the 10 Best Company Intranets in the World
- *Link*, Enbridge's employee magazine
- Regular electronic bulletins for various business units
- Online chats with Al Monaco, providing employees an opportunity to connect with Enbridge's President and CEO and ask questions

One Enbridge business unit has implemented an executive "blog" that provides an opportunity for employees to post responses to blogs written by various Executive Team members. Enbridge's Corporate Social Responsibility team also initiated a blog focused on sustainability and CSR issues—addressing what the CSR team, the company and others are doing in the area of CSR; and inviting Enbridge employees to share their comments, ask questions, and make suggestions about how to improve our CSR performance.

In addition, Enbridge holds annual employee meetings across the organization to ensure that employees receive the latest information about our plans for strategic growth, CSR strategies and plans, and our investments in talent and people. These meetings provide an opportunity for employees to meet with Enbridge's Executive Management team, local senior leadership and guests to discuss challenges and opportunities, and to raise questions about Enbridge's workplace, business and employee programs.

### **Employee Perspectives Survey**

Enbridge offers a dedicated channel for employees to communicate their feedback to their leaders through the Employee Perspectives Survey.

The survey is an important component of Enbridge's commitment to our people and is an important gauge of employee engagement levels. Enbridge employees are invited to provide their feedback on a wide variety of topics, such as benefits, work-life balance, work processes, corporate social responsibility and more. The results are then used to generate insights and identify opportunities for improvement that are incorporated in the development of business and people-focused strategies. To allow full involvement of employees at all levels in determining solutions and provide sufficient time to implement action plans, Enbridge conducts this survey on a bi-annual basis. The survey is administered by the third-party consulting firm Aon Hewitt.

Enbridge's 2012 employee engagement score of 79 per cent was up 4 per cent compared with the previous survey in 2010 and placed Enbridge within the "Best Employer" zone, significantly exceeding the North American average and several other benchmarks, including the averages for all Alberta employers, the Canadian oil and gas industry, and the North American energy industry. Engagement scores are based on responses to key engagement questions that reflect the percentage of team members who are emotionally and intellectually committed to the company. Team member engagement is a vital measure for any company because high engagement scores connect with high organizational performance, productivity, team-member satisfaction and retention.

Key findings from the Survey were that Enbridge employees think that:

- Enbridge's organizational reputation and people-focused policies are among our key strengths
- Challenging and enjoyable work keeps them engaged

The Survey showed that we had made significant strides in the area of Performance Management—receiving a 68 per cent score, compared with 58 per cent in the previous survey. However, in this area we are still below the Best Employer score of 71 per cent.

The core challenge with Performance Management is that it is linked to many other performance-related drivers, including leadership, department management, and work processes. Therefore, improvement in this area requires a multi-faceted effort. In response, we are taking the following actions that we believe will either directly or indirectly improve our Performance Management score:

- A major emphasis on leadership development. This is currently under way and includes coaching as a key focus
- A revised approach to Performance Management. Scheduled for implementation in 2015, this is a comprehensive effort that will address principles, process, technology, and training

The survey also showed that we had made a four-point improvement in the area of Career Opportunities—receiving a 69 per cent score, which is one point higher than the Best Employer score. Despite this improvement, Career Opportunities remains a major area of focus for us. As with Performance Management, the core challenge is that Career Opportunities is linked to other drivers—in this case, recognition, leadership, and department management—and any improvement effort has to be multi-faceted. In response, we are taking the following actions to improve in the area of Career Opportunities:

- Introduction of an enhanced and more rigorous approach to talent assessment and career and development planning. This is currently under way.
- The leadership development initiative that is currently under way is expected to have a positive impact on career opportunities.

Enbridge is proud of these survey results and is committed to building sustainable, people-focused strategies that respond to employee needs.

### **Third-party Recognition**

Enbridge continues to be recognized as a leading employer. Listed below are some of the awards and recognition we received in 2012:

- **Canada's Top 100 Employers:** Canada's Top 100 Employers project is a national competition to determine which employers lead their industries in offering exceptional workplaces for their employees. Enbridge was

recognized for being an industry leader in attracting and retaining employees. This is the seventh consecutive year Enbridge has been on the list, and tenth since the list's inception 12 years ago.

- **Canada's Greenest Employers:** Launched in 2007, this special designation recognizes the employers that lead the nation in creating a culture of environmental awareness in their organizations.
- **Canada's Top Employers for Canadians over 40:** This special designation recognizes employers that lead the nation in creating special programs and benefits of interest to employees aged 40 years and older. The broad range of pension and other initiatives a company offers are also considered in selecting the winners.
- **Alberta's Top 60 Employers:** Alberta's Top 60 Employers is an annual competition organized by the editors of Canada's Top 100 Employers in partnership with the Human Resources Institute of Alberta. The award recognizes companies for best practices in recruitment and retention.

### **Labour Relations and Collective Bargaining**

Enbridge believes that healthy and cooperative labour relations—built on trust, respect and integrity—contribute to our business goals and objectives. We continue to maintain and foster a cooperative approach to the union/management relationship through joint committees with various unions and industrial councils. These committees meet regularly to resolve outstanding matters, as well as to advise on and discuss issues of mutual concern.

*For more information about Enbridge employees covered by negotiated agreements, please see GRI Performance Indicator LA4 in this section, below.*

### **Health and Safety Management**

We have taken steps and made structural changes to Enbridge to ensure we are fostering a culture that proactively identifies and mitigates risks across the whole organization and is constantly focused on our top priority—safety and operational reliability.

### **Executive Leadership**

Enbridge's executive leadership team and senior management are taking an active role in establishing the strongest attainable culture in support of Enbridge's safety and operational reliability priority.

The Operations and Integrity Committee (OIC) is the most important executive committee within Enbridge. The OIC, which meets monthly and is chaired by Enbridge's President and CEO, brings together the senior leaders accountable for operations, integrity and safety across the organization. It ensures that executive management establishes and monitors key policies and programs, including the harmonization of the safety management systems and oversight of the execution of the Operational Risk Management (ORM) Plan, which broadly aims to position Enbridge as the industry leader for system integrity, environmental and safety programs and charts the course for best-in-class practices. The OIC also oversees preventative measures, reviews incidents, discusses what has been learned from incidents and how to apply those lessons across Enbridge's business units, and ensures effective internal and external communication of operational objectives and accomplishments.

The involvement of Enbridge's senior management in establishing a pervasive safety culture, and in providing ongoing, active oversight, is fundamental, which is why we have tied compensation of senior management, through scorecard metrics, to safety and integrity performance. Business unit performance is assessed relative to a scorecard of metrics and targets established by each business leader and their senior management teams at the start of the year. Scorecards are reviewed across the enterprise by the Executive Leadership Team. Scorecards include a range of financial and operational metrics that include personal, public and process safety, reliability of our systems and environmental performance. Operational performance is a critically important focus for all employees, whether they are in direct operating roles or supporting functions. To reinforce that importance, all of the employees and executives have a significant element of their short-term incentive calculation tied to operational results. For the executives who are primarily responsible for an operating business unit, 50 per cent of their annual short-term incentive is tied to their business unit scorecard(s).

We further strengthened front-line executive oversight with the creation in early 2013 of a new role of Senior Vice President (SVP), Enterprise Safety & Operational Reliability which reports directly to Enbridge's President and CEO, and which is accountable for the leadership and oversight of safety, operational reliability and environmental protection policies and practices across the enterprise. The department is accountable for defining an enterprise-wide set of integrated strategies and policies that support the organization's objective of being the industry leader in process, public and personal safety, operational reliability, and environmental protection.

**Board Direction**

Enbridge's Board of Directors is responsible for providing direction on our ORM Plan. Each of Enbridge's major business units presents their ORM Plan progress to the Board annually and provides interim updates to the Board's Corporate Social Responsibility (CSR) Committee. In addition, in August 2013, the Board created the Safety & Reliability Committee to oversee safety, security, integrity management and operational risks.

**Operational Risk Management Plan**

Our ORM Plan is our detailed road map of programs and processes that will build and sustain Enbridge's industry-leading position. The ORM Plan sets out how we will constantly reinforce the safety and integrity of our systems by investing in six key performance areas:

- Pipeline and Facility Integrity
- Leak Detection Capability and Control Systems
- Third-party Damage Avoidance and Detection
- Incident Response Capacity
- Employee and Contractor Occupational Safety
- Public Safety and Environmental Protection

We are striving to be the industry leader in all six of these critical safety and integrity dimensions.

**Health & Safety Principles and Lifesaving Rules**

To further reinforce Enbridge's safety culture and improve health and safety performance throughout the organization, in January 2012 we implemented six Lifesaving Rules and training for all Enbridge employees and contractors, and in April 2013 we enacted Health & Safety Principles to guide our safety actions, policies, procedures and culture.

*Please see the Establishing a World-class Safety Culture section above for more details about the Lifesaving Rules and Health & Safety Principles.*

**Joint Business Unit Safety Council (JBUSC)**

Operating under the direction of the Operations and Integrity Committee, Enbridge's Joint Business Unit Safety Council (JBUSC) comprises senior operations and safety leaders in the organization. The JBUSC provides enterprise-wide direction and oversight for the corporate safety culture and high-level direction/recommendations related to health and safety matters across Enbridge's business units. The Council's primary responsibilities include:

- Provide guidance to Enbridge's Executive Leadership Team (ELT) in the area of safety culture
- Monitor safety culture initiative(s) and promote a positive H&S culture
- Monitor CSR H&S metric reporting and benchmarking
- Monitor and assist in development of annual cross-business unit objectives
- Establish enterprise-wide health and safety fundamentals, principals and approach
- Review and share learnings from major Incidents
- Review business unit best practices
- Provide information and seek approval for enterprise-wide health and safety initiatives

**Enbridge Enterprise Emergency Response Team (E<sup>3</sup>RT)**

Enbridge employees in Canada and the U.S. participate in regular emergency response drills and simulations to test and improve our preparedness procedures. Employees are trained through workshops, tabletop exercises where various scenarios are discussed, and procedural drills. We also perform full-scale exercises—33 in 2012—involving local emergency agencies using equipment to practice recovery and clean-up in various terrains and/or on water.

As an additional measure in 2011, we created and began specialized training for the Enbridge Enterprise Emergency Response Team (E<sup>3</sup>RT), a cross-business-unit team that is specially trained to respond to large-scale events anywhere in North America that would require more resources than a single region or business unit could provide.

The E<sup>3</sup>RT is capable of deploying personnel and equipment to any location in North America within eight hours of notification.

The E<sup>3</sup>RT has been conducting major training exercises involving all of Enbridge's business units, emergency response contractors and consultants, and federal, state/provincial and local emergency response agencies.

The E<sup>3</sup>RT is a sub-committee of Enbridge's Operations and Integrity Committee (OIC). Enbridge's Enterprise Safety & Operational Reliability department supports the E<sup>3</sup>RT, while the OIC provides direction and approvals as required.

### **Business Unit Health and Safety Initiatives**

Following are summaries of current health and safety actions being taken by Enbridge business units:

#### ***Liquids Pipelines (LP)***

LP's goal is to achieve a safety culture in which people look out for one another and work collaboratively in identifying, preventing and correcting health and safety issues.

LP has embraced safety as a core value, has established a target of zero injuries and is committed to continually improve its safety performance. The following is a summary of health and safety initiatives that were undertaken in 2012 in order to focus on and improve upon various key elements within the existing LP Health & Safety Management System.

- **Safety Culture:** With the assistance of DuPont Sustainable Solutions and under the direction of an Executive Safety Team, LP continued executing on the Safety Culture Improvement Plan established in 2011. Activities included safety training sessions for operations managers, continuation of safety culture improvement teams in Enbridge's pipeline Control Centre and two operating regions, new safety culture improvement teams in the remaining operating regions, continuation of process improvement teams focused on contractor safety management and incident investigation, and assembly of a Process Safety Management Improvement Team.
- **Safety Training:** LP completed year three of a four-year plan to review safety training requirements for field operation employees and implement an electronic learning management system for managing and tracking completion of safety training. The electronic learning management system is in use and the teams continue to refine the training matrices and course content.
- **Integrated Incident Management System:** In conjunction with other Enbridge business units in 2011, LP participated in the purchase of an Enbridge enterprise-wide, third-party environmental, health and safety software suite called EnCompass. In 2012, LP worked with the EnCompass developers toward implementation of the software. In January 2013, EnCompass was released within LP as the new integrated incident management system tool for use in completing incident notifications, recording incident investigation findings, identifying causal factors, identifying and tracking completion of recommendations, analyzing incident trends, and reporting incident statistical data. The integrated incident management tool will be used for incidents that result in or have the potential to result in impacts to people, environment, and property. Process safety incident types will be incorporated in 2013.
- **Safety Management Performance Standards:** Safety Management Performance Standards were established and implemented for Operations people leaders in 2010 and were continued through 2012. The standards require operations management personnel to complete and document targeted numbers of safety observations, work practice inspections, field hazard assessment reviews and contractor work practice inspections at specified frequencies. These standards were developed to increase operations management participation and oversight of safety practices in order to further develop and sustain a strong safety culture.
- **Health & Safety Planning:** In 2012, LP's Health and Safety Department aligned its annual planning process with the business unit work on integrated management systems. The 2013 Health & Safety department plan was developed in late 2012 using a common process and tool for all LP department planning.

#### ***Major Projects (MP)***

MP is committed to the protection of the health and safety of its employees, contractors, and the general public. MP views safety as a core value, and believes that all incidents are preventable and that effective health and safety management is a key project deliverable. On a monthly basis, MP uses leading and lagging safety performance indicators to identify key opportunities to strengthen its construction contractors' safety performance and project safety performance overall.

- **Committed Leadership:** MP's leadership team understands that committed leadership is the foundation of a world-class safety culture. Committed leadership begins with a strong core value for safety that drives the newly introduced Enbridge Health & Safety Principles.

*Please see the Establishing a World-class Safety Culture section above for more details about the Health & Safety Principles.*

Enbridge's safety principles serve as the basis for MP's processes and reinforce project leadership behaviours. MP will continue to identify opportunities for its leaders to demonstrate committed leadership through exercising Enbridge's safety principles, and while participating in several 'leading indicator' activities, including safety steering team meetings, post-incident review meetings, and management safety walkthroughs.

- **Employee Driven:** MP is fully aware that a successful safety culture results from a strong partnership between management and the front-line workforce. For this reason, MP focuses on employee engagement in the Safety Management System through various activities, including but not limited to participation in safety meetings, toolbox talks, field-level hazard assessments, near-miss reporting, and safety observation programs. Plans include implementing new programs focused on risk tolerance and taking personal responsibility for at-risk behaviour.
- **Basics Done Well:** The implementation of the Lifesaving Rules in MP has provided clarity to those activities that, if done improperly, have a significant potential for personal harm.

*Please see the Establishing a World-class Safety Culture section above for more details about the Lifesaving Rules.*

MP has also initiated industry roundtable groups in both the U.S. and Canada with the aim of driving consistent safe work practices, policies, programs and procedures across the pipeline construction industry. Additionally, MP is developing a Project Health and Safety Management System Assessment based on industry-recognized standards to ensure that the basics of the Safety Management System are being implemented across all projects.

- **Focus on the Greatest Potential:** MP has implemented an Incident Severity Ranking Model that provides project teams with a clear picture of both the actual and potential consequences of incidents. This model allows management to readily identify precursor events that could lead to more serious personal injuries. With this information, MP will continue to target safety interventions on those precursor events that present the greatest potential consequence to construction teams.
- **Recognize and Manage Risk:** With the intention of increasing its ability to recognize and manage risk, MP project teams are completing pre-project hazard assessments during the planning phases of each project. This early assessment of risks and controls provides the project teams with the opportunity to ensure that critical tasks necessary to manage safety risks are well understood, and that appropriate measures are put in place to ensure successful implementation. In addition, contractors are required to submit job hazard assessments prior to mobilization, conduct task hazard assessments for unplanned work, and to use robust field-level hazard assessment processes at the workplace on a daily basis.

### **Gas Distribution (GD)**

GD is strongly committed to the safety of the general public, its customers, employees and contractors. Specifically, the continued commitment that Enbridge Gas Distribution (EGD) has made toward improving its safety performance in 2012 emphasized the concept that injuries are an exception to the norm; and the theme Path to Zero accentuates EGD's efforts toward zero accidents and incidents. EGD is strengthening its health and safety culture through a number of ongoing initiatives:

- **Safety Culture:** EGD recognizes the role of a strong and positive health and safety culture in keeping all workers safe. Part of this strong culture involves management engagement and the establishment of clear expectations. EGD's Central Safety Committee—a permanent governance structure responsible for managing all aspects of safety at EGD—continues to provide valuable safety leadership and decision making. Local Safety Committees have been established regionally to strengthen EGD's safety network and drive safety innovations both top-down and from the field upwards. These safety committees enhance focus and direction, while also supporting a number of safety process improvement teams, including: incident investigations; safety observations; and safety communications and engagement.
- **Hazard Assessment:** In 2012, EGD implemented a new Site-specific Hazard Assessment identification and control program across all of its operating regions. The program provides guidance and requirements for identification, assessment, and control of hazards associated with the design, construction, operation and maintenance of EGD's natural gas pipeline system.
- **Safety Performance Measurement:** EGD continues to emphasize the importance of measuring its safety

performance metrics by continuing to set aggressive targets. An increased focus on safety and reliability of EGD's natural gas systems is supported by the EGD Scorecard, where a number of safety- and pipeline integrity-related key performance indicators are heavily weighted and account for 40 per cent of the total EGD scorecard. Each EGD employee has specific safety objectives as part of the annual performance goals to help support the EGD Scorecard and to drive excellence in health and safety performance throughout the organization.

- **Industry Recognition:** EGD received the American Gas Association (AGA) 2012 Safety Achievement Award for best overall DART rate among "mega-sized gas distribution companies (over 1,500 employees)." The DART metric includes lost-time injury statistics by compiling employee **D**ays **A**way from work, **R**estricted duties or **T**ransfer to another job. EGD also received the Canadian Gas Association (CGA) 2012 Corporate Safety Award for best overall safety performance for similar injury metrics, as well as motor vehicle incidents.

### **Gas Transportation (GT)**

GT's health and safety philosophy reflects Enbridge's strong, company-wide commitment to excellence in health and safety performance.

In 2010, GT developed and implemented a comprehensive Health and Safety Management System (HSMS) to provide a structured approach and a framework for measurement and accountability of activities.

In 2012, GT began a comprehensive Operational Risk Management program that includes several initiatives specific to worker safety. As part of this ORM program, GT has also contracted DuPont Sustainable Solutions to provide consulting services related to assessment, implementation and sustainability of an improved safety culture within the organization. Specific initiatives associated with these programs and the safety culture initiative include:

- **Operating Procedures:** Enbridge recognizes the important role that clear and comprehensive operating procedures play in achieving safe operations. Accordingly, GT is undertaking an initiative to revise all operating procedures within its Process Safety Management (PSM) facilities so that they cover key processes within these facilities.
- **Process Safety information (PSI):** GT has undertaken an initiative to update PSI information at all of its PSM facilities. In recognition of the importance of this information in the safe operation of its facilities, GT will institute a Continuous Improvement Program in conjunction with its Management of Change (MOC) program to ensure that PSI is being properly generated and modified when necessary.
- **Safety Organizational Structure:** A strong safety culture is one in which employees are included in the overall management of safety as a discipline. In 2012, GT undertook an initiative to develop and implement an integrated safety organizational structure that includes line staff. This structure is now fully functional and is overseen by GT's Central Environment, Health & Safety Committee.
- **Safety Leadership:** A key element of a strong safety culture includes strong leadership from all levels of management. GT provided a comprehensive training and coaching session to all of its people leaders in 2012 to further drive this strong culture.
- **Safety Training:** In 2012, GT completed a review of training requirements for all field employees, and a new Learning Management System was implemented to track and manage training metrics for each employee.

## **POLICY**

### **Enbridge's Health & Safety Commitment**

Enbridge's strong commitment to the protection of the health and safety of our employees and the general public is spelled out in our [Health & Safety Principles](#). Our commitment statement in support of these principles is as follows:

*Enbridge is committed to ensuring everyone returns home safely at the end of each and every day, and that our assets are operated in a safe manner. This commitment to safety is based on caring for employees, our contractors, the communities in which we operate and the environment.*

*The Enbridge Values of Integrity, Safety and Respect establish how we conduct our affairs individually and collectively at a moral and ethical level. The Health & Safety Principles complement these Values by guiding our actions, policies, procedures and culture.*

*The Principles are fundamental expectations on our Path to Zero; in which safety is everyone's responsibility, leadership is accountable for safety performance, continuous improvement is required, hazards are controlled,*

and our commitment to caring extends beyond the workday.

*Safety isn't just a priority. It's our way of life. It's a core value that makes us Enbridge.*

We believe that prevention of accidents and injuries benefits everyone, and delivers increased value to our shareholders, customers and employees.

Enbridge's goal is to have no accidents. To this end, we conduct business in a manner that recognizes health and safety management as an integral part of our activities, and our employees are responsible for conducting their activities in a manner that makes health and safety a primary part of their daily activities.

Employees are required to include a safety objective in their performance documents to reinforce safety as being an integral part of everyone's job. The value of safety is integrated into every Enbridge meeting via a "Safety Moment," where employees are encouraged to share stories and advice on safety as it pertains to work, home, recreation, or everyday life.

## **TRAINING AND AWARENESS**

Enbridge's Human Resources department offers a number of programs and services to advance and reinforce Enbridge's focus on people and relationships. Among these are:

- Enhanced orientation and "onboarding" programs and practices for new employees that include presentations and discussions about corporate responsibility
- Workforce transition programs for employees leaving Enbridge
- Leadership and employee development programs
- Internal and external mentorship programs
- The Women@Enbridge community and the delivery of programs in each business unit
- The Enbridge Intranet to support employee communications
- Recruitment and career development programs
- Employee benefit programs
- Individual development and career planning

*For more information, please see the report about Enbridge University in section LA11 of this Social Performance chapter, below.*

## **LABOUR PRACTICES AND DECENT WORK PERFORMANCE INDICATORS**

### **EMPLOYMENT**

#### **LA1**

*Total workforce by employment type, employment contract and region, broken down by gender.*

#### **Permanent Employees**

As of December 31, 2012, Enbridge employed 7,820 permanent employees. This total can be divided as follows:

	<b>Male</b>	<b>Female</b>	<b>Total</b>
Liquids Pipelines (Canada & US)	2,087	879	2,966
Major Projects (Canada & US)	274	198	497
Gas Transportation	1,243	422	1,665
International	18	8	26

Gas Distribution	1,415	912	2,327
Corporate	180	184	364
<b>ENTERPRISE</b>	<b>5,217</b>	<b>2,603</b>	<b>7,820</b>

A large majority (99 per cent) of Enbridge's permanent workforce is full time. Breakdown is 7,724 full time and 96 part-time permanent employees.

### Temporary and Contract Employees

As of December 31, 2012, Enbridge employed 245 temporary employees—118 male and 127 female.

There were 2,119 contractors working at Enbridge in various capacities at that point in time. We do not track contractor gender. The contractor workforce can be divided as follows:

	<b>Total</b>
Liquids Pipelines (Canada & US)	829
Major Projects (Canada & US)	665
Gas Transportation	129
International	4
Gas Distribution	301
Corporate	191
<b>ENTERPRISE</b>	<b>2,119</b>

## LA2

*Total number and rate of new employee hires and employee turnover by age group, gender and region.*

### New Employee Hires

Enbridge hired 1,299 regular employees in 2012—809 males and 490 females. For the year ended December 31, 2012, the breakdown of new hires by gender and business unit was as follows:

	Liquids Pipelines (Canada & US)	Major Projects (Canada & US)	Gas Transportation	Gas Distribution	Corporate & International	Enterprise-wide
<b>Male</b>	411	86	163	110	39	809
<b>Female</b>	221	91	68	68	42	490
<b>Total</b>	<b>632</b>	<b>177</b>	<b>231</b>	<b>178</b>	<b>81</b>	<b>1,299</b>

For the year ended December 31, 2012, the breakdown of new hires by age group and business unit was as follows:

	Liquids Pipelines (Canada & US)	Major Projects (Canada & US)	Gas Transportation	Gas Distribution	Corporate & International	Enterprise-wide
Up to 24	78	11	32	20	3	144
25-29	146	22	42	39	15	264
30-34	110	37	30	37	18	232
35-39	113	28	34	27	13	215
40-44	82	27	26	18	14	167
45-49	54	24	25	22	2	127
50-54	28	17	30	9	9	93
55-59	13	10	10	5	7	45
60+	8	1	2	1	0	12
<b>Total</b>	<b>632</b>	<b>177</b>	<b>231</b>	<b>178</b>	<b>81</b>	<b>1,299</b>

### Turnover

Total turnover for 2012 was 535 permanent employees. For the year ended December 31, 2012, the turnover rate breakdown by gender and business unit was as follows:

		Liquids Pipelines (Canada & US)	Major Projects (Canada & US)	Gas Transportation	Gas Distribution	Corporate & International	Enterprise-wide
Voluntary	Male	2.5%	3.6%	7.1%	0.8%	6.1%	3.3%
	Female	5.1%	6.1%	5.7%	1.6%	9.4%	4.4%
	<b>Total</b>	<b>3.3%</b>	<b>4.7%</b>	<b>6.7%</b>	<b>1.2%</b>	<b>7.7%</b>	<b>3.7%</b>
Involuntary	Male	0.5%	0.7%	2.5%	1.3%	4.0%	1.4%
	Female	0.3%	2.0%	3.6%	1.2%	4.7%	1.6%
	<b>Total</b>	<b>0.5%</b>	<b>1.3%</b>	<b>2.8%</b>	<b>1.3%</b>	<b>4.4%</b>	<b>1.4%</b>
Retirement	Male	1.5%	1.1%	0.6%	3.0%	0.5%	1.6%
	Female	1.0%	0.0%	0.7%	2.3%	2.1%	1.4%
	<b>Total</b>	<b>1.4%</b>	<b>0.6%</b>	<b>0.6%</b>	<b>2.7%</b>	<b>1.3%</b>	<b>1.6%</b>
Death	Male	0.2%	0.0%	0.1%	0.2%	0.0%	0.2%
	Female	0.1%	0.0%	0.0%	0.1%	0.5%	0.1%
	<b>Total</b>	<b>0.2%</b>	<b>0.0%</b>	<b>0.1%</b>	<b>0.2%</b>	<b>0.3%</b>	<b>0.2%</b>
<b>Total Turnover</b>	Male	4.8%	5.5%	10.2%	5.4%	10.6%	6.5%
	Female	6.6%	8.1%	10.0%	5.3%	16.7%	7.5%
	<b>Total</b>	<b>5.3%</b>	<b>6.6%</b>	<b>10.2%</b>	<b>5.3%</b>	<b>13.6%</b>	<b>6.8%</b>

For the year ended December 31, 2012, the turnover by age group was as follows:

		Up to 24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60+	Total
Voluntary	Male	2.8%	3.6%	5.1%	2.7%	2.5%	4.5%	4.0%	1.9%	0.9%	3.3%
	Female	6.3%	7.1%	8.5%	4.2%	3.2%	3.2%	3.3%	0.8%	0.9%	4.4%
	<b>Total</b>	<b>3.9%</b>	<b>4.8%</b>	<b>6.4%</b>	<b>3.2%</b>	<b>2.8%</b>	<b>4.1%</b>	<b>3.8%</b>	<b>1.6%</b>	<b>0.9%</b>	<b>3.7%</b>
Involuntary	Male	0.6%	0.7%	0.6%	1.6%	1.6%	2.1%	1.7%	1.3%	1.2%	1.4%
	Female	1.3%	2.4%	1.3%	1.1%	3.2%	1.5%	0.8%	1.7%	0.0%	1.6%
	<b>Total</b>	<b>0.8%</b>	<b>1.3%</b>	<b>0.8%</b>	<b>1.4%</b>	<b>2.2%</b>	<b>1.9%</b>	<b>1.4%</b>	<b>1.4%</b>	<b>0.9%</b>	<b>1.4%</b>
Retirement	Male	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.8%	14.9%	1.6%
	Female	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	9.7%	12.4%	1.4%
	<b>Total</b>	<b>0.0%</b>	<b>6.9%</b>	<b>14.3%</b>	<b>1.6%</b>						
Death	Male	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.3%	0.6%	0.3%	0.2%
	Female	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	0.9%	0.1%
	<b>Total</b>	<b>0.0%</b>	<b>0.1%</b>	<b>0.1%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.4%</b>	<b>0.5%</b>	<b>0.5%</b>	<b>0.2%</b>
Total Turnover	Male	3.4%	4.5%	5.9%	4.3%	4.2%	6.6%	6.0%	9.7%	17.3%	6.5%
	Female	7.6%	9.5%	9.8%	5.4%	6.4%	4.7%	4.7%	12.3%	14.2%	7.5%
	<b>Total</b>	<b>4.7%</b>	<b>6.2%</b>	<b>7.3%</b>	<b>4.7%</b>	<b>5.0%</b>	<b>5.9%</b>	<b>5.6%</b>	<b>10.4%</b>	<b>16.5%</b>	<b>6.8%</b>

### LA3

*Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant location of operations.*

Enbridge believes in sharing the success of the company with the people who make it happen—our employees.

Enbridge's competitive and flexible Total Compensation package—which includes compensation, benefits, education reimbursement and time off—allows each employee to choose the plan that best suits the needs of his or her situation.

We provide competitive base salaries for our employees, as well as an incentive compensation program that rewards employees' personal performance, as well as the performance of the company overall and the business unit to which they belong.

Enbridge's benefit programs include a comprehensive selection of health and welfare, income protection, savings, and defined-benefit and defined-contribution pension plan options that are market based and competitively positioned to ensure they are meeting employees' needs.

Some of the highlights of Enbridge's Total Compensation package include:

- A flexible benefits program that allows each employee to select the level of coverage needed for his or her family in the areas of health, dental, insurance and disability
- A pension plan to help employees in their retirement
- Business travel accident insurance
- An annual performance-based incentive compensation program
- External education and training cost reimbursement for courses that are approved by the employee's supervisor
- An employee scholarship program offered to employees' children who attend post-secondary educational institutions
- Paid time off/vacation, plus paid personal days off (depending on location)

- An Employee and Family Assistance Program
- A fitness subsidy program
- An emergency childcare program
- Flexible work hours and alternative work arrangements
- A group savings plan

We also encourage our employees to actively participate in community organizations. Through our Volunteers in Partnership (VIP) program, we recognize employee contributions of time and dollars to charitable organizations by providing additional support in terms of paid volunteer time and top-up financial contributions.

### Part-time and Temporary Employees

In Canada, permanent part-time employees working 24 or more hours per week receive the same benefits and employer-provided flex credits as full-time employees. Employees working 16 or more hours per week and less than 24 hours per week also receive the same benefits but have a reduced level of employer-provided flex credits.

Temporary employees have reduced coverage and are only eligible for business travel accident insurance, life insurance equal to their annual salary, coverage for health and dental subject to 50 per cent co-insurance, and 50 per cent provincial health care coverage (where applicable).

In the U.S., employees who work 30 hours or more per week receive a full complement of benefit options. Part-time employees are eligible to participate in the cash balance pension plan, the 401(k) plan and receive business travel accident insurance.

## LA15

*Return to work and retention rates after parental leave, by gender.*

The retention rate\* for maternity / paternity / parental leave in 2012 was as follows:

	2012 Retention Rate*
Female	90.4%
Male	100.0%
Overall	90.8%

\* The retention rate accounts for people who return to the company after a maternity/paternity/parental leave.

## LABOUR/MANAGEMENT RELATIONS

### LA4

*Percentage of employees covered by collective bargaining agreements.*

As of December 31, 2012, there were 947 employees covered by a negotiated agreement, representing 12.1 per cent of the permanent employee base.

<i>Business unit / area within Enbridge</i>	<i>Bargaining Unit</i>	<i>Geographical Area</i>	<i>Number of Employees as of December 31, 2012</i>
Enbridge Gas Distribution	Local 975, Communications, Energy and Paperworkers Union of Canada (CEP)	Ontario (franchise area)	733
Enbridge Gas Storage	Joint Industrial Council	Sarnia, Ontario	14
Liquids Pipelines—Canada	Joint Industrial Council	Hardisty, Alberta	14

Liquids Pipelines—U.S.: Chicago and Superior Regions	Local 2003, United Steel Workers of America (USW)	Minnesota, Wisconsin, Michigan, Illinois, Indiana	134
Liquids Pipelines—U.S.: Cushing Region	Local 348, United Steel Workers of America (USW)	Kansas, Oklahoma, Missouri	22
St. Lawrence Gas	Local 97, International Brotherhood of Electrical Workers (IBEW)	Massena, New York	30
<b>Total Number of Employees Covered by a Negotiated Agreement</b>			<b>947</b>

## LA5

*Minimum notice period(s) regarding operational changes, including whether it is specified in collective agreements.*

The Enbridge Gas Distribution/Local 975 CEP collective agreement contains a 60-day minimum notice period. Enbridge's other collective bargaining agreements do not contain any minimum notice periods.

## OCCUPATIONAL HEALTH AND SAFETY

### LA6

*Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs.*

Enbridge's entire workforce is represented in formal joint management-worker health and safety committees. While the structure of these committees varies between business units, a common element is the participation of both employees and management representatives.

In 2011, each of the operating business units within Enbridge began a Safety Culture enhancement initiative. One component of this initiative was to establish a clear Health & Safety Committee structure that serves to promote participation and engagement at all levels and to establish clear lines of communication for decision making within the organization. These committees and the new structure were implemented in 2012.

Enbridge has significantly increased the number of EH&S personnel, with the number rising to 171 in 2012, compared with 123 in 2011. This is representative of Enbridge's business growth and of our increased focus on EH&S excellence, operational reliability, and commitment to attaining a world-class EH&S culture.

### LA7

*Rates of injury, occupational diseases, lost days and absenteeism, and number of work-related fatalities by region.*

*Note: The statistics quoted below are consolidated data for the following operating business units: Liquids Pipelines; Gas Pipelines (the Enbridge operated portion of the Vector natural gas pipeline); Enbridge Gas Distribution; Gas Transportation; and Major Projects. They are based on the 7,430 employees working for those entities as of December 31, 2012, and exclude corporate (head office) employees. [Click here to view a spreadsheet showing Enbridge's complete health & safety statistics, both consolidated and by business unit.](#)*

Enbridge's injury rate in 2012 was 1.27 recordable injuries per 200,000 hours worked, compared with 0.97 in 2011. (Although we do report and track first-aid incidents, they are not included in the frequency rate.) The rate of 1.27 is slightly better than the six-year average of 1.48, and represents our continuing trend of improving safety performance in the area of worker safety.

Enbridge's lost-day rate in 2012 was 0.32 lost days injuries per 200,000 hours worked, compared with a rate of 0.18 in 2011. This compares to a six-year historical average of 0.30. Lost days begin the day after the incident and

include calendar days after the date of the injury.

All incidents, whether regulatory recordable or not, are reported to local supervisors, as well as to our Health & Safety Department for tracking, trending and communications regarding potential lessons learned.

Enbridge's absentee rate in 2012 was 3.30 days absent per employee.

### **Work-related Fatality**

Enbridge had no employee fatalities in 2012. However, Enbridge was deeply saddened by an incident in which a contractor's worker died on February 28, 2012, on the Woodland Pipeline construction project in northern Alberta. The fatal injury was sustained when the side boom he was operating flipped over into a ditch while helping prepare for a tie-in weld.

Enbridge immediately stopped work both at the site and on the project. Alberta Occupational Health & Safety (OH&S) attended the scene of the incident and issued a Stop Use Order for the use of all side booms on the spread and a Stop Work Order for the tie-in activities at the location of the incident. Prior to construction resuming, an OH&S Order required a full mechanical inspection of all side booms and a revision to the Contractor's Job Safety Analysis for tie-in welding.

Enbridge went beyond OH&S requirements and requested that the contractor's mechanical inspections be vetted by an independent consultant before allowing side boom work to resume. Additionally, the contractor was only allowed to return to work after the OH&S orders were lifted and all operators (a) reviewed the safe-work procedures, practices and the Job Safety Analysis for side booms and pipe layers, and (b) physically demonstrated knowledge in operating the emergency shutdown devices on the side booms and excavators.

Enbridge has conducted an internal investigation into the incident and cooperated fully with the emergency officials and regulators in their incident investigation. Since this incident, Enbridge has required all contractors working on our projects to install roll-over protective systems (ROPS) on their side booms. Additionally, all side booms are to undergo pre-mobilization inspections prior to being put into service at Enbridge worksites. Enbridge has also created industry-wide pipeline construction safety roundtable groups in both the U.S. and Canada. Both contractors and owners are represented in these industry groups, whose focus is on improving the safety culture in mainline construction.

### **LA8**

*Education, training, counseling, prevention and risk-control programs in place to assist workforce members, their families or community members regarding serious diseases.*

Before Enbridge employees are authorized to perform any job that may have health or safety risks associated with it, they must complete mandatory training. As well, within each of our business units and at each of our sites, Enbridge has established health and safety committees, which meet regularly to discuss and proactively implement changes in response to: legislation; new company policies and practices to continuously improve safety performance; and new understandings gained from analyzing incidents.

If a serious injury occurs, Enbridge arranges for counselors to be brought in for the team. Enbridge also offers the Employee and Family Assistance Program (EFAP) to employees and their families in need of help in a variety of areas. In addition to providing assistance in dealing with an illness or injury, employees and their families can access help related to:

- Alcohol and drug dependencies
- Marital and family concerns
- Outplacement and retirement issues
- Bereavement
- Depression, stress and anxiety
- Long-term or major illness

All services under the EFAP are provided by, or coordinated through, an independent consulting firm with certified professional counselors. All EFAP counselors are qualified psychologists or social workers, who are required to maintain employees' confidentiality.

Under the EFAP, Enbridge covers the initial assessment and the first four hours of counseling. Extended health care plans provide ongoing coverage to certain maximums.

Enbridge's short- and long-term disability plans also include a variety of healthcare, support and counselor assistance.

Additionally, Enbridge has in effect several programs and initiatives that focus on the health of our employees and families such as pandemic planning and other health initiatives within the business units.

## **LA9**

*Health and safety topics covered in formal agreements with trade unions.*

The business units within the Enbridge group of companies that employ individuals who are represented by trade unions are Liquids Pipelines and Enbridge Gas Distribution (EGD). However, only the collective agreement that EGD has with the Communications, Energy and Paperworkers Union (CEP), local 975, includes topics related to health and safety. Article 2 of the Union Management Cooperation document states the following:

2.04—Enbridge and the Union recognize the importance of a strong commitment to the Health and Safety of our work force and therefore agree and commit to the following:

- Compliance with a standard that, as a minimum, meets all applicable laws and regulations as of April, 1998, and reflects applicable industry standards
- That Enbridge will provide and maintain a safe and healthy work environment, safe equipment and will follow operating practices that will safeguard all employees and the public
- The elimination of the source of dangers to the health, safety and physical well-being of our employees is of paramount importance
- That procedures are in place to ensure the efficient delivery of, and accessibility to, Health and Safety Training
- That Enbridge and the Union will work together to ensure all employees are aware of their rights and obligations with respect to these commitments
- That unacceptable performance of health and safety responsibilities will not be tolerated
- Development and communication of a Safety Management System

2.05—Enbridge and the Union also recognize the importance of Joint Health and Safety Committees, comprising knowledgeable employees, to achieve these commitments and agree to ensure that the committees have the necessary support to fulfill their role.

## **TRAINING AND AWARENESS**

### **LA10**

*Average hours of training per year per employee by employee category.*

We are able to report that Enbridge's investment in training and development in 2012 was approximately 1.4 per cent of total salary costs. This equated to \$1,595 per employee.

Because Enbridge's business units have specific training needs and training programs that are not centrally managed, we are not, however, able to report enterprise-wide statistics on the annual average number of training hours our employees engaged in.

Enbridge's investment in training and education provides internal technical training, functionally specific training, and leadership and core competency training, enabling our employees to acquire and enhance the skill sets needed to perform their best in their current roles and prepare for future roles.

### **Health and Safety Training**

Enbridge's individual business units are responsible for health and safety training, which includes such elements as company-wide Safety Stand Downs and in-house training to ensure that all Enbridge employees and contractors have the skills needed to safely perform their duties.

Enbridge's enterprise-wide Environment, Health & Safety training in 2012 totaled 101,503 hours, or an average of 13.7 hours per employee\*, compared with 36,567 hours in 2011, or an average of 5.6 hours per employee.

\* This includes the 7,430 employees working for Liquids Pipelines, Gas Pipelines (the Enbridge operated portion of the Vector natural gas pipeline), Enbridge Gas Distribution, Gas Transportation, and Major Projects as at December 31, 2012, and excludes Corporate (head office) employees.

## LA11

*Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings.*

Enbridge places great value and strong focus on the continuing development of all of our employees. Employee and leadership development is fundamental to the values of the enterprise and the successful execution of our strategic plans and future success.

Our Leadership and Employee Development Framework is based on a balanced combination of targeted experiences intended to equip employees for success throughout their career. Aimed at strengthening technical, functional and non-technical skills, the framework involves participation in formal learning and development programs, partnered with experiential learning opportunities provided through on-the-job learning, special projects or assignments, mentoring relationships and other self-directed learning.

Annually, all employees create individual development plans in partnership with their leaders. These development plans form the basis of skill and competency development and career progression.

To ensure that the diverse technical, functional and non-technical needs of all employees are encouraged and supported, Enbridge offers a variety of approaches to learning. Some examples of these approaches are as follows:

- New employees begin their career with a comprehensive “Getting Onboard with Enbridge” program that supports them throughout their first three months to ensure early success in their new roles.
- Enbridge provides relevant, high-calibre internal programs that enhance core and leadership competencies through our Enbridge University (ENBU) via three unique campuses—two in Canada and one in the U.S. Each campus offers a variety of programming in the areas of energy studies, business acumen, leadership development, project and risk management, and personal excellence. Courses are delivered through instructor-led sessions utilizing either external facilitators or subject matter experts from within Enbridge and via self-directed online modules, depending on the nature of the course material. Courses are focused on concepts and skills that Enbridge employees and leaders can directly apply in their current roles and will help them qualify for future opportunities.
- A comprehensive technical training curriculum specific to enhancing operational skill is offered at department, discipline, and/or job levels throughout the enterprise. Each business unit develops curriculum and delivery models appropriate for the skill to be developed and to ensure compliance to all safety, regulatory and business unit requirements. Skills are developed through a combination of hands-on demonstration, theory, testing, state-of-the-art simulators and on-the-job training. We use a learning management system to support registration and tracking.
- Formal and informal coaching and mentoring programs are available to all employees.
- External courses, certificates, designations and degrees are supported through departmental sponsorship and the enterprise-wide Education Tuition Reimbursement Program.

Other career and personal development opportunities include:

- Community Volunteer programs
- Special projects assignments
- In-house career planning workshops
- Flexible job progression through career ladders
- Targeted internal job rotations or job assignments
- energy4everyone

Throughout their career at Enbridge, employees are offered information on retirement planning and pension management. As employees approach retirement, Enbridge offers pre-retirement workshops to assist them in making a successful transition to retirement from the workplace. This includes segments on financial planning, goal setting and lifestyle changes.

## LA12

*Percentage of employees receiving regular performance and career development reviews, by gender.*

In 2012, Enbridge leaders completed performance reviews—via Enbridge's online performance management system—covering 88 per cent of our permanent employees. Performance feedback for the remaining 12 per cent was captured through a paper-based mechanism. The 12 per cent includes unionized employees, as well as some small groups in operating areas in Canada and the U.S.

## **DIVERSITY/INCLUSION AND EQUAL OPPORTUNITY**

### LA13

*Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership and other indicators of diversity.*

#### **Board of Directors**

With the retirement of Patrick D. Daniel as Director/President and CEO on September 30, 2012, Enbridge's Board of Directors comprises 12 Directors, 11 of whom are considered to be independent and one of whom, Al Monaco, serves as Enbridge's President and CEO.

As of December 31, 2012, Enbridge Inc.'s Board of Directors consisted of the following directors:

- David A. Arledge
- James J. Blanchard
- J. Lorne Braithwaite
- J. Herb England
- Charles W. Fischer
- V. Maureen Kempston Darkes
- David A. Leslie
- Al Monaco
- George K. Petty
- Charles E. Shultz
- Dan C. Tutcher
- Catherine L. Williams

Biographies of the directors are available at

<http://www.enbridge.com/InvestorRelations/CorporateGovernance/BoardofDirectors.aspx>.

#### **Permanent Employees**

As of December 31, 2012, Enbridge employed 7,820 permanent employees. The approximate breakdown by gender was 67 per cent male and 33 per cent female. The breakdown by age group was as follows:

<b>Age Group</b>	<b>Employee Count</b>
up to 24	257
25 to 29	856
30 to 34	1,069
35 to 39	1,050
40 to 44	1,047
45 to 49	1,131
50 to 54	1,115
55 to 59	853
60 and above	442
<b>Enterprise Total—Permanent</b>	<b>7,820</b>

The average age was 43.1 years. The average age of females was 42.5 and the average age of males was 43.5.

As of December 31, 2012, Enbridge's senior management, which is defined as director level and above, included 47 females and 209 males. This equates to 82 per cent male and 18 per cent female.

## Temporary Employees

Enbridge employed 245 temporary employees as of December 31, 2012. The approximate breakdown by gender was 52 per cent male and 48 per cent female. The breakdown by age group was as follows:

Age Group	Employee Count
up to 24	73
25 to 29	50
30 to 34	25
35 to 39	19
40 to 44	13
45 to 49	9
50 to 54	12
55 to 59	16
60 and above	28
<b>Enterprise Total—Temporary</b>	<b>245</b>

## Diversity and Inclusion

Enbridge fully supports employment equity legislation requiring that fair and equitable employment opportunities be available to all people, as well as the principles and practices of an inclusive workplace. We are committed to creating a workforce that, at all levels, is representative of the diverse population we serve and to providing a working environment that encourages all people to participate on an equitable basis in employment, training and career advancement opportunities consistent with their abilities, qualifications and aspirations.

Enbridge is committed to an inclusive and respectful workplace. Our employment equity and affirmative action programs have the following principal objectives:

- The achievement and maintenance of a workforce in compliance with relevant legislation, taking into account such factors as workforce availability and the evolving social and economic situation of these groups, as well as Enbridge's operational objectives
- The identification and removal of systemic barriers in employment systems, policies, procedures and practices that may have an adverse effect on the employment or career progression of any employee
- The implementation of special measures and programs to correct the effects of employment disadvantages and to promote the workforce participation of designated groups
- The development of initiatives that ensure employees can work at their full potential

As such, management will:

- Hire based on merit and job requirements, ensuring that the recruitment lens captures the available labour force in its entirety
- Treat employees equitably with respect to access to developmental and career advancement opportunities, training and other conditions of employment consistent with their performance and qualifications
- Support and be committed to programs and initiatives that foster equal employment opportunity and non-discrimination

Enbridge Liquids Pipelines (LP) business unit has created a dedicated position—Manager, Diversity—that is implementing a three-year Employment Equity and Diversity Plan for all LP operations in Canada. A Diversity Steering Committee has been formed, and has undertaken a number of activities and initiatives that promote diversity and inclusion across LP.

LP (Canada) complies with the regulations of the Employment Equity Act and, as such, is required to report annually on workforce composition in relation to the four equity groups covered by the Act: women; people with disabilities; visible minorities; and Aboriginal people. Each new employee receives a workforce survey questionnaire, asking him or her to voluntarily self-identify if they are a member of one or more of the four groups. This information is provided to the federal government and is also utilized internally to provide information on areas of under-representation both in terms of aggregate representation and representation at various levels of the organization. The information guides Enbridge's strategic diversity and equity initiatives with the goal of developing a workforce that aligns with the availability of the equity groups in the labour force, as well as becoming more representative of the communities in which we operate. Enbridge does not keep employment statistics based on membership in identified diversity groups on an enterprise-wide basis.

Enbridge understands that the organizational culture must support self-identification, and will be launching a full

“Count Yourself In” strategy in 2013 to encourage employees to self-identify in the designated groups. Enbridge’s U.S. operations routinely track the minority composition of their workforce to comply with government reporting. Effective October 1, 2010, Enbridge implemented an Affirmative Action Plan in the U.S. In compliance with the plan, Enbridge tracks the ethnicity of all job applicants and employees based on a self-identification process. Through tracking efforts, we identify specific jobs in which we have an under-representation of minority groups. Through analysis of this information, we have established placement goals and have enhanced recruitment efforts to diversify our applicant pool, with the goal of establishing a workforce that is more representative of the geographic areas in which Enbridge operates.

Enbridge is currently developing a Diversity Dashboard that will look at other breakdowns of interest to the organization, including categories not captured by legislation. The development of Diversity and Inclusion metrics is understood as a key aspect of tracking and measuring progress in this area, and will begin with the establishment of benchmarking tools to supplement legislative data requirements described above.

## LA14

*Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation.*

Note: In determining all compensation related statistics in this report, we included only salaries of regular, active, non-union, full-time employees.

Enbridge’s remuneration policies are company-wide policies, and there is no significant variation by location. Salary levels are determined using an objective and equitable process that considers the internal value of the role, market rates of pay, as well as employee skill and competency. Enbridge utilizes an objective performance management system that permits top performers to achieve higher-than-average increases in any given year.

### Average salary ratio male to female by job ladder level (%)—2012

Level 1	103.0
Level 2	99.5
Level 3	102.0
Level 4	102.6
Level 5	101.9
Level 6	105.0
Level 7	98.3

### Minimum wage versus Enbridge start rates

Region	Provincial/State Minimum Wage	Enbridge Entry-level Minimum Wage	Enbridge Entry-level Maximum Wage	Ratio of Standard Minimum Wage to Enbridge Entry-level Wage
Ontario	\$10.25			
Toronto		\$17.12	\$27.40	167.0% - 267.4%
Alberta	\$9.75			
Calgary/Edmonton		\$17.12	\$27.40	175.5% - 281.1%
Texas	\$7.25			
Houston		\$ 12.31	\$19.71	169.8% - 271.9%

### Ratio of President and CEO’s Base Salary to that of Average Employee

In 2012, the ratio of Enbridge’s President and CEO’s base salary to that of the average employee salary was 10.95. This ratio does not include variable compensation (bonus), information about which was reported in Enbridge’s March 5, 2013 Management Information Circular.

Enbridge’s President and CEO’s base salary in 2012 was \$1,000,000. (Please note that the \$1,000,000 amount differs from the \$804,167 amount reported in Enbridge’s March 5, 2013 Management Information Circular because his salary changed several times in 2012. His salary as of December 31, 2012, however, was \$1,000,000.)

To calculate “average employee salary,” we included only salaries of regular, active, non-union, full-time employees.

Enbridge’s executive compensation programs are designed to motivate management to deliver strong corporate

performance and invest the company's capital in ways that minimize risk and maximize return, while supporting Enbridge's core business goals.

We benchmark our executive compensation programs against a group of similar companies in Canada and the U.S. to ensure we are rewarding our executives at a competitive level.

Our base salaries offer fixed compensation for performing day-to-day responsibilities, while balancing the individual's role and competency, market conditions and attraction and retention issues.

## **SOCIAL PERFORMANCE, PART 2: HUMAN RIGHTS**

### **HUMAN RIGHTS PERFORMANCE INDICATORS**

#### **INVESTMENT AND PROCUREMENT PRACTICES**

##### **HR1**

*Percentage and total number of significant investment agreements and contracts that include clauses incorporating human rights concerns, or have undergone human rights screening.*

##### **HR2**

*Percentage of significant suppliers, contractors and other business partners that have undergone human rights screening, and actions taken.*

Enbridge strictly adheres to Canadian and U.S. human rights laws. Further, Enbridge's activities are governed by our [Statement on Business Conduct](#) and by the [Voluntary Principles on Security and Human Rights](#), which were established by the U.S. Bureau of Democracy, Human Rights and Labor, and which address responsible corporate action in conflict zones. For example, our Major Projects business unit requires its major suppliers to adhere to Enbridge's Statement on Business Conduct and the Voluntary Principles.

##### **HR3**

*Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained.*

Enbridge recognizes and ensures compliance with all human rights laws and regulations.

As a condition of employment, all new employees are required to read and provide written acknowledgement of their agreement to follow Enbridge's [Statement on Business Conduct](#), the human rights elements of which are outlined in the Policy section above. Thereafter, all employees must certify their compliance with the Statement on Business Conduct each year. The annual certification process for each employee includes the completion of mandatory Statement on Business Conduct refresher training, which is coordinated and rolled-out each January on an enterprise-wide basis.

Policy and practice are reinforced throughout Enbridge via ongoing mandatory training.

Each business unit has different training packages that address such subjects as maintaining a respectful workplace, anti-harassment, and violence in the workplace. All new hires take such training either immediately upon being hired or within three months of being hired. Employees are required to undertake refresher courses every two to three years. If requested, training can also be provided to groups or departments between refresher training cycles. Enbridge continually revisits the content and delivery methodology of these courses to ensure that the information is up-to-date and accessible.

#### **NON-DISCRIMINATION**

##### **HR4**

*Total number of incidents of discrimination and corrective actions taken.*

Enbridge's value of integrity is embodied in our Statement on Business Conduct, which requires employees to make decisions about, and conduct Enbridge's business in, a responsible, honest and ethical manner. Enbridge's

Statement on Business Conduct and Whistle Blower Procedures require employees to report (either directly or anonymously) any fraudulent activities or potential or actual events that do not comply with applicable legal requirements or Enbridge policies.

Enbridge management is not aware of any incidents of discrimination taking place in the company in 2012.

In the U.S., two discrimination claims were filed with the Equal Employment Opportunity Commission (EEOC) in 2012. Enbridge investigated these claims and found no evidence of discrimination. Enbridge responded to the EEOC about these claims via the EEOC's standard response process. At the time of writing this report, we were awaiting the EEOC's review and response.

## **FREEDOM OF ASSOCIATION AND COLLECTIVE BARGAINING**

### **HR5**

*Operations and significant suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and actions taken to support these rights.*

Enbridge is not involved in any operations in which the right to exercise freedom of association and collective bargaining may be at significant risk.

## **CHILD LABOUR**

### **HR6**

*Operations and significant suppliers identified as having significant risk for incidents of child labour and measures taken to contribute to the effective abolition of child labour.*

Enbridge follows the labour laws of the countries in which we operate and does not hire children.

Further, Enbridge's activities are governed by our [Statement on Business Conduct](#) and by the [Voluntary Principles on Security and Human Rights](#), which were established by the U.S. Bureau of Democracy, Human Rights and Labor, and which address responsible corporate action in conflict zones.

## **FORCED AND COMPULSORY LABOUR**

### **HR7**

*Operations and significant suppliers identified as having significant risk for incidents of forced or compulsory labour and measures to contribute to the elimination of forced or compulsory labour.*

Enbridge follows the labour laws of the countries in which we operate and does not practice forced or compulsory labour.

Further, all of Enbridge's activities are governed by our [Statement on Business Conduct](#) and by the [Voluntary Principles on Security and Human Rights](#), which were established by the U.S. Bureau of Democracy, Human Rights and Labor, and which address responsible corporate action in conflict zones.

## **SECURITY PRACTICES**

### **HR8**

*Percentage of security personnel trained in the organization's policies or procedures concerning aspects of human rights that are relevant to operations.*

Enbridge employs two full-time and two part-time security personnel. All have a full understanding of our [Statement on Business Conduct](#).

Further, all of Enbridge's activities are governed by our [Statement on Business Conduct](#) and by the [Voluntary Principles on Security and Human Rights](#), which were established by the U.S. Bureau of Democracy, Human Rights and Labor, and which address responsible corporate action in conflict zones.

## **INDIGENOUS RIGHTS**

### **HR9**

*Total number of incidents of violations involving rights of Indigenous people and actions taken.*

Enbridge respects the rights and culture of Indigenous peoples and has adopted an Aboriginal and Native American Policy that outlines key principles for Aboriginal relations and promotes the understanding of both Aboriginal and Native American peoples and issues that are important to them.

Enbridge is not aware of any incidents of violations involving the rights of Indigenous people in 2012.

In Canada, Aboriginal persons have a constitutionally protected right to be consulted if any government decision has the potential to impact treaty or other Aboriginal rights. Aboriginal groups can challenge or appeal decisions made by regulatory authorities if they are not satisfied with the decision from a rights and title perspective.

Although we are not aware of any violations to the rights of Indigenous people, we are aware that some First Nations currently oppose some Enbridge projects.

*For information on human rights, please see the Human Rights content in the Overall management Approach to Corporate Social Responsibility section of this report. For information on U.S. regulatory safeguards for protecting Native American rights, and on Enbridge's responsibilities to comply with those and our other protocols, please see the U.S.—Major Projects and Liquids Pipelines Operations content in the Aboriginal & Native American Relations—Recent Initiatives and Significant Events section of SO1/SO9/SO10 in this report.*

## **ASSESSMENT**

### **HR10**

*Percentage and total number of operations that have been subject to human rights reviews and/or impact assessments.*

Human rights are enshrined into the U.S. and Canadian constitutions, and Enbridge complies with all laws and regulations in both countries.

For example, in Canada, the regulatory review process requires project proponents such as Enbridge to conduct comprehensive reviews of social impacts, consult with stakeholders and Aboriginal groups, and suggest measures for mitigation and/or compensation. We incorporate all of these measures into all of our projects.

In 2011, the Canadian Human Rights Commission conducted an "Employment Equity Audit" on two Enbridge subsidiaries. As a result of the audit, Enbridge established a Diversity and Employment Equity strategy and a Diversity Steering Committee representing employees across Enbridge's Canadian Liquids Pipelines business unit.

## **REMEDATION**

### **HR11**

*Number of grievances related to human rights filed, addressed and resolved through formal grievance mechanisms.*

Enbridge does not yet have any material human rights grievances to report for 2012. One employment-related complaint against Enbridge Gas Distribution was made to the Ontario Human Rights Commission in 2012. The complaint was resolved in June 2013.

All of Enbridge's collective agreements and Joint Industrial Council agreements contain a formal grievance mechanism.

## **SOCIAL PERFORMANCE, PART 3: SOCIETY**

### **SOCIETY PERFORMANCE INDICATORS**

#### **LOCAL COMMUNITIES**

##### **SO1**

*Percentage of operations with implemented local community engagement, impact assessments, and development programs.*

##### **SO9**

*Operations with significant potential or actual negative impacts on local communities.*

##### **SO10**

*Prevention and mitigation measures implemented in operations with significant potential or actual negative impacts on local communities.*

Enbridge manages the impacts of our operations on communities through three areas of enterprise-wide activity that have complementary programs and practices: community and landowner relations; Aboriginal and Native American relations; and community partnerships and investments. Following are detailed reports on all three of these areas.

### **COMMUNITY AND LANDOWNER RELATIONS**

#### **ASSESSING IMPACTS**

Many of Enbridge's projects require us, as the proponent, to develop and submit a comprehensive Environmental and Socio-Economic Assessment (ESA) or similar study or document. An ESA is prepared to provide the current environmental and socio-economic baseline conditions along a proposed pipeline route and in the vicinity of proposed facilities. An ESA also typically evaluates project alternatives, and determines and compares potential effects a proposed project will have on the natural and human environment.

The socio-economic component of an ESA evaluates potential adverse and positive impacts to communities by assessing aspects such as human occupancy and resource use, heritage resources, traditional land and resource use, social and cultural well-being, human health and aesthetics, infrastructure and services, employment, and the economy.

An integral component in determining socio-economic effects of a project includes collecting and evaluating information obtained during consultations with Aboriginal and Native American groups, and stakeholders, including: environmental interest groups; landowners and occupants; and municipal, provincial and federal agencies. Once potential effects have been identified and analyzed, residual effects are predicted and their significance is assessed. Measures are then proposed to avoid or mitigate the identified effects.

#### **MAJOR PROJECTS—PUBLIC INVOLVEMENT PROGRAMS**

We are currently undertaking dozens of large Enbridge-led projects across North America. Whether a particular Enbridge project pertains to building new pipelines, crude oil tanks, power transmission lines, or renewable energy projects, we use proactive public communication and consultation programs to support two-way communication. Enbridge's philosophy is to be as transparent as possible with our stakeholders and Aboriginal and Native American groups. We accomplish this by undertaking timely, honest and open communication with them and with communities located near planned projects that may have an impact on them.

When Enbridge proposes a new project, as a first step, we implement a Public Involvement Program (PIP) that is specifically designed to share information with stakeholders, receive their feedback and address their concerns. The purpose of the PIP is to build public awareness and understanding, gather stakeholder input, answer questions, learn about community interests and perspectives and whenever possible implement changes to project design or scope to minimize adverse impacts. Factors such as environmental sensitivities, private or public lands, and nearby neighbours are carefully considered.

As part of this program, landowners, Aboriginal and Native American communities, community residents, stakeholder organizations, public officials, chambers of commerce and the media in communities close to Enbridge's activities receive regular project updates via newsletters, posters, regulatory compliance mailings, telephone calls, a

website, community open house meetings and in-person visits.

While many stakeholders are satisfied to receive project information at the start of the process and then simply be informed on a timely basis about progress and new developments, other individuals or groups have interests or concerns that require personal consultations. These consultations can vary widely—from negotiations with First Nations, private landowners and recreational users of public land; to engagement with multi-stakeholder advisory groups; to discussions about economic opportunities with local contractors.

### **OPERATIONS—PUBLIC AWARENESS PROGRAMS**

Enbridge knows that our neighbours during construction of a project will also be our neighbours for the many years that the project will be in operation, and we look for and welcome the opportunity to invest in long-term collaborative consultation relationships toward building sustainable communities.

Through our Public Awareness Programs, we have a scheduled communication process through which (a) landowners, communities and all other relevant stakeholders are kept informed about a pipeline and related initiatives and issues and (b) we seek comments from the affected public and address questions and concerns. Our Public Awareness Programs are focused on raising awareness of pipelines in communities, the importance of calling a local One-Call centre or 811 before any digging project, and how to recognize the warning signs of a potential pipeline emergency and what to do—or what not to do—in response.

Our programs and initiatives take many forms and following are details about some of them.

#### **Damage Prevention Program**

Enbridge representatives meet regularly with local emergency responders, excavators, schools, public officials and other community stakeholders along our rights-of-way to share information about the pipelines, damage prevention, leak detection, and Enbridge's emergency contact information.

Enbridge's Damage Prevention Program aims to reduce hazardous actions by Enbridge, our contractors, landowners or third parties that may cause damage to our pipeline system. These dangerous actions may also cause personal injury and damage to the environment.

The program addresses the needs of different audiences within communities and is flexible enough to change as our pipeline system evolves or as the public's needs for information changes.

An effective Damage Prevention Program provides significant value in several areas when effectively and consistently managed:

- Improved pipeline safety and environmental performance
- Enhanced public safety
- Enhanced emergency response
- Improved trust and a better relationship with our stakeholders
- Less resistance to our maintenance programs and right-of-way (ROW) activities
- Preservation of our ROW
- Improved pipeline operator reputation

Along with other companies and various state, provincial and federal governments, Enbridge designates April as Safe Digging Month, during which we communicate the importance of conducting safe digging practices and raise awareness about the importance of Call Before You Dig and One-Call centres in both Canada and the U.S.

#### **One-Call Legislation in Ontario**

In 2012, EGD strongly influenced the passing of the *Ontario Underground Infrastructure Notification System Act*, into law. Under this legislation, all underground utility operators are required to participate in Ontario One-Call, a call centre that provides answers to third-parties wanting to excavate for any reason in Ontario.

The legislation is important for both GD and EGD because their largest operational threat is third-party damage to natural gas pipeline infrastructure, and because the best way to prevent this damage is by providing information about underground infrastructure to individuals wanting to excavate.

With the passing of the legislation, excavators can get easily get the information they need with just one call. Ontario was the first of Canada's provinces and territories to pass such legislation.

#### **Public Awareness Program**

In the U.S., Enbridge's Public Awareness Program provides stakeholders with information on how to recognize and

respond to a pipeline emergency, how to dig safely, how to contact us in an emergency and other important pipeline safety information. As part of our program, emergency officials, public officials, affected public, excavators, farmers and school officials in our areas of operation for both Enbridge and Vector pipelines receive an annual brochure mailing. The brochures provide information on how to recognize and respond to a pipeline emergency. In 2012, the Enbridge mailing reached more than 950,000 stakeholders while the Vector mailing reached approximately 127,000 stakeholders.

In addition, these key audiences are reached through supplemental contact, including in-person meetings, mass media, additional mailings, special events, the new online Emergency Responder Education Program (please see below for a report on this program), and other supplemental outreach.

In Canada, Enbridge's Public Awareness Program also engages the landowners and tenants, emergency responders, contractors and municipal officials that are directly affected by Enbridge pipelines. In the past several years, we have engaged these stakeholders in a number of ways:

- Enbridge meets annually with all first responders near our operations. We provide responders with Enbridge emergency response information, including information about what to do in case of an incident. We are also delivering the new online Emergency Responder Education Program (please see below for a report on this program).
- Outreach to landowners includes meeting in person every three years, mailings of safety-related information, a cookbook, and an annual calendar contest. Recently, we added a landowner newsletter to our communications initiatives.
- We sponsor contractor breakfast sessions, conventions and other excavator assemblies. We also developed a new video to promote the Call Before You Dig program.

In addition, Enbridge created new positions in each of our operating regions for Emergency Response Coordinators, who develop training exercises and work with emergency responders in their areas.

A third-party agency firm reviews Enbridge's Canadian Public Awareness Program every third year to ensure that the program is continually improved.

### **Safe Community**

Enbridge's Safe Community Program provides contributions to local emergency responders to purchase equipment or to fund training activities that help keep communities safe. We also make targeted donations in communities near our rights-of-way to support environmental, educational, health and safety, cultural and other community initiatives. Enbridge representatives often hand-deliver the cheques and use those face-to-face meetings as an opportunity to talk about our Public Awareness Program and encourage stakeholders to contact their Enbridge representative at any time with any questions or concerns.

Since we launched the program in 2002, we have contributed over \$5.7 million in grants to first-response organizations across North America and have made the lives of more than eight million people safer.

### **Emergency Responder Education Program**

The Enbridge and Vector Pipeline Emergency Responder Education Program was rolled out in the U.S. in December 2012 to nearly 8,000 emergency response agencies; and in Canada in April 2013 to approximately 800 first response agencies.

The online training program features 3-D, interactive graphics to help first responders better visualize response to pipeline incidents. Content includes the basics of natural gas and crude oil pipeline operations, how to safely handle products transported by pipelines, including those operated by Enbridge, pipeline emergency response tactics and pipeline emergency scenarios.

Additionally, in 2013, Enbridge is rolling out an in-person outreach component of the program, as well as developing a new training module that targets 911 dispatch centres covering the areas in which we operate and fire departments in close proximity to our pipelines and facilities. As of July 2013, approximately 900 emergency responders, Enbridge employees, and other interested parties had registered to access the online training; and more than 400 had completed the training.

The program material is based on Pipeline Emergencies, an industry-leading pipeline emergency response training program developed by the National Association of State Fire Marshals (NASFM) in the U.S. The NASFM materials were adapted to provide information specific to pipelines operated by Enbridge. The program was also developed utilizing feedback received from a 2011 survey of emergency response agencies that have received grants through Enbridge's Safe Community Program.

## **Emergency Response Drills**

Enbridge personnel conduct regular emergency response drills and training exercises and invite local emergency responders, municipal leaders and other stakeholders to participate as they would in the event of an actual emergency. The meetings, the community investment program and the emergency response drills all provide opportunities to foster relationships, while also increasing the community's understanding of Enbridge's pipelines.

## ***COMMUNITY RELATIONS ADVISORS***

In 2012, Enbridge added additional Community Relations Advisors to our staff to focus on building healthy, open and long-lasting relationships with communities and residents near our operating assets, as well as the projects we are planning or constructing.

Enbridge's Community Relations Advisors are helping to develop and implement community engagement plans that meet the needs of local communities and stakeholders. They are also identifying and proactively addressing and resolving emerging concerns in key communities and regions and ensuring that Enbridge's corporate social responsibility initiatives are supported within local communities.

## ***MEASURING EFFECTIVENESS***

There are many long-term benefits to fostering good relations with stakeholders and building trust and goodwill with the landowners and communities along Enbridge's rights-of-way.

For one, if landowners and communities already know Enbridge and believe they have been treated fairly by us in the past and that we care about our communities and the safety of everything we do, then they are more likely to support Enbridge and any of our future expansion initiatives and will be more open to discuss and negotiate their needs with us.

Moreover, Enbridge employees and their families live in these same communities, and they share the same goals as their neighbours, which is to build strong, thriving, safe and sustainable communities.

Pipeline safety also enters into the equation. When stakeholders are well informed about Enbridge and our operations and trust us and know that we want to hear from them, they are more likely to be quicker to call us if they smell, hear or see something out of the ordinary with regards to our operations.

The actions or reactions of Enbridge's stakeholders are the primary indicators of our community and stakeholder relations performance and that of the Public Awareness Program. Key performance indicators for us include:

- Positive or negative feedback gathered in meetings with communities and stakeholders
- Concern/support from elected officials regarding matters important to operations and projects
- Letters of support/opposition
- Positive, negative or balanced media coverage
- Level of opposition to projects
- Timely regulatory approvals of the projects
- Conflict mitigation through effective communication and a meaningful consultation process with stakeholders

By fostering positive relations and addressing stakeholders' concerns proactively, Enbridge, in most instances, has been able to move forward on our growth projects with the support of landowners, communities, and Aboriginal and Native American neighbours.

Enbridge conducts formal and informal surveys to measure the effectiveness of our programs. For example:

- In the U.S., Enbridge is required by federal regulation to conduct an annual implementation review of the Public Awareness Program, and to evaluate program effectiveness once every four years. The effectiveness evaluation is conducted through a collaborative survey program, incorporating feedback from emergency responders, public officials, excavators and people who live and work near our pipelines. The survey measures their understanding of pipeline safety and retention of information they would have received as part of a company's pipeline public awareness baseline direct mail program. This information is paired with statistics and metrics from the annual implementation review to help determine if the program is effective and if any changes to the program are indicated. In Canada, the Public Awareness Program is reviewed and audited every three years by an outside communications company to provide recommendations and to ensure that the program is being continuously improved.
- Enbridge also uses informal measures of media interest (news and blog clips) to gauge stakeholder interest in

certain topics such as proposed pipeline construction in their area, as well as to develop educational and open-house materials that are responsive to stakeholder questions that are raised in media stories.

### **CONTINUAL IMPROVEMENT**

Enbridge aims for continual improvement of our community relations initiatives to reinforce our long-standing commitment to being a good neighbour and maintain positive relationships with landowners, tenants and communities along our rights-of-way.

For example, the relationships that Enbridge builds with communities through our community events, sponsorships of community activities or meetings with key stakeholders have helped establish Enbridge as a good corporate citizen. Some recent examples:

- **Project Zero**—Each year, in partnership with Fire Marshal's Public Fire Safety Council (FMPFSC) in Ontario, Enbridge Gas Distribution (EGD) gives \$100,000 to sponsor Project Zero, a public education program to help eliminate fire and carbon monoxide deaths by providing combination smoke and carbon monoxide alarms for distribution to homeowners by fire departments in our service area. To date, more than 9,600 combination smoke and carbon monoxide alarms have been installed under Project Zero in 34 Ontario communities.
- **Project Assist**—With the success of Project Zero, a new program called Project Assist was developed and implemented in 2012. In partnership with the FMPFSC, Enbridge donated \$100,000 to the FMPFSC to provide 20 volunteer and composite fire departments each a \$5,000 credit to purchase educational materials for enhancements in life-saving firefighting techniques. Safety is a priority for EGD and, with 85 per cent of the fire departments in its service area being volunteer and composite, this program will go a long way to ensure that proper training is being provided to firefighters, and that they can use the right techniques to respond to and carry out firefighting and rescue operations.
- **Women Building Communities**—In June 2012, Enbridge's Northern Gateway Pipelines Project sponsored a series of discussions that allowed women from the communities along the proposed project right-of-way to connect with women from the project to explore issues important to their communities. These events, held in the British Columbia communities of Kitimat, Terrace, Houston, Burns Lake and Prince George, fostered conversations about volunteering, opportunities for youth in the communities, and work-life balance. Among other results, participants identified a need to contribute to their local food banks, which prompted the project to donate \$18,000 to food banks that provide services to communities in northern British Columbia and Alberta along the proposed right-of-way.

### **CHALLENGES AND OUR RESPONSES**

When stakeholders raise concerns about Enbridge's projects and operations, we use engagement, education and communication to help us better understand their concerns and take the actions required to address them.

*For a description and discussion of the public concerns in 2012 and early 2013 related to our proposed Northern Gateway Pipelines Project, our Line 9 Reversal Project and our 2010 Marshall, Michigan spill, please see the Challenges and Our Responses section of the Overall Management Approach to Corporate Social Responsibility section of this report.*

### **ABORIGINAL & NATIVE AMERICAN RELATIONS**

Aboriginal and Native American communities comprise some of Enbridge's most important neighbours.

The terms "Aboriginal" and "Native American" are commonly used to refer to the original inhabitants of Canada and the U.S.—those who lived on the continent before other groups arrived from other parts of the world. In Canada, the term "Aboriginal" includes First Nations, Métis and Inuit peoples.

Enbridge recognizes the history, uniqueness and diversity of Aboriginal and Native American peoples. Positive relationships with Aboriginal and Native American peoples, based on mutual respect and trust will help them and us to realize our respective aspirations and will help us reach our strategic business objectives.

Enbridge's relations with Aboriginal and Native American people are extensive. In Canada, for example, Enbridge rights-of-ways are located in proximity to approximately 60 First Nation communities. As Enbridge's network expands, the breadth and depth of these relationships will grow.

Enbridge is committed to respectful relations, early engagement, meaningful dialogue and forthright consultation with our Aboriginal neighbours in Canada and our Native American neighbours in the U.S.

Enbridge shares with them a high regard for the environment and for tradition and, as such, we respect their land,

heritage sites, and traditional knowledge and land use.

### **Aboriginal and Native American Policy**

Enbridge first formalized the principles that guide our relations with Aboriginal and Native American people in our Indigenous Peoples Policy, which we adopted in 2001.

Since then, a great number of legal decisions in Canada have interpreted the nature of Aboriginal and treaty rights under the Constitution Act. These decisions have interpreted government's duty to consult and, where necessary, accommodate Aboriginal people when their Aboriginal and/or treaty rights are impacted by government decision making, including regulatory approvals.

Also, starting in 2007, Enbridge embarked on a number of pipeline expansion projects in both Canada and the U.S. All of these projects required regulatory approval from government agencies.

Consequently, in 2008, Enbridge reviewed our existing Indigenous Peoples Policy and, in early 2009, approved and adopted a revised Aboriginal & Native American Policy.

The goal of the policy is to help achieve mutually beneficial relations with Aboriginal and Native American communities in proximity to, or in some significant way affected by, Enbridge's operations. The policy and supporting guidelines are designed to ensure a consistent, thorough approach to consultation and engagement with Aboriginal and Native American people.

In the policy, Enbridge affirms that we:

- Recognize the legal and constitutional rights possessed by Aboriginal people in Canada and by Native Americans in the U.S.
- Respect the traditional ways, Aboriginal and Native American heritage sites, and the relationship that Aboriginal and Native American peoples have with the land and the environment
- Engage in forthright and sincere consultation with Aboriginal and Native American peoples about our projects and operations that have an impact upon their legally and constitutionally protected rights
- Commit to working with Aboriginal and Native American peoples to achieve sustainable benefits for them resulting from our projects and operations, including opportunities in training and education, employment, procurement, business development and community investment
- Foster understanding and respect for local Aboriginal and Native American peoples among our employees and contractors

Read the full Aboriginal & Native American Policy.

### **Enbridge's Approach**

Enbridge's Aboriginal & Native American Policy provides direction to Enbridge employees and contractors in their interaction and engagement with Aboriginal and Native American peoples located near our projects and operations.

Enbridge's interaction and engagement is regular and consistent and spans the life of the project—from the planning and regulatory approval phases, through construction and then ongoing after a project becomes operational.

Enbridge designs our engagement activities to meet or exceed all legal and government (federal, provincial and state) regulatory requirements.

Open and ongoing two-way communication is the vital link that allows us to:

- Identify the interests and concerns of the people who may be affected by our operations
- Explain our plans, expectations and constraints

Our wide range of engagement activities include:

- Regular communication through correspondence and project update newsletters
- Presentations at Aboriginal and Native American government meetings
- Community open houses
- Job fairs
- Emergency preparedness exercises
- Community investments and sponsorships

Topics of communication and discussion typically include proposed pipeline routes, facility location, water course

crossings, summaries of environmental studies, outcomes from the identification of traditional-use sites and opportunities to achieve sustainable benefits, including employment and procurement.

## **ABORIGINAL & NATIVE AMERICAN RELATIONS—RECENT INITIATIVES AND SIGNIFICANT EVENTS**

The following is an overview of recent Aboriginal and Native American Relations developments in Canada and the U.S.

### ***CANADA—CORPORATE***

Enbridge engages in broad-based national initiatives that can impact and benefit Aboriginal people, communities and organizations throughout Canada.

### **Major Aboriginal Community Investment**

#### **Enbridge School Plus Program**

The Enbridge School Plus Program, which we developed in partnership with the Assembly of First Nations (AFN), supports enriched programming and extracurricular activities in First Nations schools near major Enbridge pipeline routes in Canada. The overall goal of the program is to encourage First Nations youth to stay in school by assisting schools in offering sports activities, music or arts programs, field trips and school clubs.

The initial three-year pilot program, launched in 2009, provided funding to 42 eligible First Nations schools located in proximity to Enbridge's mainline right-of-way between central Alberta and southwest Manitoba, and in proximity to Enbridge's first wind farm near Kincardine, Ontario. Since 2009, the program has enriched the education of more than 10,000 youth in more than 90 schools by providing more than \$3 million in grants in support of educational programming.

In 2012, Enbridge made grants to 37 eligible First Nations schools, and over 6,990 First Nations youth benefited from the program.

Through the Enbridge School Plus Program, we support a wide variety of programs. Here are some examples from 2012:

- A School Plus grant provided the Mohawks of Akwesasne's Kana:takon School with funding for traditional long-house benches and language programming supplies for their Mohawk Language Immersion Program. Students are now able to fully immerse themselves in their traditional language and many can converse fluently. To the students, their traditional language is a gift to cherish.
- School Plus funded the Ermineskin Ehpewapak Alternate School's Virtues Project, a character education program. Through discussions each day, teachers and students explore a different virtue such as caring, co-operation and courage. The students talk about what each virtue means and how they need to improve on that behaviour. Posters in the classrooms provide a daily reminder of the more than 50 virtues that are closely tied to traditional Cree teepee teachings.
- School Plus funded the Cowessess Community Educational Centre's fitness program. The grant helped equip a wellness and fitness facility dedicated to students' needs. The facility is fully stocked with mats, free weights, exercise pulleys and cardio equipment and helps the young people attending the Educational Centre keep fit and active. Over 70 students use the facility every day and with the arrival of the facility, the school has been able to reintroduce sports teams, for the first time in years.

Due to the success of our pilot School Plus Program, in 2012 Enbridge expanded School Plus to include communities along the Enbridge mainline right-of-way in Ontario and Quebec, and along the proposed Northern Gateway Pipelines Project right-of-way in Alberta. The expansion brings the number of eligible schools to 91.

Throughout 2012, Enbridge continued to support School Plus initiatives that strengthen Métis and urban Aboriginal communities. These partnerships were initiated in early 2010 as an adjunct to the original on-reserve program. Supported programs include a partnership with the MacKenzie Art Gallery in Regina, Saskatchewan, to support its Urban Outreach program, which provides enriched arts instruction to students at inner-city Regina schools with high Aboriginal enrollment. The expanded School Plus Program also includes partnerships with Métis Child and Family Services of Edmonton and the Stardale Women's Group of Calgary.

In 2012, the Enbridge School Plus Program initiated a new partnership with former Canadian Prime Minister Paul Martin's Aboriginal Education Initiative to offer the Aboriginal Youth Entrepreneurship Program (AYEP) to Thomas

Simpson School in Fort Simpson, Northwest Territories. The AYE program teaches business and entrepreneurship skills to students in grades 11 and 12 and offers a mentorship component with local business and community leaders.

### **The Banff Centre**

In 2012, Enbridge continued our commitment to provide \$1 million over seven years to The Banff Centre in Banff, Alberta, to support Aboriginal leadership and management programming, including a program dedicated to developing the leadership skills of Indigenous women leaders. In addition to supporting the Centre's Aboriginal leadership programming as a whole, Enbridge's partnership with The Banff Centre guarantees 12 annual scholarships for First Nations members whose communities are located in proximity to Enbridge's proposed Northern Gateway Pipelines Project right-of-way.

### **Canadian Aboriginal Writing and Arts Challenge**

Enbridge is the presenting sponsor for Historica Canada's annual Canadian Aboriginal Writing and Arts Challenge, a national competition inviting young Aboriginal Canadians to showcase their creative writing talent or their skill in the visual arts. In June 2012, the Canadian Aboriginal Writing and Arts Challenge awarded scholarship prizes to the best submissions in each of two age categories in both the writing and arts components.

### **Progressive Aboriginal Relations Certification**

In 2012, Enbridge achieved a Silver Level certification from the Canadian Council for Aboriginal Business in its Progressive Aboriginal Relation program (PAR). This achievement reflects Enbridge's extensive activities in all four of the PAR performance areas: Business Development; Community Engagement; Community Investment; and Employment. The Silver Level standing reflects the level of integration of Aboriginal Affairs initiatives and planning within Enbridge, as confirmed through independent verification. Enbridge is the first pipeline company in Canada to become certified under the PAR program.

## **CANADA—PROJECTS AND OPERATIONS**

Enbridge strives to build strong relationships with First Nations and Métis communities.

### **Enbridge Projects**

Building on the successes of 2011, and through construction of a number of pipeline expansion/extension projects (Christina Lake, Woodland, Wood Buffalo, Athabasca, Waupisoo, and Bakken), Aboriginal communities and member-owned businesses realized an economic benefit of approximately \$89.5 million in 2012.

In the first quarter of 2013, project construction had yielded approximately \$28.8 million in additional direct and indirect spend to Aboriginal communities.

Since 2009, Enbridge has spent approximately \$150 million with Aboriginal businesses for the provision of services for our pipeline expansion/extension projects in Canada. For example, in 2011, Enbridge announced the twinning of the Athabasca Pipeline, which runs through the Cold Lake First Nation's traditional territory in northeastern Alberta. The \$1.2-billion project is creating more than 1,000 jobs for the area, including positions for inspectors, subcontractors, and construction workers. Enbridge has contracted with companies owned by the Cold Lake First Nation, such as Dechen for tree clearing and Nu Nennè-Stantec for environmental services. Combined, these contracts are worth approximately \$15 million and provide direct employment and sub-contracting opportunities for First Nation members.

In 2012, Enbridge also provided over \$1.5 million to support community development initiatives such as enhancement of local policing and new and improved infrastructure projects, as well as a number of scholarships, bursaries and training programs to Aboriginal communities in proximity to Enbridge's pipeline projects. Enbridge understands that the communities themselves are in the best position to identify their needs, and, as a result, we have agreed to allow the communities to allocate the funding for community purposes. The recipient communities will report back to Enbridge about the specific allocations. Aboriginal Affairs also made a \$34,500 contribution toward the construction of Heart Lake First Nation's new Pow Wow Arbour facility.

### *Enbridge Gas Distribution (EGD)*

First Nations artifacts, which were estimated to be over 2,000 years old, were found at two sites during the environmental assessment and permitting stage of EGD's Wilkesport Metering Station in Lambton County, Ontario. Construction was delayed while an archaeological consulting firm was commissioned to assess the discovery. Members of the Aamjiwnaang and Walpole Island First Nations assisted the 12-person salvage excavation team to ensure that all the artifacts were treated respectfully.

### *Corporate*

In an effort to strengthen relations with the Amherstburg, Ontario, community and demonstrate Enbridge's commitment to supporting cultural events, Enbridge donated \$20,000 to the 2012 Roots to Boots Festival, which commemorated the 200<sup>th</sup> anniversary of the War of 1812 and the significance of Chief Tecumseh, the leader of a First Nations confederacy that supported the British in that conflict. For our donation, we received the naming rights to the festival's Children's Pavilion where displays, re-enactments, parades, concerts, storytelling, crafts and concerts took place. Enbridge has a 15-MW solar project located in Amherstburg.

### **Enbridge Operations**

*Mother Earth's Children Charter School:* Enbridge has a three-year partnership with Mother Earth's Children Charter School (MECCS) to support the school's hot-lunch program and the purchase of a permanent home for the school. We have made a total commitment of \$330,000 to the school (\$110,000 in each of the years 2011, 2012 and 2013). The only First Nation charter school in Alberta, MECCS offers a unique educational experience for its students, engaging them with their cultural roots and connecting them to Mother Nature through lessons based on Aboriginal teachings. Through our efforts and support, we are pleased to report that MECCS has been able to secure a permanent home for the school through the purchase of the St. John's School at Genesee, Alberta.

*Canadian Indigenous Languages and Literacy Development Institute:* In 2012, Enbridge continued our support of Aboriginal language and literacy initiatives through the second year of a three-year commitment, initiated in 2011, to the Canadian Indigenous Languages and Literacy Development Institute (CILLDI) at the University of Alberta. Since 2007, Enbridge has been a supporter of CILLDI through a variety of programs such as Elder in Residence, Young Women's Circle of Leadership in Partnership with Women Building Futures, and many scholarship opportunities. In 2012, Enbridge continued to support CILLDI's objectives in the revitalization of Canada's Aboriginal languages through the Enbridge Indigenous Language Leadership Awards. Through our support, Enbridge hopes to help make it easier for Aboriginal educators to attend the institute. Enbridge is offering up to eight awards of \$2,500 each to support teachers from the Treaty 6, 7, and 8 areas in Alberta to take summer training at CILLDI to support the preservation of Aboriginal languages.

*Partners Active in Resource Sharing:* Enbridge also supports the Partners Active in Resource Sharing (PAIRS) program at Alexander Mackenzie Secondary School, which is attended by many students from the Aamjiwnaang First Nation in Sarnia, Ontario. PAIRS is an initiative of the Lambton Kent District School Board that connects high schools with local industry in order to enrich students' educational experiences. Enbridge has supported the program since 2010, which was the first year of a three-year commitment to the school. In addition to our annual financial contribution, Enbridge also donated a control unit and office furniture from Enbridge's Sarnia terminal to be used with their Internet study console at the school. Enbridge had previously provided the console and seven computer monitors and will be providing several additional PCs as soon as the console is ready. The tool will be available to students for Internet-based research in support of their academic studies. Also in 2012, as a result of funding from Aboriginal Affairs, Enbridge's PAIRS program was able to refurbish the large medicine wheel that is displayed at the main entrance to Wallaceburg District Secondary School. High school students from Walpole Island First Nation attend school at this facility.

*Belcourt Brosseau Métis Awards:* On September 22, 2012, Enbridge representatives joined Edmonton and surrounding area Métis people at the Belcourt Brosseau Métis Awards. The awards, which were established as a fund housed at the Edmonton Community Foundation, help Alberta Métis realize self-sufficiency through post-secondary education and skills development. Enbridge has been a long-time supporter of the awards. This year's Enbridge award recipient is currently enrolled in the Geotechnical program at the Northern Alberta Institute of Technology (NAIT).

*Path to Success:* Enbridge also provided support to the Second Annual Path to Success held in Regina in February 2012. More than 200 students from across Treaty Four Territory and ranging in age from 14 to 25 attended the two-day conference. The program included a keynote address from Assembly of First Nations National Chief Shawn Atleo and sessions on university life, skills and trades, and active measures. Enbridge's support of this conference provided youth an opportunity to expand their horizons and aspire toward their future success.

*Habitat for Humanity:* On July 26, 2012, Enbridge, in partnership with Technical Services Advisory Group (TSAG), presented a First Nations family from Swan River, Alberta, the key to a Habitat for Humanity home in Edmonton's Anderson Gardens community.

*Enbridge Safe Community Program:* In 2012, Enbridge awarded \$140,000 to First Nation and Métis communities in proximity to our rights-of-way under our signature Safe Community Program. The funds will assist the communities to enhance the capacity of local first responder agencies and increase safety in their communities. Approved programs include: requests for emergency communication equipment; training courses in hazardous materials handling, first aid and CPR; emergency preparedness planning; search and rescue equipment; public awareness and volunteer recognition as well as the replacement of outdated fire brigade gear.

In 2012, Enbridge also supported the Alberta Business Awards of Distinction, the Regional Aboriginal Achievement Awards in Fort McMurray and the Aboriginal Role Models of Alberta. Additional community investments made by Enbridge's Aboriginal Affairs Operations in 2012 included:

- *Saskatchewan Indian Institute of Technologies:* eight scholarships in the amount of \$2,500 each for a total of \$20,000
- *Saddle Lake Social Development Group's Family Life and Literacy Program:* a grant of \$20,000 to assist members in accessing resources associated with substance abuse, cross-cultural training and career enhancement
- *Dakota Iapi Teunhindapi Consortium:* \$5,000 for language preservation
- *Portage College:* six scholarships in the amount of \$2,500 each for a total of \$15,000
- *South East Regional College:* 10 scholarships in the amount of \$2,000 each for a total of \$20,000
- *Alberta School for the Deaf:* 10 scholarships in the amount of \$2,000 each for a total of \$20,000

#### ***CANADA—ENBRIDGE NORTHERN GATEWAY PIPELINES PROJECT***

In May 2010, Enbridge filed an application with the National Energy Board to construct and operate the Enbridge Northern Gateway Pipelines Project. The project, if approved, would involve building a new 1,176-kilometre twin pipeline system between Bruderheim, Alberta, and a new marine terminal in Kitimat, British Columbia, to export 525,000 barrels per day (bpd) of bitumen diluted with condensate (a hydrocarbon liquid used as a diluent with bitumen to decrease its viscosity) and import 193,000 bpd of condensate.

*For a description and discussion of concerns related to our proposed Northern Gateway Pipelines Project, including the concerns identified by local Aboriginal communities, please see the Challenges and Our Responses section of the Overall Management Approach to Corporate Social Responsibility section of this report.*

It is important to note that in Canada, both governments and proponents of resource development projects recognize Aboriginal groups as being separate and distinct from stakeholders and have a legal duty to consult with them. Local Aboriginal groups can challenge or appeal decisions made by regulatory authorities if they are not satisfied with the decision from a rights and title perspective. Most Aboriginal communities in British Columbia have not signed treaties similar to ones that exist elsewhere in Canada and the U.S.

#### ***Aboriginal Engagement***

The Northern Gateway Pipelines Project's Aboriginal Engagement Program includes engagement not only with Aboriginal groups located within the proposed right-of-way, but with Aboriginal groups located outside the right-of-way corridor who have expressed an interest in the project. The project has focused its engagement activities on Aboriginal groups and Métis regions located within 80 kilometres (50 miles) to either side of the project corridor and the Kitimat Terminal. The project has also engaged communities beyond 80 kilometres who identified themselves as having an interest based on their traditional territory traversing the project corridor. This 80-kilometre engagement zone was established in consideration of the scope and scale of the proposed project along with the nature and extent of the Aboriginal interests at stake.

In October 2012, the project sponsored representatives from seven Aboriginal communities to attend the British Columbia Chamber of Commerce Energy Summit in Vancouver. The theme of the summit: "What's in a Pipeline for BC?" focused on what the project would mean for both Canada and British Columbia. Discussions at the summit also included the substantially increased scope and comprehensiveness of the public and Aboriginal engagement and of

the regulatory review that has been established over the years.

In late July and early August 2012, the project's Strategic Watercourse Assessment Team (SWAT) conducted fieldwork for specific watercourse crossings along the project's pipeline route to assess, through ground truthing, the optimal crossing locations for the pipelines, the conditions of the sites for construction, and other processes relating to the construction of the pipeline project. The SWAT fieldwork engaged 11 Aboriginal participants from seven different Aboriginal communities along the right-of-way. Members of the Aboriginal community were invited to participate, as observers, in the SWAT fieldwork to better understand the construction process for watercourse crossings and to provide information associated with Aboriginal traditional practices within close proximity of the watercourse crossings.

Also in 2012, the project provided financial support to the Lheidli T'enneh First Nation's Business Development Office in downtown Prince George, British Columbia. The office will serve as a catalyst for the Lheidli T'enneh Nation to assist their members and to diversify their business and development opportunities in northern British Columbia.

Throughout 2012, the project continued to implement its Aboriginal Traditional Knowledge (ATK) Program, including a process for ATK studies to be completed by Aboriginal groups in relation to the project. The ATK Program also entailed the following:

- Reviewing the final ATK study reports submitted by the Aboriginal groups
- Tracking of ATK issues and concerns raised by the Aboriginal groups
- Offering and completion of technical meetings with those Aboriginal groups that had submitted final ATK study reports during the period for the purpose of addressing any issues and concerns raised in their ATK study reports, as well as to provide information surrounding project watercourse crossings
- Identifying, in a tracking document for follow up at a later date, ATK site-specific issues and concerns that could not be addressed immediately by the project

In addition, the project will offer technical sessions to Aboriginal groups throughout 2013, in particular to those groups that have submitted final ATK study reports during that period and to those who have previously submitted ATK study reports but who have not completed a technical meeting with the project.

In 2012, the project continued to meet with the Burns Lake Regional Aboriginal Communities Working Group in north-central British Columbia. The working group was established in 2011 for the purpose of developing strategies to maximize the participation of Aboriginal communities and their members in business, economic, and social opportunities relating to the development, construction and operation of the project.

### ***Aboriginal Economic Benefits***

The Northern Gateway Pipelines Project announced an Aboriginal Economic Benefits Package in 2010, and in 2011 and 2012, the project continued discussions regarding the package with eligible Aboriginal groups within three geographical regions: Alberta, interior British Columbia, and coastal British Columbia.

The package includes an opportunity to enter into a memorandum of understanding with the project to further discuss potential economic opportunities, including employment, training, and procurement. It also includes, for eligible groups, an Aboriginal Ownership Agreement, offering Aboriginal communities equity ownership in the project.

As of May 31, 2012, which was the deadline for entering into the agreement, Aboriginal communities representing almost 60 per cent of the combined First Nations and Métis population along the project's proposed right-of-way had elected to participate in the Aboriginal Economic Benefits Package. The majority of the groups involved in the equity offering are in Alberta and the interior region of British Columbia. Reflecting more complex concerns associated with the marine aspects of the project, First Nations in the Coastal region of British Columbia have not entered into any agreements and are publically opposed to the project based on concerns about increased tanker traffic and the social, cultural, economic and environmental risks associated with an oil spill in a marine environment.

The Northern Gateway Pipelines Project continues to engage with Aboriginal communities to find ways to respect their rights and title and address First Nations concerns. In late 2012 and early 2013, the Government of Canada announced the following initiatives to address the need for new government policy on Aboriginal inclusion in energy infrastructure development and decision making, as well as new regulatory standards for both terrestrial and marine safety and spill response:

- Establishment of a *Special Expert Panel on Tanker Safety* to review Canada's existing Marine Oil Spill Preparedness and Response Regime and provide recommendations on new measures aimed at creating a

world-class tanker safety system. The panel process includes a process for public and Aboriginal engagement. Its first report is expected to be released at the end of 2013.

- Appointment of Douglas Eyford as the *Special Federal Representative on West Coast Energy Infrastructure*. Mr. Eyford is engaging with Aboriginal communities in B.C. and Alberta that would potentially be impacted by future energy infrastructure development. He provided Canada's Prime Minister with a preliminary report at the end of June 2013, and a final report in December 2013.
- Announcement of *New Pipeline Safety Measures* that require pipeline operators to have increased capacity to respond to spills and pay for clean-up and damages. Major pipeline companies will have to show federal regulators they have access to \$1 billion in assured funds (insurance, financial assets, third-party guarantees, lines of credit, etc.) to cover the cost of an oil spill or gas release.

### **Community Advisory Boards**

Among several other mechanisms used to foster communication and build relationships, the Northern Gateway Pipelines Project is continuing to support discussion of all components of the project through Community Advisory Boards (CABs) that comprise a cross-section of interested groups, including First Nations, Métis organizations, business leaders, local elected officials, environmental organizations and the general public. Some Aboriginal groups continue to participate in the CABs on an ongoing basis, with a total of 14 Aboriginal groups from Alberta and seven Aboriginal groups from British Columbia participating in 2012.

In 2012, the Northern Gateway Pipelines Project facilitated three rounds of regional CAB meetings in Grande Prairie, Edmonton, Prince George, Terrace and Kitimat. In addition, in June 2012, the project held the annual CAB Sharing Table and CAB Conference in Richmond, British Columbia, which brought together CAB members from the Alberta and British Columbia regional CABs. Representatives of eight Alberta Aboriginal groups and seven British Columbia Aboriginal groups, along with Enbridge executives, attended the CAB.

### **Education, Training and Skills Development**

In 2011, the Northern Gateway Pipelines Project developed an Education, Training and Employment Strategy as a mechanism to help local community members develop the essential and transferable skills necessary to work in the growing pipeline and construction sectors.

As part of the overall strategy, in 2011, the project also launched a \$1.5 million Education and Training Fund to support flexible community-based training specific to the pipeline and construction sector. Based on community interest and successful initiatives, in December 2012, the project increased the fund to \$3 million. In 2012, and the first quarter of 2013, the project committed over \$900,000 of the fund's total \$3 million toward skills development and community education initiatives. Some of the initiatives under the Education and Training Fund that were specifically of interest to Aboriginal individuals are:

*Greater Strides Youth Leadership Hockey Camp:* The Northern Gateway Pipelines Project sponsored 150 Aboriginal youth from northern British Columbia and Alberta to participate in summer camps held, respectively, in Prince George and Spruce Grove. The Greater Strides camp programming focuses on youth leadership, healthy living and goal setting through hockey skills. The camps ran again in 2013. The project also funded this video for Greater Strides: <http://www.deluxedesigngroup.tv/2012/07/enbridge-greater-strides/>

*Guiding Circles Facilitator Training:* In September 2012, the project funded Guiding Circles Facilitator Training in both Edmonton and Prince George. This Aboriginal-focused career development tool is designed to assist professionals working with Aboriginal job seekers in managing obstacles to employment.

*Workforce Connections:* 121 delegates attended the Northern Gateway Pipelines Project Workforce Connections Workshop in Edmonton in September 2012. The one-day workshop brought together 13 Alberta companies that have a current labour market demand, Aboriginal human resources and social development professionals, as well as service providers and educators to network and build partnerships. Participants included Aboriginal Affairs and Northern Development Canada, Alberta Human Services, Service Canada, industry and representatives from Aboriginal organizations across Alberta.

*Contractor Readiness Sessions:* As a mechanism to assist local right-of-way communities in preparing for the business and contracting opportunities associated with the Northern Gateway Pipelines Project, Enbridge partnered with Alberta Human Services and The Business Link to deliver four Contractor Readiness sessions in Edmonton, Grand Prairie, St. Paul and Slave Lake, Alberta. Seventy-six participants attended the sessions, which were delivered in November 2012 by a third-party contractor specializing in business development. The sessions were designed to

assist local contractors understand the requirements of doing business with oil and gas companies more broadly and covered safety, pre-qualification requirements and sub-contracting processes.

*Lakes District Aboriginal Training to Employment Society:* In 2012, the Northern Gateway Pipelines Project assisted community and government partners to develop the Lakes District Aboriginal Training to Employment Society, whose mandate is to deliver training to employment programming in the central British Columbia region. The society is currently delivering Construction Craft Worker training and job placement services, with the Northern Gateway Pipelines Project as a major funder. The organization is community based, and is operated with a focus on the needs and interests of the Aboriginal community.

*Communications Training:* At the request of some Aboriginal right-of-way communities in British Columbia's central interior, Enbridge arranged for training in media and public relations to be delivered in December 2012. The training focused on managing media, public speaking and issues management in various settings and situations.

*Trade Winds to Success:* In January 2013, the Northern Gateway Pipelines Project purchased for \$200,000 an additional 18 seats to the Trade Winds to Success pre-apprenticeship program and then informed and encouraged Aboriginal groups to apply for a seat at the program. Trade Winds to Success provides the skills and knowledge to start a career in the trades, including a career as a boilermaker, carpenter, electrician, ironworker, millwright, plumber, steam/pipe fitter, or welder. *For more information about the program, please visit [www.tradewindstosuccess.ca/](http://www.tradewindstosuccess.ca/)*

*Leading Spirits Youth Achievement Award:* In February 2013, the Northern Gateway Pipelines Project launched the Leading Spirits Youth Achievement Award. Leading Spirits is a pilot initiative to support and celebrate youth in grades 7 to 12 who are working toward grade 12 completion, and who excel in areas including but not limited to culture, sport, academics and, most importantly, attitude or spirit. The Leading Spirits nomination committee will select 50 award recipients by mid-June 2013 who will receive an iPad and letter of recognition. 115 applications were received by April 30, 2013. The evaluation matrix was designed by six members of the Northern Gateway Pipelines Project Community Advisory Boards.

### **Community Sponsorships**

Throughout 2012, the Northern Gateway Pipelines Project continued to demonstrate its commitment to Aboriginal groups by providing financial support to cultural, social, sporting, and community well-being events to the following Aboriginal groups in British Columbia and Alberta, including, but not limited to, the following initiatives:

#### **British Columbia**

- Yekooche First Nation community investment
- Burns Lake-Southside Health and Wellness Centre's Soup & Bannock Program
- Aboriginal Women in Leadership Conference
- Northwest British Columbia Metis Festival
- Lheidli T'enneh Nation's Annual General Meeting
- Métis Nation of British Columbia's Annual General Meeting
- Vancouver Venture for Diversity Society's Fostering Links Charity Golf Tournament
- Gitxsan Hereditary Chief's 2012 Summit
- British Columbia Achievement Foundation's British Columbia Aboriginal Business Awards
- Holiday Celebrations: Cheslatta Carrier Nation, Lheidli T'enneh Nation, Kitselas First Nation, Nee-Tahi-Buhn First Nation, Skin Tyee Nation and Yekooche First Nation

#### **Alberta**

- First Nations Conference on Sustainable Buildings and Communities
- Saddle Lake First Nation—hockey team sponsorship
- Alexis Nakota Sioux Nation's Annual Pow Wow
- Alexander First Nation—Ray Arcand Memorial Golf Tournament
- Montana First Nation: Environmental Law & Regulatory Process in Alberta—support for Montana First Nation
- Horse Lake First Nation—Horse Lake Industry Relations Golf Tournament

- Confederation of Treaty Six First Nation—golf tournament
- Aboriginal Role Models of Alberta 2012 Banquet
- Cree Regional Authority—Young Entrepreneurs Symposium
- Alexis Nakota Sioux Nation—Christmas Hamper Donation
- Treaty 8 First Nations of Alberta—donation to Christmas Gala
- Métis National Council—Métis Nation Economic Development Summit

### **CANADA—ENBRIDGE GAS DISTRIBUTION**

In June 2009, Enbridge signed a Cooperation and Land Use Agreement with the Mohawk Council of Akwesasne (MCA) that recognizes the importance of meaningful discussions between the parties and provides economic, social and community benefits for Akwesasne.

In 2011, this agreement provided the structure for dialogue regarding the installation by Niagara Gas Transmission Ltd (NGTL), a wholly owned subsidiary of Enbridge Inc., of a new underground pipeline crossing the north channel of the St. Lawrence River using horizontal directional drilling technology.

On January 20, 2012, the Mohawk Council of Akwesasne held an official ceremony to recognize an infrastructure-related one-time contribution of \$1 million from NGTL. Under the agreement, NGTL has committed to annual payments of approximately \$100,000 for the next 20 years for the use of Akwesasne land for the new NGTL pipeline. The agreement also provides for ongoing communication and cooperation protocols regarding NGTL activities in the Akwesasne community situated in eastern Ontario, near the Canada-U.S. border.

To build the crossing, Enbridge and NGTL worked closely with the MCA's Department of the Environment on a harmonized environmental assessment report, which incorporated traditional knowledge into project plans. One of the action items required by the report was the removal of the decommissioned pipe and the protection of culturally important trees.

Enbridge and NGTL also ensured that we bought materials and rented workspace from local businesses, and structured contracts that promoted the hiring of Akwesasne workers and contractors.

### **CANADA—WIND AND SOLAR ENERGY**

#### **Cruickshank and Underwood Windfarms**

Enbridge's 182-megawatt Underwood Windfarm and 8-megawatt Cruickshank Windfarm are located in Bruce County, Ontario, on the eastern shore of Lake Huron.

The two wind farms, which went into full commercial operation in 2009, are located within the traditional territory of the Saugeen Ojibway, which comprises two First Nations—the Chippewas of Nawash and Saugeen First Nation.

Enbridge's agreements with the Saugeen Ojibway Nation include their participation in archeological work and in ongoing environmental monitoring, as well as potential employment, training and business opportunities for members of the Saugeen Ojibway Nation members.

Of the nine permanent employees of the two wind farms, two are members of the Saugeen Ojibway Nation.

In 2012 and in early 2013, Enbridge supported hockey teams from the Saugeen First Nation and the Chippewas of Nawash for their "Little NHL Hockey Tournament." Enbridge also supported the Chippewas of Nawash 2012 and 2013 golf tournament.

In 2012, the Enbridge School Plus Program provided \$18,975 in funding to the Chippewas of Nawash Cape Croker Elementary School for a music and leadership programming and Celtic camp field trip.

#### **Sarnia Solar Project**

In connection with this project, and our other operations in the Sarnia area, Enbridge has maintained a relationship with the Aamjiwnaang First Nation, whose reserve is located near Sarnia, Ontario. In 2012, Enbridge provided financial support for this First Nation's Youth After School Health and Fitness Program.

#### **Greenwich Windfarm**

In November 2011, Enbridge and Renewable Energy Systems Canada Inc. (RES) completed construction of the 99-MW Greenwich Windfarm, which is located on Crown lands near Thunder Bay, Ontario, and the project began commercial operation. Throughout the earlier regulatory process, two local First Nations—the Red Rock Indian Band and the Fort William First Nation—had been engaged, culminating in the conclusion of agreements that provide sustainable benefits flowing from the project to each of the First Nations. In 2012, Greenwich Wind contracted with

the Red Rock Indian Band to provide road maintenance services to the project through a Band-owned company. These services are being provided to the project on an ongoing basis by First Nation contractors.

The Greenwich limited partnership had also concluded agreements with local Métis organizations in relation to the project. In response to concerns expressed by the Métis Nation of Ontario, the project has agreed to prohibit the use of chemical-herbicide sprays in vegetation clearing activities during the operation of project transmission-line corridors, access roads and turbine-tower sites.

#### **Lac Alfred Windfarm**

In 2011, Enbridge acquired a 50 per cent interest in the 308-MW Lac Alfred Wind Farm in the Gaspé region of Quebec. During the regulatory process, project developers had engaged with the Mi'qmaq and Malecite First Nations communities in the Gaspé to ascertain their concerns regarding the project. First Nations members have also been employed in construction of the project. In 2012, Aboriginal employees provided over 6,530 hours of labour. The 150-MW Phase 1 of the project was put into service in January 2013, and phase 2 is under construction and expected to be operational by December 2013.

#### **Cabin Gas Plant**

In late 2011, Enbridge agreed to acquire the Cabin Gas Plant near Fort Nelson, British Columbia, thereby entering the segment of the Canadian midstream business (which broadly includes the transportation, storage and wholesale marketing of crude or refined petroleum products) that is focused on the growing unconventional gas production in British Columbia and Alberta. In October 2012, commissioning of Cabin Plant 1 and construction of Cabin Plant 2 were deferred, and the plants put into suspension mode, although maintenance and other services continued to be procured from Aboriginal suppliers.

Enbridge's total commitment to Aboriginal employment, consulting services, procurement, community investment and training in 2012 was approximately \$12.2 million. We acquired operational control of the plants effective May 1, 2013, and they remain in suspension mode.

In the first quarter of 2013, our total commitment to Aboriginal employment, consulting services, procurement, community investment and training was approximately \$4.5 million.

#### **Conference Sponsorship**

Beginning in 2010 and continuing in 2011 and 2012, Enbridge has sponsored the annual "Powering Up Aboriginal Energy" conference, held in Toronto. This conference, which is primarily directed at Aboriginal communities, discusses issues related to Aboriginal participation in the renewable energy industry.

#### ***U.S.—MAJOR PROJECTS AND LIQUIDS PIPELINES OPERATIONS***

Enbridge engages with Native American communities in the U.S. regarding new projects and ongoing operations. These communities play an important role in Enbridge's planning, consultation and construction processes, with tribal environmental staff having an ongoing role on a consultative basis both during construction of a pipeline and when construction is complete and the pipeline is operational.

The U.S. federal government consults with recognized Native American tribes on a government-to-government basis, which is required under Section 106 of the National Historic Preservation Act. Enbridge also works directly with the tribes whose lands are being crossed by our construction projects. The tribal governments and the U.S. Bureau of Indian Affairs must approve agreements with Enbridge before we can build on any tribal-owned tracts of land. In addition, the tribes are concerned with any construction or maintenance activity taking place on reservations so, as a courtesy, it is important that Enbridge keep tribal governments informed of any such plans.

Lastly, all Native American reservations have a Tribal Employment Rights Ordinance (TERO), which states that companies, such as Enbridge, will give Native Americans hiring preference on all work within reservations.

In the U.S., Enbridge Native American Affairs provided scholarships to the following:

- Leech Lake Tribal College—\$2,500
- Fond du Lac Tribal and Community College—\$2,500

In 2011, 2012 and 2013, the Mandan, Hidatsa and Arikara Nation (MHA) in New Town, North Dakota, hosted the International Energy Oil and Gas Summit. The Fort Berthold Indian Reservation of the MHA is experiencing rising oil production from the Bakken formation, which is resulting in unprecedented wealth for the tribe, but is also taking a toll on roads, safety and culture. The summit provided a venue for the oil industry to understand concerns and work with the tribe to find solutions. Enbridge was a sponsor of the summit and participated in a panel discussion with other industry representatives regarding the future of oil and gas on the Fort Berthold Indian Reservation. Although

Enbridge does not currently have assets or projects in this area, opportunities may exist there in the future.

In North Dakota, our focus has been on sponsorships and supporting business development opportunities to enhance Native American relations. Over the past two years, Enbridge has been working with Fort Berthold officials as they develop the Thunder Butte Refinery. This refinery is being proposed approximately five miles (eight kilometres) from an existing Enbridge pipeline that has been idle for several years. In addition, we were a Warbonnet sponsor and had speakers on pipeline transportation at the Mandan Hidatsa and Arikara Energy Summit for 2012. At the summit we discussed operations with local and national tribal leaders. Representatives from several Native American nations and First Nations in Canada attended.

### **Flanagan South Pipeline Project**

Enbridge is proposing to build the Flanagan South Pipeline Project, a nearly 600-mile (966-kilometre), 36-inch diameter interstate crude oil pipeline that will originate in Flanagan, Illinois, and terminate in Cushing, Okla., crossing Illinois, Missouri, Kansas and Oklahoma. The majority of the pipeline will parallel Enbridge's existing Spearhead crude oil pipeline right-of-way. Initial capacity will be 600,000 barrels per day (bpd). Depending on regulatory approvals, construction could begin in 2013, with completion estimated for mid-2014.

Our Flanagan South Project team initiated contact with representatives of the Osage Nation of Oklahoma in early spring 2012. Initial outreach included project introduction letters, followed by phone conversations with members of the Osage Congress. In late April 2012, our team held eight project open houses along the 600-mile Flanagan South Route. One of those was held in Pawhuska, home to the Osage Nation.

Leading into the open houses, members of our project team met with the Osage Minerals Council, providing background on the project and responding to a range of questions. Since that initial meeting, team members have had discussions with leaders of the Osage Nation and members of the Minerals Council and Osage Congress.

Working initially through a member of the Minerals Council, discussions began with the newly formed Osage Nation Energy Services LLC (ONES). ONES was established by the Osage Congress at the direction of the Osage Nation's chief to be engaged with energy activity related to the tribe. Ongoing dialogue has continued between Enbridge's procurement, engineering and public affairs personnel and ONES' chairwoman regarding initial construction activities, including identification and development of pipe yards in the area and coordination between ONES, Enbridge and the Osage Human Resources and Training office regarding a training program for tribal members.

As part of the training program, the Osage Nation coordinated a meeting in Pawhuska in April 2013 with representatives of the labor unions to establish guidelines necessary to enable tribal members to work on the Flanagan South Project during construction. The Osage Nation's Director of Education has developed a three-month training program, with the goal of providing Enbridge contractors with skilled tribal member workers.

Since the Flanagan South Project was announced, Enbridge has contributed \$30,000 to the Osage Nation through our Community Investment Program. Of that amount, \$20,000 was directed to the Osage Nation EMS Broadband Project, where the funds will help the county provide better service for the emergency management of Osage County. The emergency management office is located near the Osage County pipeline right-of-way and pipe yard. An additional \$10,000 was provided as seed money for ONES for administrative purposes.

Enbridge and the Flanagan South Project team members look forward to continuing to build on the relationships that have developed with the Osage Nation and ONES, both during construction and continuing through operation of the pipeline.

### ***CROSS-BORDER PROJECT—MONTANA-ALBERTA TIE LINE***

In 2011, Enbridge acquired Tonbridge Inc. and assumed management of the Montana-Alberta Tie Line (MATL) project, a bi-directional power line project between Great Falls, Montana, and Lethbridge, Alberta. The project will provide power transmission for wind energy projects under development in northern Montana.

The MATL project crosses land in Montana that is of historic and cultural interest to the Blackfoot Tribe. The tribe is partnering with MATL to identify and protect any archeological, historic or cultural artifacts or areas that could be affected by the project. The tribe is providing a trained cultural resource monitor familiar with tribal history and pre-history in the project area, and Enbridge contributed approximately \$145,000 in 2012 to support the work of the monitor. The full-time tribal monitor helps to identify tribal sensitive cultural resources and ensures appropriate treatment of these resources. The tribal monitor has been working in Montana since late fall 2011 when construction restarted and will continue through 2013 as construction progresses south from the U.S.-Canada border.

In Canada, Enbridge has engaged with the Kainai First Nation and the Piikani First Nation in southern Alberta to introduce Enbridge as the new project proponent and to provide updated project information. Enbridge is committed to continuing to meet and we look forward to developing positive long-standing relationships with these First Nations.

## **CHALLENGES AND OUR RESPONSES**

During the spring and summer of 2013, several protesters camped on the Enbridge right-of-way in Clearwater County, Minnesota, near the town of Leonard. The group, led by the Indigenous Environmental Network, was calling for the removal of four Enbridge pipelines that cross one half acre of tribal land. These four pipelines, running from Edmonton, Alberta, to Superior, Wisconsin, were built in 1949, 1958, 1962 and 1972, respectively. At the time of original pipeline construction, Enbridge obtained easements with the owner of the property. However, since that time, the land became ceded territory to the Red Lake Band, which has been aware of the pipelines on the property.

The protest leader was not a member of the Red Lake Band, and the Red Lake Tribal Chairman stated that the protest activity was not sanctioned by Red Lake Nation.

Enbridge has made progress with our good-faith efforts to address the ownership issues with the Red Lake Band and is continuing to work with the Band to achieve an amicable resolution. Protest activity has been minimal since the end of August 2013.

*For a description and discussion of the public concerns related to our proposed Northern Gateway Pipelines Project, including the concerns specifically pertaining to Aboriginal stakeholders, please see the Challenges and Our Responses section of the Overall Management Approach to Corporate Social Responsibility section of this report, as well as the Canada—Enbridge Northern Gateway Pipelines Project section of SO1/SO9/SO10.*

## **COMMUNITY PARTNERSHIPS AND INVESTMENTS**

In 2012, Enbridge helped build sustainable communities across our operating regions in Canada and the U.S. through investments in our six focus areas:

- Lifelong Learning
- Community Leadership
- Natural Legacy/Neutral Footprint
- Arts & Culture
- School Plus
- Safe Community

By investing in each of these focus areas with our dollars, partnerships and human capital, Enbridge is able to support organizations that contribute to the economic and social development of communities near our operations. Enbridge believes that these investments are essential to being a good neighbour, and that they contribute to maintaining our social license to operate. Please see below for more details on the six focus areas.

Enbridge partners with charitable and non-profit organizations in our various geographic regions in Canada and the U.S. that have the skills and expertise to affect change.

*The criteria and guidelines for Enbridge's Community Partnerships & Investments Program are outlined under the heading "Policy" of this Society section.*

In 2012, Enbridge's actual enterprise-wide Community Investment expenditure totaled approximately \$16.5 million, which we invested in more than 750 charitable, non-profit, and community organizations. This investment amount is growing with corporate earnings, and represents approximately 2 per cent of Enbridge Inc.'s profits.

Following are details about Enbridge's approach to our six community investment focus areas.

### **Lifelong Learning**

Investing in educational programs in the regions where Enbridge's employees live and work helps to build strong, sustainable communities. Enbridge understands that today's students are tomorrow's leaders, and we are committed to helping young people advance their education to achieve their greatest potential.

Through a commitment to educational opportunities for students and adults, we focus our investments on scholarships for higher education, programs that improve literacy, and skills in math and science.

### **Community Leadership**

Enbridge demonstrates community leadership by investing in innovative, leading-edge initiatives in social services, health, volunteerism and leadership. In addition to civic investments, Enbridge also supports social development initiatives through employee-led United Way campaigns across the company.

### **Natural Legacy and Neutral Footprint**

Enbridge's Natural Legacy Program provides us with an opportunity to demonstrate our ongoing commitment to environmental stewardship, habitat remediation and protection. Enbridge does this through initiatives such as elementary educational programs, and the planting and care of native trees and plants throughout urban and rural areas along our rights-of-way.

Enbridge has also formally committed to stabilizing our own environmental footprint through our Neutral Footprint commitments.

*For a complete summary of our Neutral Footprint commitments, please see Part 7 of section EN23-EN27 of the Environmental Performance chapter of this report.*

### **Arts & Culture**

The development and sustainability of cultural institutions is an investment in the vibrancy and diversity of a community. Enbridge supports arts and culture initiatives that make communities in which we operate brighter, warmer, and more interesting places to live.

### **School Plus**

Enbridge's School Plus Program—one of Enbridge's flagship community investment programs—is designed to encourage young Canadian Aboriginal students to stay in school. Established by Enbridge in partnership with the Assembly of First Nations, the School Plus Program supports enrichment programming and extra-curricular activities in First Nations schools near major Enbridge pipeline routes and facilities—from Alberta to Quebec. With funding from Enbridge, teachers have the means to find creative ways to make education more enticing to students who are at risk of dropping out. Since 2009, our School Plus Program has enriched the education of more than 10,000 students in more than 90 schools by providing more than \$3 million in grants in support of educational programming.

### **Safe Community**

Another one of Enbridge's flagship community investment programs, the Safe Community Program, provides monetary support to:

- Police agencies
- Fire fighters, including volunteer fire-fighting organizations in rural communities
- Emergency Medical Services (EMS)
- Other related health providers who respond to emergency situations in the communities where Enbridge operates

In 2012, the Safe Community Program provided more than \$1.6 million in grants to 429 first-responder organizations in Enbridge right-of-way communities in Canada and the U.S. Grants given through this program allow eligible organizations to acquire such support as new safety equipment, obtain professional training, and deliver safety educational programs in their neighbourhoods. By helping first responders, Enbridge is making our neighbourhoods safer and building sustainable communities.

### **Volunteers in Partnership (VIP) Program**

Enbridge encourages our employees to actively participate in their communities. Through Enbridge's Volunteers in Partnership (VIP) Program, we recognize employee contributions of time and dollars to charitable organizations by providing additional support in terms of paid volunteer time and top-up financial contributions.

We support employee volunteer opportunities by:

- Providing grants of \$500 to non-profit organizations where employees have volunteered at least 40 hours or more of service per year outside of business hours in countries where we have operations; or providing grants to match an employee's individual fundraising efforts for one event per year up to a maximum of \$500
- Matching donations up to \$10,000 for employee contributions to the United Way during the campaigns of individual Enbridge business units
- Providing the opportunity for employees to take one paid day or eight hours off per year to volunteer at a non-profit organization of their choice in countries where we have operations
- Providing one paid day or eight hours off per year for supervisor-led team-building volunteer activities in countries where Enbridge has operations

Through this support, Enbridge gains a better understanding of the communities in which we operate, the challenges they face and the ways we can best contribute.

## **Benchmarking and Assessment**

To help Enbridge ensure that our community investments are achieving the maximum results possible, we have been working with London Benchmarking Group (LBG) Canada, of which Enbridge is a founding member. LBG Canada comprises a group of companies that are using the “LBG model” to improve their management, measurement, and reporting of community involvement initiatives.

LBG Canada focuses on companies’ voluntary community contributions and applies consistent accounting principles to value their total investments. Companies value financial donations, as well as a full range of other contributions—including staff time, in-kind contributions, and management costs—that a company could make to a community.

In this regard, Enbridge’s enterprise-wide community contributions in 2012 totaled over \$16 million.

The LBG Canada approach provides a process for assessing the results that Enbridge and the community realize from our contributions.

SiMPACT Strategy Group, facilitator of LBG Canada, worked with Enbridge to determine the true community value of our 2012 Canadian community investments.

## **Community Investment and Community Enhancement Projects Related to the July 26, 2010 Spill on Enbridge’s Line 6B near Marshall, Michigan**

In July 2010, Enbridge experienced a major oil spill near Marshall, Michigan.

Since the beginning of the incident in Marshall, Enbridge committed to cleaning up the Kalamazoo River and to restoring the area as close as possible to its pre-existing condition. We have worked hard to deliver on that commitment, and we will continue until the job is complete.

By spring 2012, cleanup, under the direction of the U.S. Environmental Protection Agency, had progressed to the point that the Kalamazoo River and Morrow Lake had been reopened for recreational use.

Enbridge’s commitment to the communities of Marshall, Battle Creek and areas along the Kalamazoo River extends beyond the cleanup itself. Enbridge recognizes how important the Kalamazoo River is to area residents. The river is a recreational hub, providing area residents with the opportunity for fishing, kayaking, canoeing, and simply enjoying its beauty. As such, Enbridge has committed to supporting community investment programs that will provide a long-lasting benefit to the community by enhancing recreational opportunities.

Based on input from local residents, community leaders and recreation groups, much of Enbridge’s community investment efforts are focused on increasing access to the Kalamazoo River. Enbridge has created or improved five river access sites to encourage recreational opportunities along the river. In addition, Enbridge has and will continue to support other programs in the Marshall region that align with our corporate community investment initiatives to help build sustainable communities. As of May 31, 2013, Enbridge had contributed more than US\$600,000 to organizations in the area, including, among several others: the Marshall (Michigan) Historical Society; Wilder Creek Conservation Club; United Ways of Battle Creek, Marshall and Kalamazoo; the Red Cross of South Central Michigan; the Food Bank of South Central Michigan; and Michigan Envirothon.

## **PARTNERSHIP PROFILES**

### ***LIFELONG LEARNING***

Enbridge recognizes that education is one of the most powerful gifts, which is why we are proud to support educational opportunities that help students in all stages of life. Through a commitment to educational opportunities for youth and adults, we focus our investments on scholarships for higher education, programs that improve literacy, and skills in math and science.

Following are updates on some of the key lifelong learning initiatives we support.

#### **Enbridge Inc.**

*Scholarships and bursaries*—In 2012, Enbridge contributed over \$120,000 through more than 60 endowed scholarships and bursary awards to 22 high-school and post-secondary institutions across Canada. By focusing on areas such as engineering, Aboriginal leadership, non-profit studies, and environmental sustainability leadership, Enbridge is actively supporting the development of the next generation of business and community leaders in a number of key areas.

*Calgary Stampede*—Enbridge partnered with the Calgary Stampede Foundation in support of The Enbridge Citizens of Tomorrow Program to provide equal opportunity programming for Calgary’s youth. This program promotes western heritage while supporting leadership and character-building activities. In 2012, Enbridge provided 13 post-secondary

scholarships to youth who were selected based on their achievements throughout their time at the Young Canadians School of Performing Arts or as part of the International Youth Livestock Show. In addition, Enbridge has signed a 10-year agreement in the amount of \$1,925,000 with the Calgary Stampede, contributing to their capital campaign to help build their new Youth Campus area that will house the Calgary Arts Academy, Stampede School, Calgary Stampede Showband, The Young Canadians and other future youth groups. This area will impact over 1,600 students and provide one central location for all groups to learn, rehearse and collaborate.

*Junior Achievement of Southern Alberta (JASA)*—In 2012, 21 Calgary-based Enbridge employees contributed over 180 hours through the delivery of Junior Achievement programs (*Dollars with Sense* and *Economics for Success*) in two schools (15 classes) across Calgary, reaching more than 320 students during three different team-building events planned through the Enbridge VIP program. With our support of JASA's volunteer management program (\$50,000 each year), Junior Achievement was able to reach a new record of more than 1,500 volunteers and 964 classroom deliveries and 25,000 students reached in southern Alberta in 2012. Junior Achievement's unique programs across Canada allow students to experience and understand the global business economy.

### **Community Relations Canada**

Community Relations invested \$5,000 into new books for a grade 1 classroom in Wawanessa, Manitoba. Community Relations also hosted a team-building event, in which several Enbridge employees took part, with Calgary Reads to address literacy needs for grades 1 and 2 students.

### **Liquids Pipelines Canada**

*MindFuel* (formerly Science Alberta Foundation)—MindFuel develops and distributes hands-on and online science programs. Combining innovative digital resources and real-world experiments, MindFuel is a world-recognized science literacy leader and registered charity that creates and delivers programs designed to help educators ignite a passion for science in students of all ages. Enbridge Pipelines Inc. has partnered with MindFuel for more than five years to produce and market three exciting initiatives on Wonderville.ca focused on promoting and profiling occupations required to build pipelines and increase science-fact-based awareness and literacy on the benefits of pipelines. The initiatives include: a highly interactive digital video game on building a pipeline; an engaging pipeline career video; and an animated journey through a pipeline.

*Alberta School of Business*—Enbridge Pipelines Inc. has renewed its partnership with the Alberta School of Business. This investment continues to be directed to applied business research in energy sustainability, the "Enbridge Professorship in Energy Policy," and the "Enbridge Award in Energy and the Environment," in support of continued research to find new ways for energy to be developed, transported and used in efficient and socially responsible ways while also protecting the environment. Funds are also used to increase the capacity of Centre for Applied Business Research for Energy and the Environment (CABREE) to conduct and disseminate policy-focused and rigorous fact-based research of importance to the energy and resource sectors at a provincial and national level. Secondly, funds are directed to support and enhance student activities within the School's Natural Resources, Energy and Environment (NREE) specializations in both undergraduate and MBA programs.

*Junior Achievement (JA) of Northern Alberta & NWT*—As founding partner of Junior Achievement's Volunteer Resource Management Program, Enbridge Pipelines continues to provide a visible and meaningful demonstration of our commitment to youth by helping students develop the competence, confidence and character needed to compete in today's global economy. In addition, the Enbridge Volunteer Recognition Program ensures that annually hundreds of critical volunteer mentors, who impact over 20,000 students annually, are shown gratitude as they help to foster continued growth of JA program delivery.

*Lambton College of Fire & Safety*—Enbridge Pipelines awarded the first year of a five-year commitment (totaling \$25,000) in scholarships to students who are currently attending the Fire Science Technology, Paramedic, Police Foundations, and Protection, Security, and Investigation programs at Lambton College of Fire & Safety in Sarnia, Ontario. One of the five scholarships is allocated to an Aboriginal student from a First Nations community.

### **Liquids Pipelines U.S.**

*Scholarships and Bursaries*—In 2012, the Liquids Pipelines U.S. division awarded a total of \$36,000 in scholarships to 13 organizations.

*Keystone Science School's Key Issues Institute*—For the ninth consecutive year, Enbridge recruited middle school

science teachers from areas of our U.S. operations to attend Keystone Science School's Key Issues Institute. Enbridge sponsored the participation of six teachers from Marshall and Battle Creek, Michigan, and Petal, Mississippi, in the interdisciplinary program that provides educators with a balanced and non-biased process for teaching students the concepts of sustainability and investigating environmental issues.

*Black Leaders for Economic and Educational Development*—For the past eight years, Enbridge has sponsored the Black Leaders for Economic and Educational Development Scholarship through the Gary Development Foundation. Enbridge contributions support one full-time engineering student per year with \$5,000 in tuition, books and internship opportunities.

*Wisconsin Outdoor Education Expo*—Enbridge sponsored the Wisconsin Outdoor Education Expo, which has attracted more than 32,000 students, teachers and volunteers since 2006. Attendees participate in the Expo's many featured activities, including archery, wildlife and conservation heritage enrichment, team building, firearm safety, fishing, sporting dog demonstrations, and trail recreation.

#### **Enbridge U.S.—North Dakota Region**

*Project SEND (Seeking Energy in North Dakota)*—Over the past three years, Enbridge has sponsored the Project SEND program, which aims to send the sixth grade students on an overnight field trip to discover the vast amount of energy resources and business in their state. Students attend a presentation on Enbridge's operations in the Minot community and tour the facility to gain a better understanding of pipeline operations. The program also sends students to tour a power plant, a mine, a gasification plant, and an ethanol plant in North Dakota.

#### **Enbridge U.S.—Marshall, Michigan**

Enbridge's commitment to the communities of Marshall, Battle Creek and areas along the Kalamazoo River extends much further than the incident cleanup. Enbridge committed to supporting community investment programs that will provide a long-lasting benefit to the community by enhancing recreational opportunities. Enbridge provided an initial gift of \$100,000 and pledged further support by offering an additional \$100,000 of matching funds for \$100,000 raised by both the Kalamazoo River Valley Trail and Calhoun County Trailway Alliance. Both met the challenge, meaning Enbridge invested \$400,000 to these organizations to help connect trailways along the Kalamazoo River that will eventually cross the state from Lake Michigan to Lake Huron.

*Historic Bridge Park*—After significant improvements to Historic Bridge Park near Battle Creek, Calhoun County reopened the park for public use on June 1, 2012. Among other improvements, Enbridge enhanced the playground, parking and picnic areas, added a pavilion and restrooms, and installed a handicap-accessible boat launch.

*Ike Payne Park*—Enbridge provided the City of Galesburg with a \$10,000 contribution for enhancement to its Ike Payne Park along the Kalamazoo River, including a new river walk in 2012. The park had been used as an access point for river cleanup in 2010 and 2011.

*Olivet Community Schools (OCS)*—Enbridge provided Olivet Community Schools with an initial \$8,000 grant to increase its environmental education curriculum. The initial \$8,000 grant will assist OCS departments in purchasing supplies and equipment that will be used well into the future to educate innumerable OCS students about water quality issues. Enbridge has also offered OCS another \$8,000 as a challenge grant. When an additional \$8,000 is raised, Enbridge will match the amount dollar-for-dollar, thus giving OCS a total of \$24,000. These funds will enhance science education for over 350 students each year for many years to come. These dollars can be used for enhanced education and environmental field trips.

#### **Gas Transportation / Enbridge Energy Partners**

*Sally Ride Science Festival*—Enbridge partnered with the Sally Ride Science Festival to host an exhibit booth at their annual fair targeting middle schools girls interested in learning more about STEM careers (science, technology, engineering and math).

*Genesys Works*—Enbridge supports Genesys Works' summer training program, where high schools students are trained in technical and professional skills to earn an internship in a business environment.

*The Keystone Center's Key Issues Institute*—For the ninth consecutive year, Enbridge recruited middle school science teachers from areas of our U.S. operations to attend The Keystone Center's Key Issues Institute. Enbridge sponsored the participation of six teachers from Marshall and Battle Creek, Michigan, and Petal, Mississippi, in the

interdisciplinary program that provides educators with a balanced and non-biased process for teaching students the concepts of sustainability and investigating environmental issues.

### **Enbridge Gas Distribution (EGD)**

*Junior Achievement (JA)*—EGD's support of JA Central Ontario and JA South Western Ontario is well aligned with the EGD's community investment goals. JA's Dollars with Sense program introduces students to personal financial management concepts. Students learn to assess personal goals, learn about money as a means of exchange, and explore various investment vehicles through role playing and investment simulation. In 2012, EGD employees successfully facilitated 50 JA classroom programs. This equates to 1,500 students receiving the JA Advantage. Eighty EGD employees participated in Our Business World (grade 5), Diversity in Action (grade 6), Dollars with Sense (grade 7) and Economics for Success (grade 8). The Boston Consulting Group Impact Study found that over 65 per cent of achievers indicate that participation in JA programs had a significant impact on staying in school and enrolling in post-secondary education.

### **COMMUNITY LEADERSHIP**

Enbridge's community investment focus on community leadership reflects our commitment to innovative initiatives that improve the quality of life for members of communities where we operate. We strive to promote leadership in these communities by supporting the United Way, health care institutions and health programs and social services organizations.

Following are updates on some of the key community leadership initiatives we support.

### **Enbridge Inc.**

*Volunteers in Partnership (VIP) Program*—The enterprise-wide Enbridge VIP Program supports the volunteer efforts that our employees are making in communities where we operate through grants to match their time and their fundraising efforts. In 2012, the program engaged over 1,000 employees from all over Canada and the U.S., and contributed \$342,000 and 2,595 hours to the community. Since the program's debut in 2010, over 2,200 employees from across the enterprise have participated in the program, resulting in the contribution of \$622,000 and over 7,000 hours to the community.

*Enbridge Ride to Conquer Cancer*—The second year as National Title Sponsor of the Enbridge Ride to Conquer Cancer has been a tremendous success. The 2012 events came to a conclusion with the fourth and final ride taking place in Quebec from July 7-8. Following on the success of the Ontario (June 9-10), British Columbia (June 16-17) and Alberta (June 23-24) rides, the Quebec event was another milestone. More than 11,600 riders raised a total of \$44.3 million in support of cancer research. In addition to Enbridge's sponsorship role (2011-2013), employees were active participants in the Ride, with over 325 employees, friends and family members raising over \$1.2 million in support of cancer research. More than 150 employees along with their family and friends participated as volunteers and helped support the lunch pit stop sites over the two-day Ride.

*Alberta Children's Hospital*—Enbridge participated in the Alberta Children's Hospital Foundation's 9th Annual Caring for Kids Radiothon as a "Power Hour" Sponsor on February 9, 2012. During the "Enbridge Power Hour", Karen Radford, Executive Vice President, People and Partners along with eight Enbridge employee volunteers received 200 donation calls, raising a total of \$69,390 for the hospital (which includes the initial \$15,000 contribution by Enbridge). This marked the most successful Power Hour in the Radiothon's history.

*United Way Employee-led Campaign*—In 2012, Enbridge's Calgary office raised over \$1 million during the city-wide United Way Campaign. Of this amount, \$901,055 was donated to the United Way of Calgary and Area and \$140,569 was donated to the Aspen Family and Community Network Society for their Sustainable Families Program (formerly called the Families in Transition Program).

*Aspen Family and Community Network Society's Sustainable Families Program*—Enbridge's Calgary-based employees raised \$140,569 through a silent auction, with proceeds going directly to the Sustainable Families Program (formerly called the Families in Transition Program), an Enbridge-sponsored program of Aspen Family and Community Network. Now into its 14th year, this program helps to transition families at risk into more stable living conditions. Employees host these families throughout the year in various social activities, including organizing an annual "Back-Pack" program in August, providing necessary school supplies, and gift certificates for clothing, food and entertainment.

*Timeraiser*—Since 2006, Enbridge has partnered with Framework in support of the Timeraiser program, a comprehensive volunteer engagement process that makes it easier for individuals to find meaningful and relevant volunteer opportunities in their community. It also benefits non-profit and charitable organizations by connecting them with quality, skilled volunteers. An annual Timeraiser event facilitates connections between a variety of groups, including young citizens, businesses, charitable and not-for-profit agencies, and emerging artists. The event is part volunteer fair, part silent art auction and part night on the town, with people matching their skills with agencies and bidding volunteer hours for artwork. The 8th annual Timeraiser event was held in Calgary on June 14, 2012. Over 400 people attended—including 33 Enbridge employees—with 174 making a pledge to get involved in the community. A total of 6,645 volunteer hours were raised and all 24 pieces of art reached the maximum "bid" of 125 hours. This year, over \$20,000 was invested in the careers of emerging and mid-career Calgary-based artists.

*Volunteer Calgary*—In celebration of National Volunteer Week, Enbridge participated in the 16th annual Volunteer Calgary Leadership Awards on Tuesday April 17, 2012 and was proud to present the 2012 Leader in Volunteer Engagement Award to the Calgary Public Library and its Living Library Program. This award recognizes a non-profit organization that has been innovative in its approach, and engages volunteers in a way that helps them deliver on their mission and mandate.

*Famous 5 Foundation*—Enbridge sponsored women's leadership events in Calgary, Fort McMurray and Ottawa throughout the year with various women leaders speaking about their careers and experiences as leaders. In addition, Enbridge sponsored the Famous 5 Youth Leadership Awards program through the Famous 5 Foundation, which presents five awards of \$1,000 each to youth who are making a difference through their volunteer or service work.

*Calgary Family Services*—Enbridge was proud to partner with Calgary Family Services for the presentation of the 2012 McKillop Award for Community Service. This annual award recognizes the vital role not-for-profit human services employees play in building creative, sustainable and ethical responses to the varied and often challenging needs of Calgarians. The event took place on September 27, 2012, where three recipients were presented with the award.

### **Community Relations Canada**

*Brandon's Food for Thought Program*—Community Relations donated \$5,000 to the Food for Thought Program in Brandon, Manitoba to help ensure school-aged students have an opportunity to be better prepared to learn by accessing a nutritious and healthy breakfast or snack before attending school each day. This initiative provides breakfast programs in 14 Brandon-area schools at no cost to the participants. Food for Thought also provides participants education regarding proper nutrition and helps to build strong families and successful children and youth.

*The West Central Saskatchewan Youth Initiative Project*—Community Relations provided \$5,000 to purchase resources for this highly visible program designed for youth who are at risk or in need, ages 5 and up. The program provides one-to-one mentoring with professionally screened adults and volunteers, an anti-bullying program and teen-parent conflict resolution/mediation workshops. It also promotes self-esteem and provides an opportunity for youth to join the Youth Initiative Council, which provides recommendations and strategic planning relevant to the initiative.

*15 For 15: Feeding our Communities*—During the Christmas season, Community Relations donated \$1,000 to 15 food banks along our rights-of-way in Ontario to help feed families in need over the holiday season.

### **Liquids Pipelines Canada**

*United Way Employee led Campaign*—In 2012, Enbridge Pipelines' Alberta Capital Region campaign collected contributions of \$1,289,491 (combined employee, special events and company match). Of this amount, \$85,000 was directed specifically to a safety and environmental renovation of the Boys & Girls Big Brothers Big Sisters Kinsmen Club site, which will include Enbridge employee volunteer engagement.

*KLD Wellness Centre*—Enbridge has committed \$260,000 over a three-year period toward the KLD Wellness Centre located in Kerrobert, Saskatchewan, to support the new Integrated Health Care Facility serving Enbridge Pipeline's Central Region operating area. Since 2006, Enbridge has contributed \$510,000 in support of the Centre.

*Boys & Girls Club*—Enbridge was proud to launch the second year of the Boys & Girls Club's Big Brothers Big Sisters of Edmonton & Area in-house employee mentoring relationships program. This program targets inner-city high-risk

youth and works to ensure they have access to positive role models who impact their future and ability to be successful in life.

*Children's Hospital*—At the Children's Hospital Foundation 10<sup>th</sup> Annual Regina Radiothon, Enbridge Pipelines presented a two-year total investment cheque of \$50,000, while six local employees participated in the Radiothon. Brian Kefford, Enbridge retiree (40+ years), represented Enbridge on air and spoke to our value of safety and our support of the ongoing service and equipment needs for their pediatric transport ambulance. Enbridge has contributed a total \$70,000 to the Foundation since 2010.

*Timeraiser*—As a founding partner, Enbridge Pipelines sponsored the 4th Annual Edmonton Timeraiser, which invited 24 Edmonton and area non-profits to promote their volunteer opportunities to attendees who bid volunteer time, instead of money, on locally sourced and fair market-value purchased art; 4,025 volunteer hours were raised for those non-profits in 2012.

### **Liquids Pipelines U.S.**

*Haven of Rest Homeless Shelter*—Haven of Rest Homeless Shelter in Battle Creek, Michigan, received two donated properties owned by Enbridge for their clients to utilize. In addition, Enbridge contributed \$10,000 for each home for repairs and rehabilitations.

*Hillcrest Hospital*—A \$10,000 donation from Enbridge allowed for the purchase of key medical equipment for the Hillcrest Hospital in Cushing, Oklahoma. This is part of a total of \$155,000 in contributions that Enbridge has made to the hospital's foundation since 2004. The hospital has recognized Enbridge's support by adding our name to the entrance to the Intensive Care Unit.

*American Red Cross*—Enbridge supports various local chapters of the Red Cross. In 2012, Enbridge contributed more than \$38,000 to assist with disaster relief efforts in Michigan, Oklahoma and Minnesota.

*United Way employee-led campaign*—In 2012, a total of \$191,038 was donated to United Way chapters in Minnesota, Wisconsin, North Dakota, Illinois, Oklahoma and Indiana. This includes both employee contributions and company matches.

### **Enbridge U.S.—North Dakota Region**

*North Dakota Oil Can! Pick up the Patch! Program*—Increased traffic and a booming population in North Dakota has caused the area to experience some growing pains. As members of the North Dakota Petroleum Council's Oil Can! Pick up the Patch! Program, over 60 Enbridge employees in the Minot, North Dakota, office volunteered their time to pick up nearly 200 bags worth of trash along a North Dakota highway. This program is an initiative to encourage oil companies to pay-it-forward.

*American Red Cross—Mid-Dakota Chapter*—In 2012, Enbridge challenged the Mid-Dakota Chapter of the American Red Cross to a \$5,000 match grant to aid in flood recovery efforts for the Chapter's office location in Minot, ND. While assisting thousands of flood victims, the Chapter was also battling water at their own front door. The flood of June 2011 caused damage to more than 4,100 properties in the Minot region, with more than 3,000 of those—homes, commercial properties, public and farm structures—experiencing between six and 12 feet of water.

*Roosevelt Park Zoo*—Enbridge's North Dakota region employees volunteered in 2012 at the Roosevelt Park Zoo in Minot, North Dakota, to aid in the zoo's flood recovery. Since flooding hit in 2011, the zoo had to disperse all of its animals to locations across the U.S. until the zoo could rebuild. Approximately 75 Enbridge Pipelines employees volunteered more than 600 hours to the zoo's rebuilding efforts and in return they got to name two new wolves at the zoo.

### **Gas Transportation / Enbridge Energy Partners**

*Houston Zoo*—Enbridge's funding of the Houston Zoo supports five education efforts that bring Science Technology Engineering and Math (STEM) programs to under-served students throughout greater Houston, linking Texas Essential Knowledge and Skills (TEKS) principles to the programs taught.

*Trees For Houston*—For the second year in a row, Enbridge partnered with Trees for Houston and 65 Houston employees and their families planted more than 250 trees. Trees For Houston is a non-profit organization dedicated

to planting, protecting and promoting trees.

*America Red Cross*—Enbridge supported the American Red Cross at their Super Ball fundraiser and the Fire Hurts Campaign and assists when needed with disaster relief efforts.

*United Way employee-led Campaign*—Enbridge's Houston office's 2012 United Way Campaign resulted in a total gift of \$563,940.92 through employee donations, fund raising events and a dollar-for-dollar company match.

### **Enbridge Gas Distribution (EGD)**

*Princess Margaret Cancer Foundation*—The Princess Margaret Cancer Foundation unveiled a monument commemorating the 5th Annual Enbridge Ride to Conquer Cancer, presenting five riders with inaugural Gold Helmets signifying the riders that have participated since 2008. The funds raised through the 2013 event were donated to the foundation's Billion Dollar Challenge, which will fund Personalized Cancer Medicine at The Princess Margaret Hospital.

*Mohawk Council of Akwesasne (MCA)*—On January 20, 2012, the Mohawk Council of Akwesasne (MCA) held an official ceremony recognizing Niagara Gas Transmission Ltd. (NGTL) for their contribution of \$1 million. Under the agreement, Niagara Gas has paid a one-time infrastructure-related fee (\$1 million) to the MCA, and will commit to annual payments of about \$100,000 over 20 years for the use of Akwesasne land for an NGTL pipeline.

*Clean Air Commute Initiative*—In support of reducing our carbon footprint, EGD employees joined more than 15,000 people from 257 workplaces across Canada who switched to more sustainable modes of transportation for their commute to and from work for the Clean Air Commute initiative that ran from June 18-24, 2012. EGD employees walked, biked, carpooled, tele-commuted and took public transit to work in an effort to reduce smog and air pollutants produced during daily commutes. Collectively, 343 Enbridge employees participated in the Clean Air Commute, contributing 9.29 tonnes of avoided pollutants and travelled a total distance of 96,209.7 km. As a result of EGD's high employee participation efforts, Enbridge received the Clean Air Commute's Greatest Percentage Participation Award. Participation in 2012's Clean Air Commute challenge across the Greater Toronto Area grew 33 per cent compared with 2011.

*United Way of the Greater Toronto Area*—EGD employees raised \$1.8 million for the United Way of Greater Toronto Area during the 2012 employee campaign. In addition, the Enbridge CN Tower Climb in support of the campaign saw more than 10,000 climbers participating and raised a total of \$2.4 million, with 204 Enbridge employees, family and friends raising a total of \$56,200

*Eva's Initiatives*—The Platinum Heart Award was presented to EGD at Eva's Initiative's Annual General Meeting in July 2012 in recognition of EGD's active involvement through employee engagement initiatives while actively supporting awareness of youth homelessness and Eva's Initiatives. Eva's Initiatives operates three unique shelters in the Greater Toronto Area that daily house and feed 114 youths aged 16 to 24. With cutting-edge services and distinctive programming, the shelters provide a continuum of services not available elsewhere in Canada. Nationally, Eva's Initiatives works to build innovative long-term solutions to youth homelessness. Each year, Eva's helps over 4,000 homeless and at-risk youth to get off the street, find housing and community supports, and begin to rebuild their futures.

### **NATURAL LEGACY & NEUTRAL FOOTPRINT**

At Enbridge, we take our responsibility to the environment seriously, and recognize that the way we treat the planet is our natural legacy.

Enbridge's Natural Legacy Program provides us with an opportunity to demonstrate our ongoing commitment to environmental stewardship and habitat remediation and protection. Enbridge does this through initiatives such as elementary educational programs, and the planting and care of native trees and plants throughout urban and rural areas along our rights-of-way.

Enbridge has also formally committed to stabilizing our own environmental footprint through its Neutral Footprint commitments. As of 2009, we are counteracting our environmental impacts within five years of their occurrence by:

- Planting a tree for every tree we remove to build new pipelines and facilities;

- Helping to conserve an acre of natural habitat for every acre we permanently alters to build new pipelines and facilities; and
- Generating a kilowatt hour of renewable energy for every kilowatt hour of additional energy our operations consume.

Our Neutral Footprint commitments are voluntary and are applied and integrated into all of our projects and operations. By meeting these Neutral Footprint commitments, we will stabilize Enbridge's environmental footprint at January 2009 levels.

Following are updates on our Neutral Footprint commitments and some of the key Natural Legacy initiatives we support.

### **Neutral Footprint**

We operate Neutral Footprint with environmental/conservation partners and employee volunteers, dispersing the funding across Canada and the U.S.

In 2012, Enbridge invested approximately \$5 million in these environmental initiatives.

As of September 30, 2013, we were exceeding our Neutral Footprint objectives. We had met approximately 135 per cent of our "Tree for a Tree" commitment; 1,758 per cent of our "Acre for an Acre" commitment; and 105 per cent of our "Kilowatt for a Kilowatt" commitment (based on our forecasted growth in power consumption to 2015).

*For the current status of our Neutral Footprint progress, please see our [Neutral Footprint dashboard](#). For a complete summary of our Neutral Footprint commitments, please see Part 7 of section EN23-EN27 of the Environmental Performance chapter of this report.*

### **Enbridge Inc.**

*The Calgary Awards*—Enbridge is the Platinum Sponsor of the Calgary Awards in the 'Environmental Achievement' category, which recognizes an environmental not-for-profit organization. The Calgary Awards, presented by The City of Calgary, honour members of the community who have made a significant contribution toward improving the quality of life for Calgarians. At an award ceremony on June 13, 2012, the Calgary Horticultural Society received the 2011 Not-for-Profit Environmental Achievement Award in recognition of their Healthy Homes Program, a holistic in-home consultation that addresses environmental and community issues in Calgary, including waste reduction, water conservation, energy efficiency, toxic cleaning products and sustainable food choices.

### **Community Relations Canada**

In 2012, Enbridge contributed more than \$100,000 to Natural Legacy initiatives. Types of investment include solar lighting installation, educational nature trail construction, tree planting, ecological literacy and funds to develop and support various outdoor classrooms.

*Saskatchewan Burrowing Owl Interpretive Centre*—Community Relations' \$2,500 support allowed the centre to complete required expansion and equipment updates in order to adequately house the owls that currently reside there, as well as future populations. The centre opened in 1997 to educate the public about burrowing owls and to care for injured owls that are brought in.

*Pembina Valley Conservation District (Manitoba)*—Community Relations donated \$25,000 to assist the conservation district with the replacement of an unsafe public viewing tower that overlooks Lake Agassiz, which used to be an immense glacial lake. The base of the tower will serve as an outdoor classroom, with picnic tables that classes can gather around for discussions and field work. Local schools use the park as an educational interpretive area for science and history/geography.

*Bird Studies Canada*—Community Relations donated \$15,000 in support of the Manitoba Breeding Bird Atlas, a seven-year project to document the distribution and abundance of all bird species that breed in Manitoba. The data collected by the Manitoba Breeding Bird Atlas project will be used by government agencies, land managers, consultants, and conservationists to assess changes in breeding bird distribution and status. This data will also identify bird biodiversity hotspots and other areas of high conservation priority.

*Strathcona County Arbor Day*—Community Relations donated \$10,000 in support of Arbor Day in Strathcona County near Edmonton, Alberta. During Arbor Day, 1,200 students are taught the importance of trees and the environment through six different activity stations that encourage them the respect and love of nature.

## **Liquids Pipelines Canada**

*St. Lawrence River Institute*—The St. Lawrence River Institute of Environmental Sciences is a centre for environmental research and education in Cornwall Ontario. Enbridge supports the River Institute's education program called "Water Quality and its Importance," an interactive workshop for students and community groups. In this workshop, participants take water samples from the St. Lawrence River and learn to analyze indicators of water quality in the laboratory. The results are then linked to potential impacts on aquatic ecology and human health. Not only does the program raise awareness about water quality, it also gives young people a glimpse into laboratory science and potential career options.

*Ducks Unlimited*—In partnership with Ducks Unlimited Canada, two substantial wetland and surrounding upland habitats and trails were re-opened. The \$210,000 investment supported the rebuilding and remediation of McKell Wascana Conservation Park (Regina, Saskatchewan) and Wawanosh Conservation Park (Sarnia, Ontario), including interpretive signs and improved public access, ensuring continued use and creating much needed field-trip destinations for public school wetland education programs.

*Enbridge Riverwatch Program*—The Enbridge Riverwatch Program is the main educational program of the South Central Eco Institute, an umbrella organization of like-minded partners including students, teachers and professionals from 10 school divisions and six conservation districts in southern Manitoba. The program puts industry-standard water quality monitoring equipment in the hands of students. Over 500 sets of data have been collected in a 25,730 km<sup>2</sup> area of the high impact region of the Lake Winnipeg Watershed. The Enbridge Riverwatch Program is connecting students of all ages to watershed education in a "Think Globally, Act Locally" monitoring program.

## **Liquids Pipelines U.S.**

*Neutral Footprint*—A major contribution from Enbridge as part of our Neutral Footprint commitments supported the largest land conservation deal in Wisconsin history. In 2012, Enbridge and the McKnight Foundation provided funding that allowed the Wisconsin Department of Natural Resources (DNR), the Lyme Timber Company and the Conservation Fund to secure 45,000 acres of forest land in Douglas, Bayfield, Burnett and Washburn counties in Wisconsin. This allowed for the establishment of the Brule-St. Croix Legacy Forest, which includes the headwaters of the St. Croix and Bois Brule rivers and contains dozens of small lakes and ponds. In exchange for the conservation easement payments, the Lyme Timber Company must keep the land undeveloped and open to public access—including for hunting, fishing and hiking—forever. The forest also will be open for sustainable forestry, including logging for the region's wood products industry. The second phase—another 22,668 acres—is proposed for 2014.

*Lower Des Plaines River Ecosystem Partnership*—In Enbridge's Chicago Region, Liquids Pipelines U.S. is supporting the Lower Des Plaines River Ecosystem Partnership in Will & Cook Counties, Illinois. The partnership will produce a comprehensive plan that will recommend specific projects to improve the water quality, alleviate flooding and promote wildlife habitat for the Long Run Creek Watershed while addressing requirements by the U.S. Environmental Protection Agency. The plan will be used to inform officials and landowners of actions needed to protect and enhance water quality, as well as natural resources/open space and groundwater recharge. Enbridge's Line 6A runs through the Long Run Creek Watershed. To date, Enbridge has contributed \$5,000 in support of the partnership.

*Forest Preserve District of Will County, Illinois*—In 2012, Enbridge entered into a two-year partnership with the Forest Preserve District of Will County, committing \$10,000 toward new signage at the Forest Preserve's Isle a la Cache Museum and at the trailhead at Centennial Trail—Schneider's Passage, both located in Romeoville; and \$10,000 for a land restoration project at the Forest Preserve's O'Hara Woods, also located in Romeoville.

## **Enbridge U.S.—North Dakota Region**

*Mouse River Loop Envirothon*—Enbridge's North Dakota region sponsored the 8th annual Mouse River Loop Envirothon, which includes geocaching, a lecture on wildlife, and a trail test at the Upper Souris National Wildlife Refuge. Students from six area North Dakota high schools competed in the events.

## **Gas Transportation / Enbridge Energy Partners**

*The Nature Conservancy of Texas*—Enbridge sponsored The Nature Conservancy of Texas's Houston luncheon to bring awareness to the needs of conservation in that area of the world.

*The Nature Conservancy of Louisiana*—Enbridge again contributed to The Nature Conservancy of Louisiana's Fund for Gulf Coast Restoration to support their work to build artificial oyster reefs and protect the largest natural oyster reef along the Louisiana coast in Sabine Lake for the purpose of protecting coastal habitats.

## **Enbridge Gas Distribution (EGD)**

*Trout Unlimited Canada*—As part of Enbridge's Natural Legacy Program, EGD has invested \$200,000 in support of Trout Unlimited Canada to help revive, protect and rejuvenate a major waterway within the Duffins Creek region of EGD's franchise area. The restoration program was launched in April 2012, with a series of employee events being held throughout the year, including lunch & learns and tree planting events.

*10,000 Trees for the Rouge Valley*—In collaboration with Enbridge Pipelines Inc. and an organization called 10,000 Trees for the Rouge Valley, on October 24, 2012, EGD and Enbridge Pipelines mobilized a group of employees from Toronto, Sarnia and Belleville to play a part in planting about 650 trees. The event took place in Rouge Park close to the site where Enbridge had removed trees cleared to create an access road to reach Enbridge's Line 9 pipeline where erosion of the Rouge River shoreline had exposed the pipe.

*Smart Commute initiative (Toronto)*—EGD received the Smart Commute—Northeast Toronto 2012 Employer of the Year Award, as well as the Smart Commute Gold Workplace designation, which is awarded to outstanding workplaces that demonstrate innovation, focus on measuring their success, and achieve significant positive outcomes and demonstrated success in changing the commute modes of their employees. By actively promoting sustainable transportation initiatives like EGD's Don Mills Corporate Shuttle and a thriving vanpool program, Enbridge employees have seen measurable results and made significant, positive impacts on their carbon footprint. Smart Commute is aimed at educating employees about alternative ways to commute such as public transit, carpooling, vanpooling, cycling and telecommuting.

## **ARTS & CULTURE**

We deliver on our promise to make communities better places to live by investing in visual and performing arts, and other organizations that contribute to culturally vibrant communities. For us, theatre, dance, music, visual arts and, in fact, all forms of expression provide communities with a unique identity—and all of us with sources of inspiration and beauty.

Following are updates on some of the key arts and culture initiatives we support.

### **Enbridge Inc.**

*Governor General's Performing Arts Awards Gala*—As the third year Presenting Sponsor of the Governor General's Performing Arts Awards (GGPAAs) in Ottawa, an Enbridge contingent was hosted by His Excellency the Governor General of Canada on May 5, 2012. The GGPAAs are Canada's most prestigious honour in the performing arts, with a long and successful history. The awards celebrate, recognize and inspire the arts community across the country, and Enbridge is proud to support the nurturing of Canadian talent.

*Alberta Theatre Projects (ATP)*—Over the past 10 years, Enbridge has been proud to support the Enbridge playRites Festival of New Canadian Plays. We have been witness to the creation of dozens of original theatrical works, many of which have gone on to national and international acclaim. Enbridge's partnership with ATP is one of our longest and proudest cultural collaborations. In 2013, we celebrated the 10th Anniversary of our partnership with a gala dinner for Enbridge and ATP staff, followed by the world premiere of Governor General Award-winning playwright Joan MacLeod's *The Valley* at the 27th Annual Enbridge playRites Festival of New Canadian Plays.

### **Community Relations Canada**

*Morden Corn & Apple Festival*—Community Relations donated \$10,000 to Morden, Manitoba's popular Corn & Apple Festival, which Enbridge has been supporting since 2008. A family event, the festival has a reputation for cheerful hospitality, good food, wholesome entertainment and a relaxing atmosphere.

*Music in the Square*—Community Relations supported this free musical concert series in Colborne, Ontario with a \$5,000 donation. The concerts, which are held Thursday evenings from June to August, attract hundreds of local

residents and visitors who come to enjoy local artists.

*Come on Home, Macrorie (Saskatchewan) Centennial Celebration*—Community Relations was proud to support with a \$4,000 donation “Come On Home Macrorie,” a three-day centennial celebration. Visitors took part in an old-time fair, craft and art displays, old-time children's events, a parade, a supper, an entertainment evening featuring local artists and musicians, and a fireworks display.

#### **Liquids Pipelines Canada**

*Globe Theatre Society*—As part of Globe Theatre's educational programming with their theatre school, the Enbridge Education Outreach Program provides multi-disciplinary theatre workshops to children who experience financial and social barriers who may experience restricted access to professional arts programming and the long-term benefits of creative drama education: independence, leadership skills, confidence, divergent thinking, diverse communication skills and pride in expressing their ideas and creativity. In 2012, Globe Theatre School teachers ran theatre creation workshops in six classrooms in Regina, Saskatchewan, at Kitchener Community School, Imperial Community School, and St. Theresa Elementary, reaching more than 120 students.

*The Works International Visual Arts Society*—Enbridge continued as a Sponsoring Partner of The Works International Visual Arts Society education initiatives, specifically: The Enbridge Arts Internships (Summer Internship, Certification, Education, and Scholarship) Program; and The Places, Art & Design in Public Places Internship Program, offering theoretical and hands-on learning to participants during full-time, paid internships with The Works Art & Design Festival. Participants benefit from working with experienced arts presenters, as well as world-class artists, designers, curators and educators. Once participants have completed the program, their skills are transferable to galleries, museums, educational institutions and other non-profit charitable organizations in Edmonton and countrywide. In 2012, the festival covered downtown Edmonton and surrounding areas with 53 one-of-a-kind installations and exhibits, and over 250 special events and performances, all featuring the theme of Energy.

#### **Liquids Pipelines U.S.**

*Duluth Airshow*—Enbridge continued our support of the semi-annual Duluth Airshow in 2012. A US\$25,000 contribution sponsored the Canadian Forces Snowbirds demonstration and performance.

*Oulu Cultural & Heritage Museum*—Enbridge Liquids Pipelines U.S. invested \$8,000 in support of this museum that will highlight early cultural history in northern Bayfield County, Wisconsin, around the Iron River and Oulu area, emphasizing logging and agriculture, which were the original industries of the area. The museum will cater to the general public and to school groups, featuring artifacts, exhibits and displays that depict the early culture, development and history of northern Wisconsin and demonstrations of early pioneer skills and crafts.

#### **Enbridge U.S.—North Dakota Region**

*Berry Acres Corn “Maize”*—Providing holiday fun for area residents, Berry Acres in Minot, North Dakota, provides a large pumpkin selection in the fall, as well as a large maze constructed in a corn field. Enbridge was the first official sponsor of the maze for the 2012 season, which saw visits from thousands of community residents. The maze is constructed over approximately 40 acres and provides family oriented entertainment from September to October.

#### **Gas Transportation / Enbridge Energy Partners**

*Alley Theatre*—Enbridge supported Houston's Alley Theatre for the tenth consecutive season by serving as the Lead Sponsor of one production during the 2012-2013 season. Enbridge also sponsored the Alley Theatre Playwriting 360° Showcase, which presents plays written by young adults from schools who participate in the program. The program introduces students to dramatic writing as a creative outlet.

*Houston Symphony*—Enbridge partnered with the Houston Symphony to get educational CDs featuring NASA imagery of Earth into schools throughout the Houston Independent School District (HISD). The CDs include an educational resource that teachers can use with students and exposes children to music played by the Symphony.

*Houston Museum of Natural Science*—Enbridge is continuing our partnership with the Houston Museum of Natural Science as a Wiess Energy Hall Partner. The Wiess Energy Hall explores the application of scientific concepts and advanced technology in the oil and gas industry. Museum visitors learn about all the processes of energy development—from how oil and natural gas are formed to the ways in which various types of energy are used. Enbridge's donation also supports elementary education energy-related curriculum guides.

### **Enbridge Gas Distribution (EGD)**

*City of Markham*—Members of council of the City of Markham in Ontario presented EGD with the 2012 City of Markham Corporate Award in recognition of EGD's long-standing support of the Markham Village Music Festival. Enbridge has been a proud sponsor of the festival for more than a decade and has contributed over \$50,000 in cash and in-kind sponsorship.

### **SCHOOL PLUS**

We believe in investing in the leaders of tomorrow by supporting enrichment programs and extra-curricular activities for Canadian Aboriginal school children located near our major pipeline routes and facilities. Through our School Plus Program, we provide Canadian Aboriginal youth in grades K-12 with enrichment programs to engage them in the education process, encouraging them to remain in school. We value educational opportunities that will ultimately contribute to the growth and learning of Canadian Aboriginal school children. Since 2009, our School Plus Program has enriched the education of more than 10,000 youth in more than 90 schools by providing more than \$3 million in grants in support of educational programming.

*For a full report on our recent School Plus investments and other major Aboriginal community investment initiatives, please see Aboriginal & Native American Relations—Recent Initiatives and Significant Events in this SO1 section, above.*

### **SAFE COMMUNITY**

With operations and employees in communities across Canada and the U.S., we believe it is essential to be involved in those communities to help make them healthy, vibrant and ultimately, better places to live. The safety of the communities in which we operate and the people who live and work along our pipeline system remains our highest priority, which is why we are proud to support the organizations that help to keep our communities safe. Through our Safe Community Program, we provide grants to local first responders in areas of Enbridge operations to help with equipment, training, public awareness and volunteer recognition. Additionally, we support safety initiatives that are important in the communities where we operate.

In 2012, the Safe Community Program provided more than \$1.6 million in grants to 429 first-responder organizations in Enbridge right-of-way communities in Canada and the U.S. Following are reports about some of our key Safe Community initiatives in 2012.

#### **Enbridge Inc.**

*Calgary Police Foundation*—Enbridge is proud to be a Founding Partner of the Calgary Police Foundation, which celebrated its launch in October 2012. Enbridge's contribution of \$1 million over five years will assist the Foundation's focus on the safety and well-being of youth through education, prevention and early-intervention. Through the Foundation, Enbridge directs support to the Sheldon Kennedy Child Advocacy Centre, Youthlink, Multi-Agency School Support Teams (MASST), the Calgary Police Cadet Program and the Get-a-Life Program. Our support of this community foundation mirrors our commitment to safety and supports our Safe Community and Community Leadership focus areas.

*STARS*—Enbridge representatives attended a Shock Trauma Air Rescue Society (STARS) air ambulance grand opening event for the Saskatoon air base in Saskatchewan on October 15, 2012, in relation to our renewed funding commitment in the amount of \$500,000 for STARS' expansion into central Saskatchewan. This is in addition to our previous multi-year funding toward the AW139 aircraft, which is coming into service in Alberta in 2013.

#### **Community Relations Canada**

*Ontario Association of Fire Chiefs (O AFC)*—Community Relations provided \$5,000 in funding to the O AFC to help ensure the safety of children who attend Camp Bucko, a summer camp that provides an opportunity for Ontario children recovering from burn injuries to meet other children who have shared a similar experience. Our funds allowed for the purchase of two automated external defibrillators.

*Regional Municipality of Wood Buffalo*—Community Relations provided Wood Buffalo \$1,000 for the purchase of 10 safety kits to be distributed to schools within the regional municipality during its Emergency Preparedness Week.

*South Saskatchewan First Responder Coordinator Committee: Emergency Medical Practitioners Development Weekend*—Community Relations provided the committee \$2,000 to assist with the training and skill development of Saskatchewan first responders. This weekend provided first responders with refresher training, as well as introduced them to new skills and techniques so they are prepared in any emergency situation.

### **Liquids Pipelines Canada**

In 2012, Enbridge's Safe Community Program delivered 109 monetary grants totaling \$1,150,000 to eligible first responders within Alberta, Saskatchewan, Manitoba, Ontario and Quebec for the purchase of safety equipment or to obtain professional training and deliver education programs to help save lives and keep Enbridge right-of-way communities safe. Now into the fourth year of the program, Enbridge has provided over 500 grants to local volunteer and first responder organizations.

### **Liquids Pipelines U.S.**

In 2012, the Safe Community Program delivered grants to 320 emergency responders totaling \$317,396 to eligible first responders in the U.S. for the purchase of safety equipment or to obtain professional training and deliver education programs to help save lives and keep Enbridge right-of-way communities safe.

### **Enbridge U.S.—Chicago Region**

Through the Safe Community Program, Enbridge contributed \$2,000 to the New Lenox Fire Department and \$2,000 to the Will County Sheriff's Department in recognition of their strong support during a vehicle accident that occurred at Enbridge's New Lenox valve site in March 2012.

*Munster, Indiana, Police Department*—Enbridge donated \$10,000 to the Munster Police Department in support of a new K-9 unit. The Munster Police Department heads up the law enforcement strike team for a district response task force that includes emergency responder groups from five counties in the Indiana Department of Homeland Security District 1. This new K-9 Unit will be utilized to support District 1 task force activities.

### **Enbridge U.S.—North Dakota Region**

*Williston Fire Department*—Enbridge Pipelines (North Dakota) LLC celebrated the 50<sup>th</sup> Anniversary of its North Dakota system by contributing \$50,000 to the Williston Fire Department located in the heart of the booming Williston Basin. These funds will go toward a regional fire training facility to be used by emergency responders across the region in both traditional fire training and oil-related incidents.

### **Enbridge U.S.—Superior Region**

*Viking, Minnesota Volunteer Fire Department*—The Viking, Minnesota, Volunteer Fire Department was the recipient of a \$5,000 community investment and Safe Community grant from Enbridge. Funds donated to the group supported the organization's efforts to purchase new equipment needed to fight fires and save lives, including a significantly updated fire truck.

### **Gas Transportation / Enbridge Energy Partners**

*Enbridge and Vector Pipeline Emergency Responder Education Program*—The online component of the Enbridge and Vector Pipeline Emergency Responder Education Program was rolled out in December 2012 to nearly 7,000 emergency response agencies across the U.S. The program was piloted with internal stakeholders and external emergency responders in the U.S. and Canada in November 2012. In the fourth quarter of 2012, 135 people registered for the program and nearly 50 completed the four modules, two practical scenarios and corresponding quizzes. In 2013, Enbridge is rolling out an in-person outreach component of the program, as well as developing a new training module that targets 911 dispatch centres covering areas in which we operate and fire departments in close proximity to our pipelines and facilities. U.S. agencies successfully completing the program are eligible for an additional \$250 when applying for their annual Enbridge Safe Community grant, and continuing education credits are available for firefighters in select states. The online program was rolled out to Canadian emergency responders in April 2013.

### **Enbridge Gas Distribution (EGD)**

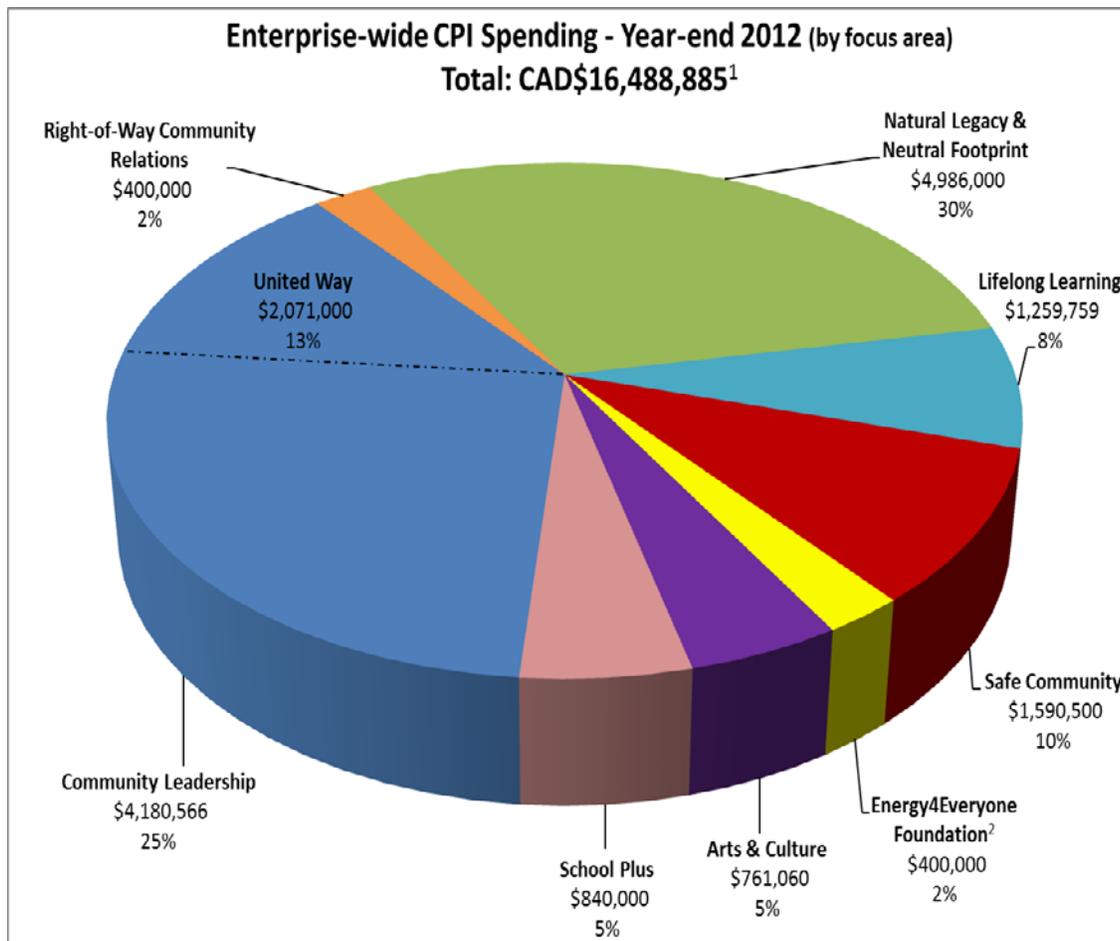
*Project Assist*—On July 24, 2012, EGD launched a new Safe Community initiative called Project Assist in partnership with the Fire Marshal's Public Fire Safety Council. Designed to supplement existing training in the communities where Enbridge operates, Project Assist is a new Enbridge program that provides \$100,000 in funds to purchase

educational materials for enhancements in life-saving firefighting techniques. This donation will be shared by 20 Ontario fire departments that have volunteer firefighters. EGD also works with the Fire Marshal's Public Fire Safety Council to deliver Project Zero, a public education program to help eliminate fire and carbon monoxide deaths. To date, Project Zero has installed more than 9,600 combination smoke and carbon monoxide alarms in 34 Ontario communities.

**ENTERPRISE-WIDE COMMUNITY PARTNERSHIPS AND INVESTMENTS (CPI) SPENDING**

**YEAR-END 2012—ACTUAL**

**Total: CAD \$16,488,885<sup>1</sup>**



<sup>1</sup> This total expenditure is larger than the \$13 million previously reported in Enbridge Inc.'s 2012 Annual Review due to the inclusion of the company's Neutral Footprint investments, which are voluntary and are applied and integrated into all of our projects and operations.

<sup>2</sup> For information on the energy4everyone Foundation, which supports the delivery of affordable, reliable and sustainable energy to communities that do not have it, please see section EC8 of the Economic Performance chapter of this report.

## **CORRUPTION**

### **S02**

*Percentage and total number of business units analyzed for risks related to corruption.*

Enbridge reviews our operations annually for potential risks associated with fraud, using the control evaluation procedures that we established to ensure that it meets the requirements of the Sarbanes-Oxley Act and our own Statement on Business Conduct. Employees and provisioned contractors must complete an online Statement on Business Conduct training program and confirm their compliance with the Statement each year.

Enbridge's Statement on Business Conduct applies to Enbridge Inc. and each of our subsidiaries and controlled entities. The Statement highlights Enbridge's commitment to the specific standards of conduct that we expect of our directors, officers, employees, consultants and contractors in each of the countries in which we do business.

### **S03**

*Percentage of employees trained in organization's anti-corruption policies and procedures.*

Each year, all employees and provisioned contract workers must complete a training course on our Statement on Business Conduct, and acknowledge their compliance with the Statement during the preceding year. Enbridge coordinates and rolls out the training course throughout the company each January. New employees must sign an acknowledgement stating that they have read and agree to abide by the Statement. They must then enroll in the training when the annual training cycle commences in January.

Enbridge's Compliance Department contacts any employee or provisioned contract worker who fails to certify their compliance within the required timeline.

In October 2012, Enbridge also rolled out a redesigned online fraud awareness and conflict of interest training program to all Enbridge employees and provisioned contract workers. This mandatory training program required employees and provisioned contract workers to disclose their knowledge of any fraudulent activities or conflicts of interest they may have observed at Enbridge. The reports generated by Enbridge's computer-based learning management system enabled Enbridge's compliance officers to follow up with anyone who failed to take the training or who reported a potential fraud or conflict-of-interest-related incident.

Through the 2012 training, Enbridge learned about several incidents of actual or perceived conflicts of interest. Enbridge's compliance officers investigated all such reports and, where necessary, additional controls were put in place.

### **S04**

*Actions taken in response to incidents of corruption.*

Enbridge's Statement on Business Conduct and Whistle Blower Procedures outline the procedures Enbridge follows in response to any allegations of corruption.

Strict adherence to the Statement on Business Conduct and all other Enbridge policies is mandatory for all Enbridge employees and provisioned contract workers. Failure to comply may result in disciplinary action up to and including termination.

In 2012, Enbridge took action in response to several confirmed cases of material breaches of our Statement on Business Conduct. Actions taken included terminations of employment, suspensions and reassignments.

## **PUBLIC POLICY**

### **S05**

*Public policy positions and participation in public policy development and lobbying.*

#### **Public Policy Positions—National Canadian Energy Strategy**

Because energy is so important to the health of the Canadian economy, Enbridge supports the development of a national Canadian energy strategy. The strategy should be flexible enough that it could respond to significant changes in circumstances, and should be integrated with a national environmental strategy, a national transportation strategy and a national education strategy.

An integrated national Canadian energy strategy would help Canada negotiate with trading partners on issues pertaining to energy and the environment, and help the country reduce delays resulting from inefficient and

overlapping regulatory processes.

### **Public Policy Development and Lobbying**

Enbridge supports the democratic process in the jurisdictions in which we conduct business. We do so in accordance with the letter and spirit of all applicable laws of the countries in which we operate. As such, all of our activities pertaining to public policy development, lobbying and political donations comply with the country, provincial and state laws governing those activities, as well as with our Statement on Business Conduct.

Enbridge does not have a formal policy on public policy development or lobbying, but our Statement on Business Conduct addresses political contributions by stating that, “no funds or assets of Enbridge shall be contributed to any political party or organization, or any candidate for public office, except where such contribution is permitted by applicable law and authorized by senior management or the Board of Directors.”

In Canada, the Federal Accountability Act prohibits corporate political donations at the federal level. Laws governing corporate political donations to provincial entities vary by province. Enbridge strictly adheres to them.

### **SO6**

*Total value of financial and in-kind contributions to political parties, politicians and related institutions by country.*

In 2012, Enbridge contributed approximately \$78,400 to provincial political parties in Canada. We did not contribute to federal political parties or politicians in Canada.

Enbridge did not make any contributions to political parties, politicians or related institutions in the U.S.

## **ANTI-COMPETITIVE BEHAVIOUR**

### **SO7**

*Total number of legal actions for anti-competitive behaviour, anti-trust and monopoly practices and their outcomes.*

Enbridge is not aware of any legal actions for anti-competitive behaviour, anti-trust or monopoly practices during 2012.

Regarding competition and anti-trust legislation, Enbridge’s Statement on Business Conduct states that:

- Enbridge and our employees must comply with all applicable Canadian, U.S. or other foreign competition and anti-trust legislation
- Behaviour that is prohibited under such legislation includes activities such as agreements with competitors to allocate markets or customers, price fixing or agreements to control prices, the boycotting of certain suppliers or customers, bid-rigging, misleading advertising, price discrimination, predatory pricing, price maintenance, refusal to deal, exclusive dealing, tied selling, delivered pricing and the abuse of dominant position
- Situations constituting potential breach of such legislation or circumstances requiring direction should be immediately reported to the employee’s supervisor or to the Law Department

## **COMPLIANCE**

### **SO8**

*Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations.*

In 2012, the following significant fines were imposed upon Enbridge subsidiaries or controlled entities:

- On July 2, 2012, the U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) issued a Notice of Probable Violation and Proposed Civil Penalty to Enbridge setting forth allegations of violation regarding the Line 6B pipeline release near Marshall, Michigan, and a proposed penalty of US\$3,699,200. Enbridge paid the full amount and PHMSA sent a closure letter with the Final Order and a receipt of payment of the full penalty amount.
- On September 13, 2012, PHMSA issued a Notice of Probable Violation and Proposed Compliance Order to Enbridge regarding the 2010 Toledo Line 17 Audit, with a total penalty of US\$68,600. Enbridge responded to PHMSA on October 12, 2012, with an explanation of corrective actions taken and request for reconsideration of the proposed penalties. On August 26, 2013, Enbridge received a Final Order from PHMSA setting out required actions concerning the documentation of inspections on Enbridge equipment and safety devices. The civil

penalty imposed by PHMSA in the Final Order remained US\$68,600. The civil penalty has been paid and the requirements of the Final Order have been met.

## **SOCIAL PERFORMANCE, PART 4: PRODUCT RESPONSIBILITY**

### **GOALS AND PERFORMANCE**

Enbridge is committed to excellence in implementing product responsibility standards that not only comply with legislated requirements, but also respond to the social, economic and environmental expectations of communities, customers, shareholders, government and the public.

This commitment is an integral part of all planning and operations initiatives carried out corporately, as well as those carried out by Enbridge's business units.

Enbridge strives for zero incidents and injuries and believes that prevention of incidents and injuries benefits everyone and delivers increased value to our stakeholders.

### **PRODUCT RESPONSIBILITY PERFORMANCE INDICATORS**

#### **CUSTOMER HEALTH AND SAFETY**

##### **PR1**

*Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures.*

Enbridge is a transporter of energy, primarily in the form of liquid petroleum products and natural gas. Enbridge does not produce these commodities, but transports them from source to end users.

While Enbridge does not specifically conduct life-cycle reviews of the products that we transports through our systems, we do thoroughly review our systems to ensure that the products we transport are delivered in a manner that is safe and reliable. These reviews pertain to the design, construction, operation and maintenance of the transport systems. They are conducted on all of Enbridge's systems.

Enbridge's Liquids Pipelines business unit implements a New Service Request and New Commodity Approval process prior to movement of new products on its pipeline system. These processes require shippers to provide product quality information and material safety data sheets when requesting to ship a product on the pipeline for the first time. These processes further set out the requirements for ongoing periodic testing of all products once approved for transport on the pipeline. Enbridge also requires shippers to provide updated material safety data sheets every three years in accordance with regulations. This information is used to assess the health and safety impacts of any new products being introduced to the pipeline system and any changes in characteristics that may impact health and safety during the product lifecycle.

In addition to these processes, Liquids Pipelines has an industrial hygiene program that sets out requirements for regular air sampling and monitoring of its operations and maintenance activities to assess worker exposures to airborne contaminants and potential impacts to worker health and safety. This information is used to validate the effectiveness of controls utilized to protect workers, including engineering controls, administrative controls and personal protective equipment.

*For details on Enbridge's pipeline and systems integrity practices and performance, please see section EN23-EN27 in the Environmental Performance chapter of this report.*

Enbridge is also expanding our interests in electricity transmission, as well as in renewable and alternative energy technologies such as wind, solar and geothermal energy. Enbridge takes our responsibility as an energy producer seriously. We pursue this commitment by:

- Managing all of our operations and new facilities with respect for our neighbours and their land
- Consulting with the individuals who live and work in the vicinity of these operations, as well as those who may become our neighbours as our renewable energy portfolio grows

- Maintaining our projects to the highest possible standards
- Keeping neighbours, community residents and officials informed about our activities

Enbridge is committed to protecting the public and the environment, and we build safety into every step of our operations.

## **PR2**

*Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle, by type of outcomes.*

Enbridge is not aware of any incidents of non-compliance taking place in 2012 concerning the health and safety impacts of Enbridge's products and services.

## **PRODUCT AND SERVICE LABELING**

### **PR3**

*Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements.*

Enbridge's Liquids Pipelines and Gas Transportation business units, as well as Enbridge Gas Distribution (EGD), are required to indicate with pipeline location markers, including labels with our name and contact information, any pipeline that is situated within a right-of-way. Although Enbridge is not required to use location markers to identify pipelines that run through streets or properties, it is illegal to excavate within streets or properties without obtaining "locates," which provide information on underground pipelines, etc. In Ontario, for example, home and property owners and contractors are responsible for obtaining "locates" before they dig and can obtain them by calling Ontario One-Call. Ontario One-Call is a call centre with which both EGD and Enbridge's Liquids Pipelines business unit contract to handle such inquiries within Ontario.

In addition, the Workplace Hazardous Materials Information System (WHMIS) requires EGD to make Material Safety Data Sheet (MSDS) information available to all of its natural gas customers. EGD maintains updated French and English copies of the sheet pertaining to natural gas on its website. Liquids Pipelines also maintains MSDSs that are representative of the various products it ships on the pipeline system and makes these MSDSs available to employees, contractors working on the pipeline system, and also to the public upon request.

Enbridge's rights-of-way at our wind farms include the footprints of the wind turbines themselves, as well as buried high-voltage cables located anywhere within the leased area. The rights-of-way at Enbridge's solar farms are contained within the fenced solar farm itself and on Enbridge property outside the fence.

Even though buried high-voltage cables are identified above-ground by power-line markers, the marker may not necessarily be directly over the power line. To protect people and ensure their safety, federal and provincial/state laws require anyone planning to excavate near a right-of-way to call their local toll-free One-Call number in advance of any excavation.

Enbridge makes landowners and the general public in the vicinity of our wind farms aware that buried high-voltage power lines are located both inside and outside the perimeter of the wind farms. (At Enbridge's solar farms, buried high-voltage power lines are contained only within the fenced perimeter of the solar farm. There are no buried power lines outside the fenced perimeter.)

Also integral to Enbridge's wind and solar farms are high-voltage sub-stations, which are located on leased or Enbridge-owned land near the farms. These sub-stations are fenced and no public entry is permitted.

### **PR4**

*Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes.*

In October 2012, Canada's National Energy Board, through an Assurance of Voluntary Compliance, identified the need for Enbridge to install pipe identification signage along our Alberta Clipper pipeline. Enbridge completed all corrective actions within the specified timeline.

## **PR5**

*Practices related to customer satisfaction, including results of surveys measuring customer satisfaction.*

In 2012, Enbridge Gas Distribution (EGD) responded to just under three million customer inquiries and issued approximately 24 million residential utility bills.

Customer service and satisfaction are important to EGD and, as a result, measurement of these areas is important. To get the information it needs, EGD uses a third-party market research supplier to conduct ongoing telephone interviews with customers. EGD also conducts a reputation study to monitor its reputation vis-à-vis its residential customers based on awareness, familiarity, service quality, trust and advocacy. EGD includes benchmarking questions in the study so that it can compare its performance with that of local telephone companies, electric companies and natural gas marketers in the EGD franchise area. In 2012, the study determined that EGD led in the areas of service quality, trust and advocacy.

In 2005, EGD instituted an Office of the Ombudsman to resolve customer issues that the call centre was unable to resolve. In 2012, EGD escalated 6,731 issues to the Customer Ombudsman's office.

EGD uses a variety of information, including all of the sources of information outlined above, to identify opportunities to improve customer satisfaction.

## **MARKETING COMMUNICATIONS**

### **PR6**

*Programs for adherence to laws, standards and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship.*

A thorough process is in place to review marketing communications pieces prior to distribution. This process includes internal training and education and a periodic review by Enbridge's legal department.

### **PR7**

*Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion and sponsorship by type of outcomes.*

In 2012, Enbridge complied with applicable laws, regulations and voluntary codes concerning marketing communications.

## **CUSTOMER PRIVACY**

### **PR8**

*Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data.*

In 2012, Enbridge's Liquids Pipelines business unit received a minor complaint regarding an Enbridge Customer Service employee possessing a shipper customer's confidential information, including the individual's home contact information.

Enbridge Gas Distribution (EGD) is aware of two incidents that took place in 2012 in which customer information was misdirected due to process and system errors. The incidents affected approximately 50 customers.

In 2012, a back-up tape containing customer data on approximately 1,400 customers of an EGD subsidiary was stolen.

EGD reported details of the above-mentioned incidents to its customers and to the responsible authorities as required, and addressed the process and system errors in a timely manner.

No complaints were referred to the Privacy Commissioner of Canada in 2012.

## **COMPLIANCE**

### **PR9**

*Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services.*

In March 2012, EGD pleaded guilty in the Ontario Court of Justice to one charge under the Ontario Occupational Health and Safety Act in connection with a fire that occurred at an EGD gate station in September 2009. The charge

and resulting guilty plea related to EGD's failure to take all reasonable precautions for the protection of a worker as required under the Ontario Occupational Health and Safety Act. The Court sentenced EGD to pay an aggregate fine of \$62,500. The event in question resulted in property damage but no injuries.

# ECONOMIC PERFORMANCE

NOTE: Throughout this Economic Performance chapter, 2010 financial results have been adjusted to account for the 2-for-1 stock split in May 2011.

**“We’re delivering the superior returns that our investors have come to expect, while looking for ways to create economic value for other key stakeholders.”** – *Richard Bird, Executive Vice President, Chief Financial Officer & Corporate Development*

Our shareholders expect Enbridge to consistently create value for them, just as we have over the past 60+ years.

At the same time, society is expecting companies to create broader economic value—not just for a company and its shareholders, but also for all key stakeholders, Aboriginal and Native American groups, and partners, for example by creating higher quality jobs and helping to improve the quality of life of communities.

By living up to the expectations of our shareholders and the wider society, we believe Enbridge can be a powerful agent of change and prosperity.

## **Delivering Superior Long-term Value to Enbridge Shareholders**

Enbridge’s total shareholder return (TSR) has outperformed the S&P/TSX Composite Index over the past 10 years, with an average annual return of 19 per cent compared to 9 per cent for the Composite Index.

In 2012, we achieved a TSR of 16 per cent, more than double the TSX Composite Index’s performance and more than triple the average TSR performance of Enbridge’s Peer Group. Further, over a longer term horizon (three, five and 10 years), Enbridge has consistently outperformed both the TSX index and the Peer Group.

## **Demonstrating High-quality and Sustainable Earnings-Per-Share Growth**

The diversity of Enbridge’s businesses and strategic positioning of our assets contribute to the reliability of our growth.

Adjusted earnings per share (EPS) grew 11 per cent in 2012, and are expected to grow by 10+ per cent per year on average through the middle of the decade.

In addition, Enbridge’s track record for EPS growth over the last decade has averaged close to 10 per cent per year.

## **Paying Out a High Proportion of Earnings in the Form of a Growing Dividend Stream to Enbridge Shareholders**

Enbridge’s record in this category is unmatched in our sector.

The 12 per cent dividend increase we announced in December 2012 was our 18th consecutive annual increase.

Over the last decade, our dividend growth has significantly outperformed that of our peers, and we are focused on continuing this performance.

We expect dividend growth will track or exceed earnings growth through the middle of the decade.

## **Creating Shared Economic Value**

Enbridge is committed to working with local communities, and to helping them achieve sustainable benefits from our activities, including opportunities for training, employment, procurement, business development and community investment.

Enbridge offers contracting opportunities to qualified Aboriginal and Native American suppliers and contractors where appropriate and encourages joint ventures between Aboriginal/Native American businesses and

non-Aboriginal/Native American businesses. This commitment is a shared responsibility involving Enbridge and our subsidiaries, employees and contractors and is more fully explained in our [Aboriginal and Native American Policy](#).

Since 2009, Enbridge has spent approximately \$150 million with Aboriginal businesses for the provision of services for our pipeline expansion/extension projects in Canada. For example, we are twinning our Athabasca Pipeline, which runs through the Cold Lake First Nation's traditional territory in northeastern Alberta. The \$1.2-billion project is creating more than 1,000 jobs for the area, including positions for inspectors, subcontractors, and construction workers. Enbridge has contracted with companies owned by the Cold Lake First Nation, such as Dechen for tree clearing and Nu Nennè-Stantec for environmental services. Combined, these contracts are worth approximately \$15 million and provide direct employment and sub-contracting opportunities for First Nation members.

In 2012, Enbridge also provided over \$1.5 million to support community development initiatives such as enhancement of local policing and new and improved infrastructure projects, as well as a number of scholarships, bursaries and training programs to Aboriginal communities in proximity to Enbridge's pipeline projects. Enbridge understands that the communities themselves are in the best position to identify their needs, and, as a result, we have agreed to allow the communities to allocate the funding for community purposes.

For its part, Enbridge's Northern Gateway Pipelines Project announced an Aboriginal Economic Benefits Package in 2010; and in 2012, continued discussions regarding the package with eligible Aboriginal groups within three geographical regions: Alberta, interior British Columbia, and coastal British Columbia. The package includes an opportunity to enter into a memorandum of understanding with the project to further discuss potential opportunities arising from the project, including employment, training, and procurement. It also includes, for eligible groups, an Aboriginal Ownership Agreement, offering Aboriginal communities equity ownership in the project.

### **Community Investments**

Enbridge partners with charitable and non-profit organizations in our various geographic regions in Canada and the U.S. that have the skills and expertise to effect change. In 2012, Enbridge's enterprise-wide Community Investment expenditure totaled approximately \$16.5 million, which we invested in more than 750 charitable, non-profit, and community organizations. This investment amount is growing with corporate earnings, and represents approximately 2 per cent of Enbridge Inc.'s profits.

In 2012, we concentrated our community investments in six focus areas that contribute to enriching communities where we live and work: Lifelong Learning; Community Leadership; Natural Legacy/Neutral Footprint; Arts & Culture; School Plus; and Safe Community.

Safe Community is one of Enbridge's flagship community investment programs. With operations and employees in communities across Canada and the U.S., we believe it's essential to be involved in those communities to help make them healthy, vibrant and ultimately, better places to live. The safety of the communities in which we operate and the people who live and work along our pipeline system remains our highest priority, which is why we are proud to support the organizations that help to keep our communities safe.

In 2012, the Safe Community Program provided more than \$1.6 million in grants to 429 first-responder organizations in Enbridge right-of-way communities in Canada and the U.S. Grants given through this program allow eligible organizations to acquire such support as new safety equipment, obtain professional training, and deliver safety educational programs in their neighbourhoods.

By helping first responders, Enbridge is making our neighbourhoods safer and it's one more way for us to help build sustainable communities.

**ECONOMIC—GOALS AND PERFORMANCE**

<b>Economic Scorecard Results</b>			
<b>Objectives</b>	<b>2012 Results</b>	<b>2011 Results</b>	<b>Challenges</b>
1. Deliver superior long-term value to Enbridge shareholders as measured by Total Shareholder Return (TSR)	16% TSR in 2012 (for more details, please see Part 1 of the Economic Scorecard Commentary below)	40% TSR in 2011 (for more details, please see Part 1 of the Economic Scorecard Commentary below)	Enbridge's value proposition is based on maintaining a reliable business model. However, Enbridge's business activities are subject to various risks. For details about Enbridge's risk profile, please see section EC2 of this Economic Performance chapter. For additional details on Enbridge's risk management practices and principal risks, please see the Risk Management section of Enbridge Inc.'s 2012 Financial Report.
2. Demonstrate high-quality and sustainable earnings per share growth	9% growth to \$1.62 in adjusted earnings per common share (for more details, please see Part 2 of the Economic Scorecard Commentary below)	11% growth to \$1.46 in adjusted earnings per common share (for more details, please see Part 2 of the Economic Scorecard Commentary below)	
3. Payout a high proportion of earnings in the form of a growing dividend stream to Enbridge shareholders	\$1.13 per common share, an increase of 15% from 2011 (for more details, please see Part 3 of the Economic Scorecard Commentary below)	\$0.98 per common share, an increase of 15% from 2010 (for more details, please see Part 3 of the Economic Scorecard Commentary below)	
4. Establish a long-term track record of growth in supporting the communities in which Enbridge operates	Invested approximately \$16.5 million in more than 750 charitable, non-profit and community organizations (for more details, please see Part 4 of the Economic Scorecard Commentary below)	Invested \$13.0 million in more than 550 charitable, non-profit and community organizations (for more details, please see Part 4 of the Economic Scorecard Commentary below)	

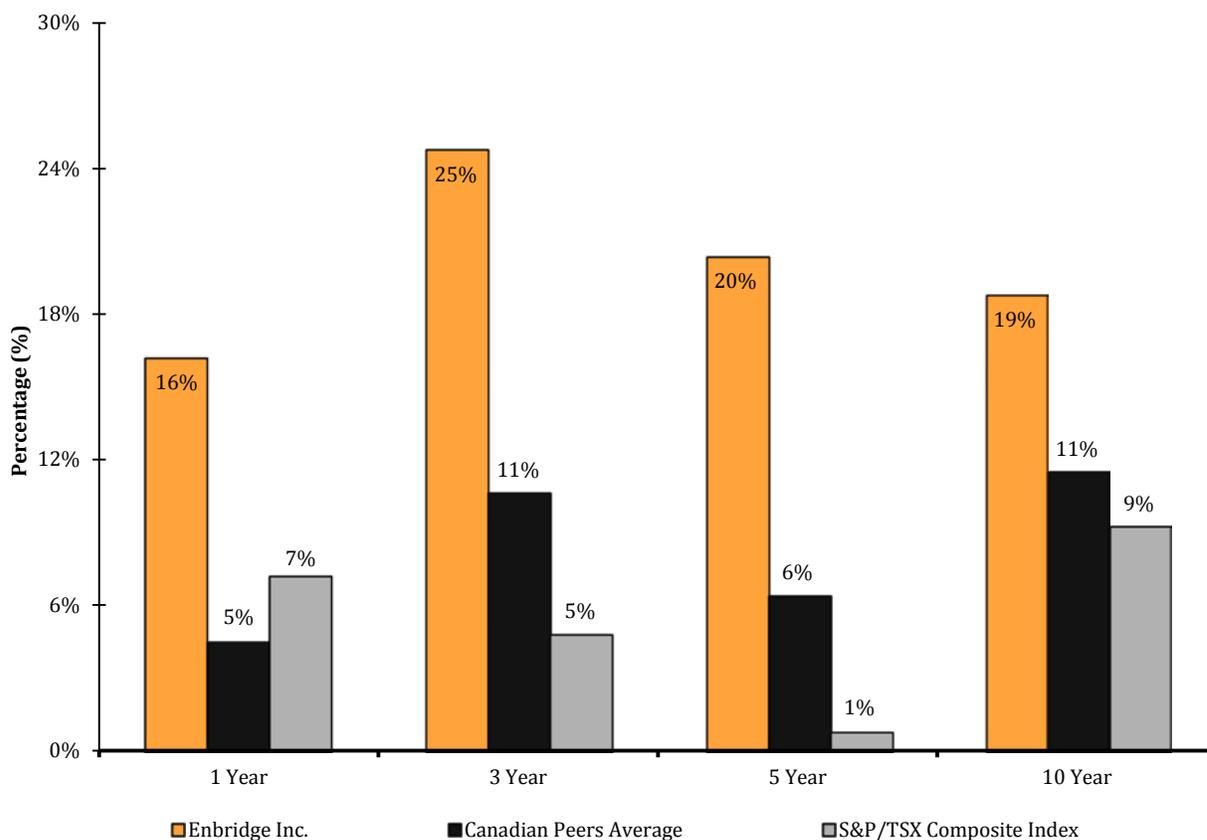
## ECONOMIC SCORECARD COMMENTARY—2012

### 1. DELIVER SUPERIOR LONG-TERM VALUE TO ENBRIDGE SHAREHOLDERS AS MEASURED BY TOTAL SHAREHOLDER RETURN<sup>1</sup> (TSR).

During 2012, Enbridge achieved a solid 16 per cent TSR as a result of our continued growth prospects, increasing dividend, and our lower risk profile when compared to our Peer Group<sup>2</sup> and the broader market index. Enbridge's Peer Group averaged a TSR performance of 5 per cent during 2012 and the TSX returned 7 per cent. Further, over a longer term horizon (three, five and 10 years), Enbridge has consistently outperformed both the TSX index and the Peer Group as indicated in the chart below.

#### TOTAL SHAREHOLDER RETURN—TSX

As at December 31, 2012



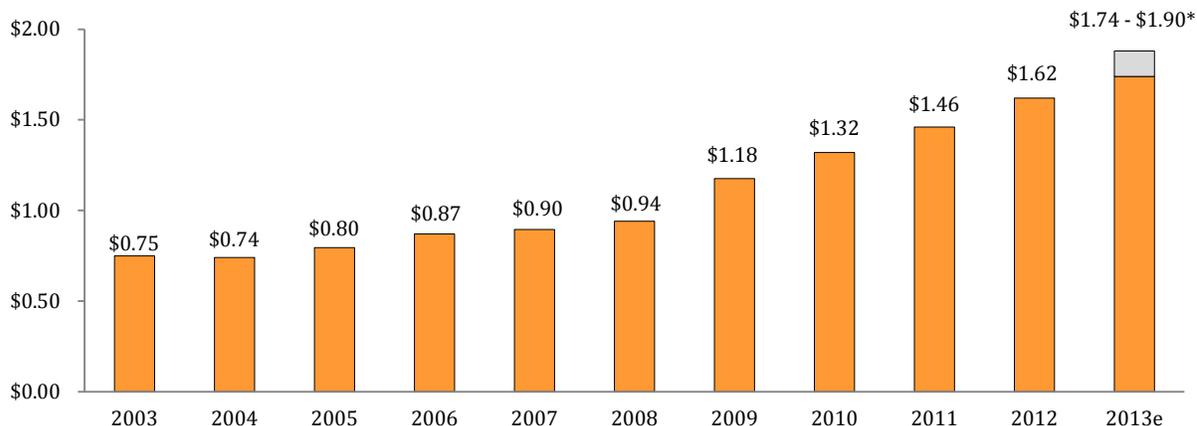
1 Total Shareholder Return: the total return of a stock to an investor that includes both capital gains and re-invested dividends.

2 Peer Group: Canadian Utilities, Fortis, TransCanada, TransAlta and Emera.

## 2. DEMONSTRATE HIGH-QUALITY AND SUSTAINABLE EARNINGS PER SHARE GROWTH.

The diversity of Enbridge's businesses and strategic positioning of our assets contribute to the reliability of our growth. Adjusted earnings<sup>3</sup> per share (EPS) grew 11 per cent in 2012, and are expected to grow by 10+ per cent per year on average through the middle of the decade. In addition, Enbridge's track record for EPS growth over the last decade has averaged close to 10 per cent per year as indicated in the chart below.

### 10-YEAR ADJUSTED EARNINGS PER SHARE GROWTH



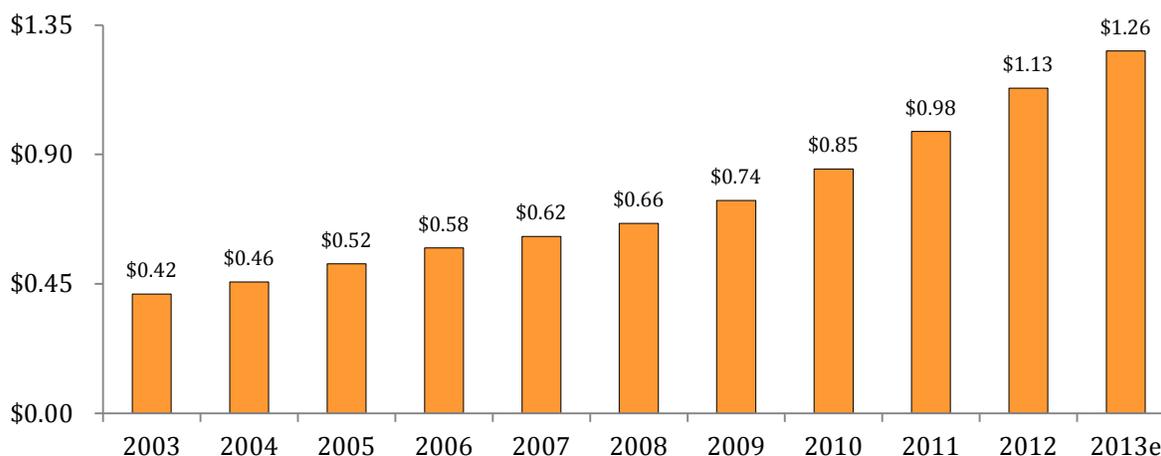
\*2013 earnings per share guidance range: \$1.74 to \$1.90 (prepared under US GAAP).

- Adjusted Earnings: This document contains references to adjusted earnings/(loss), which represent earnings or loss applicable to common shareholders adjusted for non-recurring or non-operating factors on both a consolidated and segmented basis. Management believes that the presentation of adjusted earnings/(loss) provides useful information to investors and shareholders as it provides increased transparency and predictive value. Management uses adjusted earnings/(loss) to set targets, assess performance of the company and set the company's dividend payout target. Adjusted earnings/(loss) and adjusted earnings/(loss) for each of the segments are not measures that have a standardized meaning prescribed by Canadian GAAP and are not considered GAAP measures; therefore, these measures may not be comparable with similar measures presented by other issuers. See the Non-GAAP Reconciliations section on page 92 of Enbridge Inc.'s [2012 Financial Report](#) for a reconciliation of the GAAP and non-GAAP measures.

**3. PAYOUT A HIGH PROPORTION OF EARNINGS IN THE FORM OF A GROWING DIVIDEND STREAM TO ENBRIDGE SHAREHOLDERS.**

Enbridge's record in this category is unmatched in our sector. The 12 per cent dividend increase we announced in December 2012 was our 18th consecutive annual increase. Over the last decade, Enbridge's dividend growth has significantly outperformed that of our peers and we are focused on continuing this performance. It is expected that dividend growth will track or exceed earnings growth through the middle of the decade.

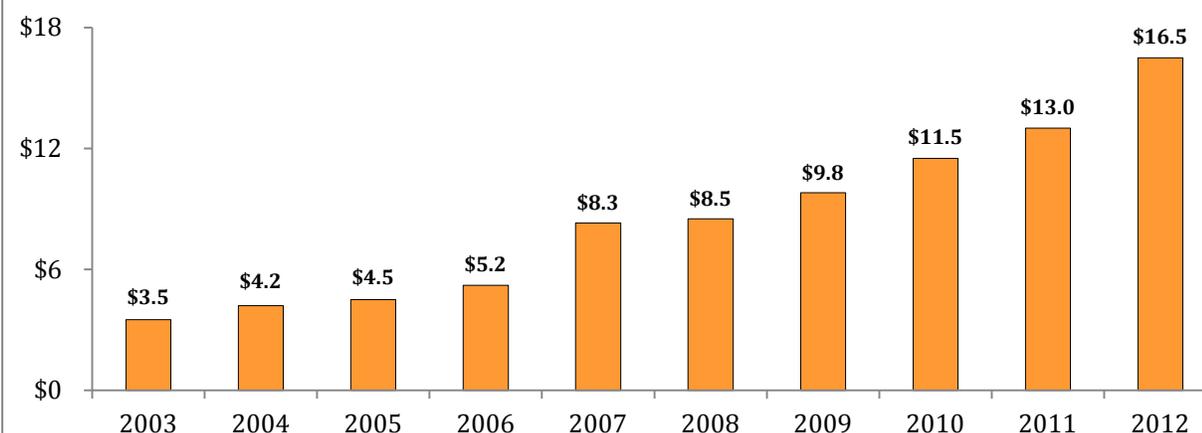
**10-YEAR HISTORICAL DIVIDEND PER SHARE GROWTH**



**4. ESTABLISH A LONG-TERM TRACK RECORD OF GROWTH IN SUPPORTING THE COMMUNITIES IN WHICH ENBRIDGE OPERATES.**

In 2012, Enbridge invested approximately \$16.5 million in more than 750 charitable, non-profit and community organizations. This investment amount has been growing with corporate earnings, and represents approximately 2 per cent of Enbridge Inc.'s profits.

**10-YEAR HISTORICAL COMMUNITY INVESTMENT (\$ MILLIONS)**



## MATERIALITY

Enbridge's 2013 CSR Report primarily focuses on material issues, i.e. those CSR-related subjects that we have determined are of highest interest to stakeholders and to Aboriginal and Native American groups and have the highest impact on the company.

The matrix below illustrates the Economic Performance subject areas that we have deemed to be material to Enbridge, our stakeholders and Aboriginal and Native American groups, ranging from less material in the lower left corner and increasing in material importance up to the right corner, where the subjects of highest interest to our stakeholders and highest impact for the company are listed.

Economic Materiality Matrix				
		Low	Medium	High
Stakeholder Interest	High			<ul style="list-style-type: none"> <li>• Economic benefits to:               <ul style="list-style-type: none"> <li>• Customers</li> <li>• Aboriginal communities</li> <li>• Communities</li> <li>• Shareholders/Investors</li> </ul> </li> </ul>
	Medium		<ul style="list-style-type: none"> <li>• Economic benefits to:               <ul style="list-style-type: none"> <li>• Employees</li> <li>• Governments</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Economic benefits to suppliers</li> <li>• Financial implications of climate change</li> </ul>
	Low			
		Business Impact		

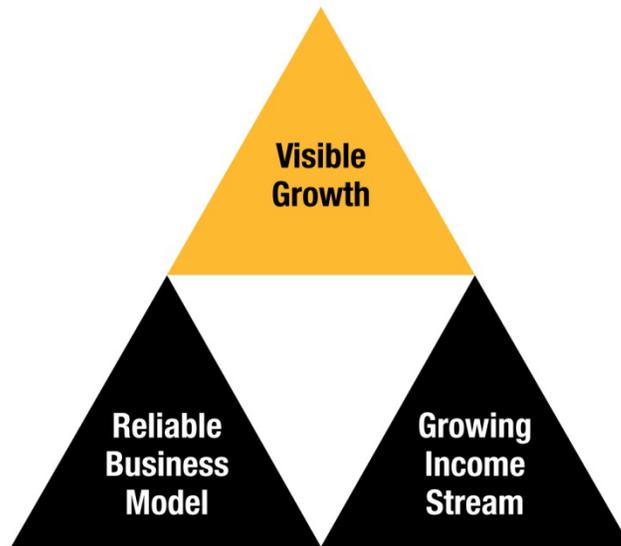
Listed below by chapter and/or report section are the Economic Performance subject areas that we have deemed to be most material to Enbridge our stakeholders, and Aboriginal and Native American groups:

<b>Material Subject Areas</b>	
<i>Economic Performance</i>	
Material subject	Details available in report section
Economic Benefits to Customers	EC1
Economic Benefits to Aboriginal Communities	EC1  See also: Social Performance chapter, Part 3 →SO1 → Aboriginal and Native American Relations
Economic Benefits to Communities	EC1
Economic Benefits to Shareholders/Investors	EC1

## **CORPORATE STRATEGY**

### **Enbridge's Investment Proposition**

Enbridge's unique investment proposition is based on an overarching strategy that brings together three desirable characteristics: Growth, Income and Reliability.



This combination has served Enbridge and our shareholders well. Enbridge's long history of successfully implementing this strategy is evidenced by our sector-leading total shareholder return, whether measured on a one-year, 10-year or even a 55-year basis.

Enbridge expects to continue to build on our strong track record of growth through the middle of this decade, with a full slate of potential investment opportunities that fit within the reliable business model that our investors have come to count on.

## 1. VISIBLE GROWTH

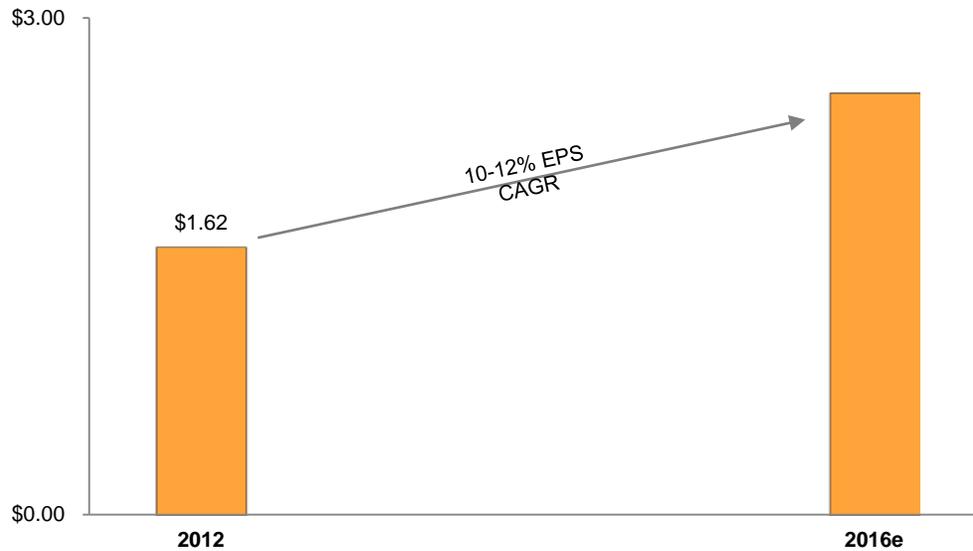
Enbridge's growth is driven by the ongoing need for new energy infrastructure development. In 2012 alone, Enbridge secured \$14 billion in new growth projects across our business units. At year-end, Enbridge had \$28 billion in secured growth projects, all of which are expected to be in service by 2016.

As a result of these new projects, earnings per share have grown steadily over time at an attractive rate. Further, given Enbridge's secured project inventory, we are confident in achieving a 10-12 per cent annual average adjusted EPS growth rate through 2016.

### Earnings Growth

- 13 per cent EPS growth in 2010
- 11 per cent EPS growth in 2011
- 11 per cent EPS growth in 2012

### LONG-TERM EARNINGS PER SHARE GROWTH



CAGR: Compound Annual Growth Rate

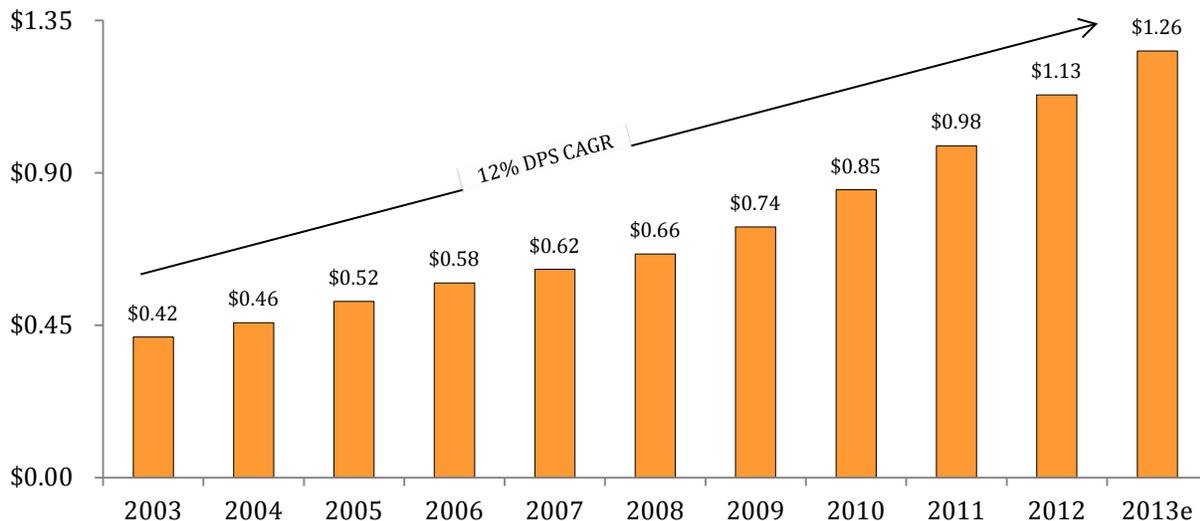
Along with higher EPS, Enbridge's healthy slate of growth projects is expected to drive an even greater growth in our cash flows. Enbridge's ability to generate free cash flow adds further value to our shareholders by providing funding flexibility, as well as opportunity for additional distribution increases.

## 2. GROWING INCOME STREAM

At no point in Enbridge's long history have we ever decreased our dividend payment. In fact, we have increased the dividend in each of the last 18 years, and over the past decade the dividend has grown on average by 12 per cent. The dividend provides an attractive yield to the investor, and given the expected growth in earnings and free cash flow, Enbridge expects to continue to grow the dividend through the middle of the decade.

- 15 per cent dividend increase in 2010, 2011 and 2012
- Expected continued dividend growth in line with, or exceeding, earnings (10+ per cent per year)

### DIVIDEND PER SHARE GROWTH 2003—2013e



DPS CAGR: Dividend per Share Compound Annual Growth Rate

## 3. RELIABLE BUSINESS MODEL

Enbridge looks to consistently structure our business to reliably deliver steady, visible and predictable results. This is evidenced in our contractual arrangements, our risk management frameworks, and our overall philosophy and approach to business. As a result, Enbridge's business model produces adjusted earnings that our shareholders can count on.

- 90+ per cent of Enbridge's revenues are generated from investment grade counterparties and regulated utilities.
- Less than 5 per cent of Enbridge's earnings are exposed to commodity price, interest rate and foreign exchange risks.

*For more information on Enbridge's corporate strategy, industry fundamentals, growth projects, risk management practices and company performance, please see Enbridge Inc.'s [2012 Annual Review](#) and [2012 Financial Report](#).*

## ECONOMIC PERFORMANCE INDICATORS

### ECONOMIC PERFORMANCE

#### EC1

Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments.

#### SUMMARY TABLE OF DIRECT ECONOMIC VALUE GENERATED AND DISTRIBUTED<sup>1</sup>

Enbridge Inc.	2012 (\$ million)	2011 (\$ million)	2010 (\$ million)
Revenues	25,306	27,053	21,520
Commodity costs	18,566	19,864	15,276
Operating and administrative expenses	2,890	2,281	2,032
Adjusted earnings <sup>2</sup>	1,249	1,100	977
Payments to shareholders <sup>3</sup>	895	759	648
Payments to lenders <sup>4</sup>	988	955	871
Total compensation <sup>5</sup>	1,102	935	813
Donations and other community investments <sup>6</sup>	16.5	13.0	11.5
Payments to governments <sup>7</sup>	549	216	314

1. Effective January 1, 2012, Enbridge commenced reporting using U.S. GAAP as its primary basis of accounting, including restatement of comparative periods. (Prior to that, the company had reported in accordance with Part V—Pre-changeover Accounting Standards of the Canadian Institute of Chartered Accountants Handbook.) Hence, some of the 2010 and 2011 totals in this table have been restated from those reported in prior CSR reports.

2. Adjusted earnings is a non-GAAP measure representing earnings attributable to common shareholders adjusted for non-recurring factors.

3. Includes cash dividends and dividends reinvested through the Common Share Dividend Reinvestment and Share Purchase Plan.

4. Includes total interest payments on debt during the year net of capitalized interest.

5. Includes amounts for annual payroll, annual incentive rewards, employee benefits, employee training and development, and employee relocations. At December 31, 2012, Enbridge had 7,820 permanent employees.

6. Includes investments in charitable and not-for-profit organizations and in Enbridge's Neutral Footprint commitments.

7. Includes property taxes, business taxes, provincial capital taxes and income taxes paid.

For information pertaining to Enbridge Income Fund Holdings Inc., please visit <http://www.enbridgeincomefund.com/>; to Enbridge Energy Partners, please visit <http://www.enbridgepartners.com/>; and to Enbridge Energy Management, please visit <http://www.enbridgemanagement.com/>.

## **ADDED ECONOMIC VALUE FOR STAKEHOLDERS**

In helping to satisfy society's need for safe and secure supplies of energy through Enbridge's core business of transporting natural gas and petroleum products, our activities provide a significant and quantifiable direct economic benefit to a broad group of stakeholders.

### **Shareholders / Lenders**

Enbridge Inc. shareholders realize returns through a combination of capital appreciation and dividends. 2012 was another strong year for Enbridge Inc. share price performance on the Toronto Stock Exchange. Investors holding Enbridge Inc. stock for the entire year realized share price appreciation of 13 per cent. As a result, Enbridge's overall market value increased by \$5 billion to \$35 billion. Furthermore, in 2012, Enbridge paid dividends of \$1.13/common share or a total of \$895 million to Enbridge Inc. shareholders. The combination of compounding dividends and capital gains equated to a total shareholder return of 16 per cent in 2012.

Ongoing support for Enbridge's share price comes in part from indices that provide business rankings based on information about the social, ethical and environmental policies and practices of organizations. These indices are based on the concept that a company's commitment to CSR will sustain and grow long-term shareholder value. As a result, a certain segment of investors choose to direct their investments toward these companies. During the past several years, Enbridge has been included in the following indices:

- CDP
- Dow Jones Sustainability Index (World and North America indices)
- FTSE4Good Index

Enbridge Inc. lenders realize returns through interest payments on short- and long-term debt and repayment of principal at maturity. Enbridge Inc. once again met all contractual debt obligations for the year. Interest payments made to lenders during 2012 totaled \$988 million.

*For information on shareholder/unitholder returns for Enbridge Income Fund Holdings Inc., please visit <http://www.enbridgeincomefund.com/>; for Enbridge Energy Partners, please visit <http://www.enbridgepartners.com/>; and for Enbridge Energy Management, please visit <http://www.enbridgemanagement.com/>.*

### **Employees**

Enbridge's business operations provide jobs and contracting opportunities in many communities in Canada and the U.S. Headquartered in Calgary, Enbridge has major offices in Edmonton, Toronto and Houston and numerous field offices in our areas of operations. Combined, Enbridge had more than 7,800 permanent employees in Canada and the U.S. In 2012, Enbridge's payments to employees for salary as well as annual incentive programs totaled approximately \$879 million. We also provide direct economic benefits to employees through savings plans, retirement/pension plans, training programs, as well as health benefit plans. The value of these totaled \$223 million in 2012.

*For more information on Enbridge's employment practices, please refer to the Social Performance: Labour Practices and Decent Work section of this report.*

### **Community**

Enbridge concentrates our investments in focus areas that contribute to enriching our communities. The six areas are: Lifelong Learning; Community Leadership; Natural Legacy/Neutral Footprint; Arts & Culture; School Plus; and Safe Community. For descriptions of these six areas, please see Society—SO1—Community Partnerships and Investments—Strategy in the Social Performance chapter of this report.

By investing in each of these key areas with our dollars, partnerships and human capital, Enbridge is able to support organizations that contribute to the economic and social development of communities near our operations. We believe these investments are essential to being a good neighbour and are a contributing factor in maintaining our social license to operate.

Enbridge partners with charitable and non-profit organizations in our various geographic regions in Canada and the U.S. that have the skills and expertise to effect change.

In the year ended December 31, 2012, Enbridge's actual enterprise-wide community investment expenditure totaled approximately \$16.5 million, which we invested in more than 750 charitable, non-profit, and community organizations. This total represents approximately 2 per cent of Enbridge Inc.'s profits.

Other direct economic community benefits, although more difficult to quantify, arise as a result of new projects in and around Enbridge’s right-of-way communities. These include job creation, skills training, as well as the purchase of goods and services in and around those communities.

*Please see section EC9 below for recent examples of projects highlighting these direct and indirect economic benefits.*

*For more information on Enbridge’s community investment, please see Society—SO1—Community Partnerships and Investments in the Social Performance chapter of this report.*

## **Taxes**

Enbridge’s tax governance system is based on three guiding principles: we comply with all applicable tax laws, we pay our fair share of tax in every community in which we operate, and we ensure that business transactions are carried out in a tax efficient and legal manner.

Our tax code of conduct upholds Enbridge’s core values and requires that we act with integrity and demonstrate respect for the tax laws and tax authorities in all jurisdictions in which we operate through timely and accurate compliance, transparent communication and a spirit of cooperation.

Our tax risk philosophy aligns with Enbridge’s overall low risk tolerance and seeks to minimize tax uncertainty and tax risk through strong leadership, engagement in the organization, compliance and executive accountabilities.

As a result of our tax mandate and our operations within communities across North America, Enbridge pays income, property, business and other required taxes to local, state, provincial and federal governments in Canada and the U.S. In 2012, Enbridge paid \$549 million in income taxes, property, business and other taxes and sales and use taxes.

*In millions of dollars*

	2012
Income Taxes*	\$267
Property, Business & Other Taxes*	\$228
U.S. Sales & Use Taxes	\$54

\*includes taxes paid in both Canada and the United States

## **Customers**

Enbridge’s gas distribution business provides more than 2 million customers in Canada and upper New York State with access to one of the lowest cost and cleanest burning fuel sources—natural gas. Accessing this essential service at a lower cost helps families to manage their cost of living.

Ontario-based Enbridge Gas Distribution (EGD) has distributed more than \$66 million to customers through the incentive regulation sharing model, which concluded its fifth year in 2012. This agreement has benefited Enbridge’s customers and improved returns to shareholders. EGD is one of the fastest growing utilities in North America.

*For more information on incentive regulation, please see page 46 of Enbridge Inc.’s 2012 Financial Report.*

EGD also works with its gas distribution customers through its demand-side management (DSM) programs to increase the efficient use of valuable energy resources, thereby further reducing each household’s costs, while at the same time reducing environmental impact. Since 1995, EGD’s DSM programs have cumulatively delivered about 7.1 billion cubic metres of natural gas savings (the equivalent of enough gas to supply approximately 2.76 million homes for one year<sup>1</sup>) and net energy savings to customers of about \$2.3 billion. Through these DSM activities, EGD has helped its customers avoid approximately 13.4 million tonnes of carbon dioxide emissions<sup>2</sup>.

<sup>1</sup> Assumes that a typical residential customer uses 2,568 m<sup>3</sup> of natural gas per year to heat their home and water.

<sup>2</sup> Assumes that 1.89 kgs of carbon dioxide are emitted for each m<sup>3</sup> of gas that is consumed.

Enbridge’s activities also provide a direct, yet not so easily quantifiable, economic benefit to our hydrocarbon transportation customers. Every day through our energy transportation systems in Canada and the U.S., we provide our energy producer customers with direct access to markets. Pipelines are the lowest cost and safest transportation solution for large volumes of hydrocarbons. Without this infrastructure, these customers would not be able to achieve the netback pricing that they do for their products. Furthermore, their resulting increased profitability in turn can lead to their growth, which can in turn lead to increased employment and community investment.

## *EC2*

*Financial implications and other risks and opportunities for the organization's activities due to climate change.*

Climate change and the other changes that climate change will trigger challenge Enbridge with the following financial and business risks:

### **1. INCREASED REGULATORY BURDEN RESULTING FROM GOVERNMENTS' RESPONSE TO CLIMATE CHANGE AND THE NEED TO REDUCE GHG EMISSIONS**

The GHG-related regulations under which we will have to operate in the future will most likely conform in a broad sense to the final U.S. regulations.

Regulatory risks to Enbridge include the issue of local gas distribution companies being required to take responsibility for their customers' emissions from the use of natural gas. Under the cap-and-trade systems being considered for Quebec and Ontario, we likely will also be managing both the free allocation and purchase of credits on behalf of customers, a function that companies such as Enbridge Gas Distribution have not traditionally been required to do.

Enbridge will also be exposed to increased power costs associated with our operations, when regulatory constraints associated with GHG emissions are imposed on power utilities. We anticipate that there will be no competitive disadvantage to Enbridge if regulatory costs are uniform internationally (i.e., if they impact Enbridge's competitors to the same degree).

Costs are difficult to quantify at this time because related policies in Canada and the U.S. are in a state of flux.

### **2. THE LONG-TERM DRIVE TOWARDA MORE CARBON CONSTRAINED FUTURE AND LESS RELIANCE ON FOSSIL FUELS**

Over the longer term, as society transforms to less carbon intensive energy systems, both oil and natural gas are expected to become more expensive due to increased costs and regulation.

However, although availability of renewable and alternative energy is growing, oil and natural gas is also expected to continue to be a critical and dominant source of energy in the near- and mid-term. This will provide a continuing need for the current Enbridge transportation services.

At the same time, increased investment in renewable and alternative energy is expected to provide opportunities for Enbridge's businesses in these areas and contribute to offsetting the risks associated with a carbon-constrained future.

### **3. THE IMPACTS OF INCREASED SEVERE WEATHER EVENTS ON ENBRIDGE'S INFRASTRUCTURE SYSTEM**

The most severe weather events that Enbridge operations experience are hurricanes along the Texas Gulf coast. However, our systems are part of a broadly based logistics network that connects producers to consumers, where all parties are aligned in their contingency planning to shut-down in advance of severe storms and resume operations and energy supply as a first priority following the storm event, thus limiting impacts.

### **4. INVESTOR RISK**

There is a growing pool of investment capital worldwide that is dedicated to investments in socially responsible and sustainable companies. Further, Enbridge is experiencing growing interest in our business from CSR rating services whose reports can influence these investors' perceptions, as well as public opinion. We believe that our ability to respond in a timely and transparent manner to requests for information regarding our environmental, social and governance (ESG) commitments enhances our corporate reputation.

### **5. TECHNOLOGY DEVELOPMENTS**

To mitigate risk and capitalize on emerging technologies, Enbridge, through an internal dedicated department, tracks developments and identifies and screens appropriate new technologies. Technologies of interest are generally associated with new and improved energy delivery and efficiency, as well as renewable and alternative low-impact energy generation.

Enbridge has made significant investments with respect to wind, solar and geothermal power as well as our

fuel cell/turbo-expander. Evaluations concerning carbon capture and storage are ongoing.

### **Opportunities Arising from Climate Change**

Enbridge believes that we are in a good position to take full advantage of many of the opportunities related to the climate change issue, including the following:

- With an increased focus on demand-side management activities and conservation, our recognized expertise in this area is expected to provide a good platform for growth and for offering fee-for-service services to current customers and others;
- There will be increased opportunities for select renewable and alternative energy delivery services in the realm of district energy, which will change the way customers receive energy in the future. Services along these lines may be offered to third parties;
- As Enbridge's customers become more aware and educated about their contribution to carbon issues, we expect to be in a strong position to be able to help them manage their emissions, thus creating a stronger link with them for further collaborative activities; and
- Enbridge has interests in 12 wind power projects, four solar farms, four waste heat recovery facilities and one geothermal facility and a fuel cell/turbo-expander. Together, Enbridge's interests have a combined capacity of approximately 1,250 megawatts capacity, which is enough electricity to meet the power requirements of approximately 375,000 homes, while also avoiding approximately 1.3 million tonnes of GHG emissions each year. We expect that we will realize future wind and solar opportunities by expanding our existing operations, as well as by developing new greenfield projects near our operations throughout North America, particularly where operating synergies can be applied.

### **EC3**

*Coverage of the organization's defined benefit plan obligations.*

Enbridge maintains pension plans, which provide defined benefit and/or defined contribution pension benefits and other post-employment benefits other than pensions to eligible retirees.

Pension costs and obligations for the defined benefit pension plans are determined using the projected unit credit method. This method involves actuarial calculations using several assumptions, including discount rates, expected rates of return on plan assets, health-care cost trend rates, projected salary increases, retirement age, mortality, and termination rates. These assumptions are determined by Enbridge management and are reviewed annually by an actuary.\* Actual results that differ from assumptions are amortized over future periods and, therefore, could materially affect the expense recognized and the recorded obligation in future periods.

Enbridge remains able to pay the current benefit obligations using cash from operations. In 2013, we expect to pay approximately \$140 million into our defined benefit pension plans.

*Please see Note 24 to Enbridge Inc.'s Consolidated Financial Statements for the year ended December 31, 2012, which appears on pages 146-151 of Enbridge Inc.'s 2012 Financial Report, for disclosure of the difference between the actual and the expected results for the past two years.*

Benefits payable from the defined benefit plans are based on members' years of service and final average remuneration. These benefits are partially inflation-indexed after a member's retirement. Contributions by Enbridge are made in accordance with independent actuarial valuations and are invested primarily in publicly-traded equity and fixed income securities.

\*At year-end 2012, the value of the assets in Enbridge's defined benefit pension plan was \$1,500 million and its pension obligation was \$1,879 million, leaving a shortfall of \$379 million which equals about 0.0114 per cent of the company's market capitalization.

### **EC4**

*Significant financial assistance received from government.*

### **Wind Power Assets**

**Underwood, Cruickshank, Talbot and Greenwich Windfarms**—Enbridge Income Fund sells the energy it generates from its Underwood (Kincardine), Cruickshank, Talbot and Greenwich windfarms (all in Ontario) to the Ontario Power Authority (OPA) pursuant to various types of 20-year power purchase agreements (PPAs). Renewable

energy produced by the Underwood Windfarm is sold under a “RES II” PPA; the Cruickshank Windfarm a Renewable Energy Standard Offer Program (RESOP) PPA; and the Talbot and Greenwich windfarms “RES III” PPAs.

The OPA pays a price per megawatt hour (MWh) that consists of a fixed amount and in some cases an indexed amount for all electric energy delivered during the term. The contracted power price per MWh for all four of the Enbridge Income Fund’s Ontario windfarms is currently higher than the market rate for the Ontario wholesale electricity market. Enbridge Income Fund must equally share with the OPA any revenues derived from the sale of electricity above an established cap. The OPA is entitled to all associated environmental credits and attributes, ancillary services and transmission rights associated with the electric energy.

The Underwood, Cruickshank and Talbot windfarms also qualify for incentives under the Government of Canada’s ecoENERGY for Renewable Power Program (eRPP), which provides \$10 per MWh for electricity generated over a 10-year term. However, Enbridge Income Fund must equally share any incentive that it receives on the Cruickshank Windfarm’s generation with the OPA.

The eRPP incentive for the Underwood Windfarm is limited to a maximum of approximately \$47.7 million over a 10-year period and to a maximum of approximately \$4.8 million per fiscal year. The eRPP incentive for the Cruickshank Windfarm is limited to a maximum of approximately \$2.4 million over a 10-year period and to a maximum of approximately \$230,000 per fiscal year. The eRPP incentive for Talbot is limited to a maximum of approximately \$30 million over a 10-year period and to a maximum of approximately \$3 million per fiscal year.

The federal Minister of Natural Resources may adjust the amount of the incentive or suspend payment of the incentive based on whether annual production and revenues generated meet or exceed a specified threshold level.

**Magrath and Chin Chute Windfarms**—Enbridge Income Fund sells the energy it generates from the Magrath and Chin Chute windfarms to the Alberta Power Pool. The price of the electricity generated on these projects is substantially fixed under long-term power price swap arrangements. Each project also receives an additional \$10 per MWh for electricity generated for a 10-year term under federal government support programs for renewable power. The Magrath Windfarm receives funding under the Wind Power Production Incentive (WPPI) until August 16, 2014, and the Chin Chute Windfarm receives eRPP funding until March 31, 2017.

**SunBridge Windfarm**—Enbridge Income Fund sells the energy it generates from its 50 per cent ownership in the SunBridge Windfarm to the Saskatchewan power grid at fixed prices under a long-term PPA with SaskPower.

**Lac Alfred, Massif du Sud and Saint Robert Bellarim Windfarms**—Enbridge Inc. sells the energy we generate from our 50 per cent ownership stake in the Lac Alfred, Massif du Sud and Saint Robert Bellarim windfarms to Hydro-Quebec under 20-year PPAs. As is the case with Enbridge’s OPA contracts in Ontario, the contracted power prices per MWh for Enbridge’s wind energy projects in Quebec are currently higher than the market rates for the Quebec wholesale electricity market. Hydro-Quebec may, however, sell power to customers outside of Quebec under different pricing conditions.

**Cedar Point Windfarm**—Enbridge’s Cedar Point Windfarm qualified for the U.S. Department of the Treasury 1603 grant program, under which it received a cash grant of up to 30 per cent of its project capital costs upon completion.

#### **Solar Power Assets**

**Sarnia, Amherstburg II and Tilbury Solar Projects**—Enbridge Income Fund’s Sarnia Solar Project, Amherstburg II Solar Project and Tilbury Solar Project all operate under RESOP agreements. Under these agreements, Enbridge Income Fund sells the electricity generated by each facility or facility segment, as the case may be, under 20-year fixed price PPAs with the OPA. In addition, the OPA is entitled to all associated environmental credits and attributes, ancillary services and transmission rights associated with the electric energy generated.

The Sarnia Solar Project also qualifies for an incentive under the eRPP and receives \$10 per MWh for electricity generated up to a maximum of approximately \$1.4 million over a 10-year term, and a maximum of approximately \$145,000 per fiscal year for each segment.

Enbridge Income Fund must share the incentives equally with the OPA. The federal Minister of Natural Resources may adjust the amount of the incentive or suspend payment of the incentive based on whether annual production and revenues generated meets or exceeds a specified threshold level.

**Silver State North Solar Project**—Enbridge’s Silver State North Solar Project qualified for the U.S. Department of the Treasury 1603 grant program, under which it received a cash grant of up to 30 per cent of its project capital costs upon completion.

### Geothermal Power Assets

The Neal Hot Springs Geothermal Project in Oregon, of which Enbridge is a partial owner, received a U.S. Department of Energy (DOE) loan guarantee under the DOE's Title XVII loan guarantee program (created by the Energy Policy Act of 2005). This loan guarantee secures a loan from the U.S. Treasury's Federal Financing Bank. Also, the project received a \$32.8-million Section 1603, Division B of the American Recovery and Reinvestment Act of 2009.

### Run-of-River Hydroelectricity Interests

The Wasdell Falls Run-of-River Hydroelectricity Project in Ontario, of which Enbridge is a partial owner, received \$2 million from Natural Resources Canada (NRCAN) through NRCAN's ecoEnergy Innovation Initiative (ecoEII). Enbridge and Coastal Hydropower Corporation are partners in the project that will generate 1.65 MW of hydroelectricity using highly efficient Very Low Head (VLH) turbines.

### Carbon Capture and Storage Research Project

Enbridge is a consortium member of Project Aquistore, a carbon capture and storage research project led by the Petroleum Technology Research Centre in Saskatchewan. Project Aquistore has received \$5 million from the Government of Canada through the Sustainable Technology Development Corporation, a \$5 million commitment from the Government of Saskatchewan through the Go Green Fund, and \$9 million from NRCAN through its ecoEnergy Technology Initiative (ecoETI).

## MARKET PRESENCE

### EC5

Range of ratios of standard entry-level wages by gender compared to local minimum wage at significant locations of operation.

Note: In determining all compensation related statistics in this report, we included only salaries of regular, active, non-union, full-time employees.

Enbridge's remuneration policies are company-wide policies, and there is no significant variation by location. Salary levels are determined using an objective and equitable process that considers the internal value of the role, market rates of pay, as well as employee skill and competency. Enbridge utilizes an objective performance management system that permits top performers to achieve higher-than-average increases in any given year.

### Average salary ratio male to female by job ladder level (%)—2012

Level 1	103.0
Level 2	99.5
Level 3	102.0
Level 4	102.6
Level 5	101.9
Level 6	105.0
Level 7	98.3

### Minimum wage versus Enbridge start rates

Region	Provincial/State Minimum Wage	Enbridge Entry-level Minimum Wage	Enbridge Entry-level Maximum Wage	Ratio of Standard Minimum Wage to Enbridge Entry-level Wage
Ontario	\$10.25			
Toronto		\$17.12	\$27.40	167.0% - 267.4%
Alberta	\$9.75			
Calgary/Edmonton		\$17.12	\$27.40	175.5% - 281.1%
Texas	\$7.25			
Houston		\$12.31	\$19.71	169.8% - 271.9%

## *EC6*

*Policy, practices and proportion of spending on locally based suppliers at significant locations of operation.*

Enbridge's CSR Policy states that "Enbridge will strive to provide employment and economic opportunities in the communities where we operate."

While Enbridge does not have a formal policy regarding buying from locally-based suppliers and we do not formally track our locally-based expenditures, we can say that, in practice, we meet the majority of our needs through local suppliers.

We have a clearly defined management and governance structure for all major projects and in that regard we have developed strategic relationships with suppliers and contractors.

For example, over the last six years, our Major Projects business unit has sourced finished pipe worth approximately \$1.5 billion from Canadian-located manufacturing facilities. This has had positive impacts on local businesses and the people they employ. At any given time during Enbridge's pipe production, these manufacturers could employ approximately 400 employees in their facilities working directly on Enbridge's pipeline manufacturing needs. Additionally, there would be a number of businesses and workers that would be positively impacted indirectly by this local pipe production.

Furthermore, as part of our Aboriginal and Native American Policy, we offer contracting opportunities to qualified Aboriginal and Native American suppliers and contractors where appropriate, and encourage joint venture opportunities between Aboriginal/Native American businesses and non-Aboriginal/Native American businesses when they build capacity and support mutual business interests. For example, through construction of a number of pipeline expansion/extension projects (Christina Lake, Woodland, Wood Buffalo, Athabasca, Waupisoo, and Bakken), Aboriginal communities and member-owned businesses realized an economic benefit of approximately \$89.5 million in 2012. In the first quarter of 2013, project construction had yielded approximately \$28.8 million in additional direct and indirect spend to Aboriginal communities.

## *EC7*

*Procedures for local hiring and proportion of senior management hired from the local community at locations of significant operation.*

Enbridge does not have a formal policy regarding hiring locally, but in practice most of the people that we hire are, in fact, hired locally.

In Canada, Enbridge's Liquids Pipelines business unit falls under the Employment Equity Act and pays specific attention to four designated groups who have traditionally faced barriers to progression in Canadian organizations: women; Aboriginal peoples; people with disabilities; and visible minorities. Enbridge has regarded compliance with the Act as an opportunity to understand and address barriers to hiring, retention and progression of the designated groups. A key activity has been the formation of relationships with client-facing organizations locally to support access to Enbridge opportunities, involving Enbridge colleagues in mentoring, speed networking, career fairs and events, presentations and outreach, and other activities that source the potential of the local workforce.

Compliance under the Employment Equity Act also requires Enbridge to analyze annual employment equity statistics for both total representation for the designated groups and also organizational placement. This analysis enables the organization to understand where we are being successful in recruitment and promotion, and where gaps exist, particularly through the hierarchy of positions. Enbridge looks for indicators of growth, year over year, to see that present talent is finding success as career progression.

Through our Aboriginal and Native American Policy, we commit to implementing measures to enable Aboriginals and Native Americans to become part of our permanent workforce at a level that is representative of regional demographics and encompasses a wide spectrum of career levels.

*For information on our approach to Aboriginal economic development, please refer to the Social Performance: Society—SO1—Aboriginal & Native American Relations section of this report.*

Also, Enbridge received the 2012 Recognizing Immigrant Success in Edmonton (RISE) award for efforts at successfully integrating internationally educated professionals. Initiatives such as language classes address cross-cultural communication, which can often be a barrier to career progression.

## **INDIRECT ECONOMIC IMPACTS**

### **EC8**

*Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement.*

Energy is the great enabler and is fundamental to almost everything people do. Yet, in developing countries, access to and affordability of energy can be prohibitive and has a very real impact on the quality and length of life of people in those countries.

Enbridge, through our support of the energy4everyone Foundation (e4e), is highlighting and tackling energy poverty by improving access to energy for targeted communities in Africa and Latin America; and demonstrating to people in developed nations the significant positive impact and value of energy in addressing poverty.

With a vision of empowering people and communities to improve their own lives by providing energy to everyone, e4e seeks to implement practical and sustainable solutions to improve access to energy for communities in need.

e4e designs each of its projects for triple bottom line results—Economic (savings from a more efficient technology, improvement of income level and productive time savings); Environmental (reduction of GHGs, savings of wood fuel and reduced deforestation); and Social (improved access to health, education and means of communication).

Enbridge has established an Employee Volunteer Assignment to give our employees the opportunity not only to implement an e4e project, but also to promote a better understanding of e4e, the energy challenges faced by communities in need, and how e4e-sponsored projects are designed to offer sustainable, long-term solutions to communities in need. Each Enbridge employee who has participated as an e4e volunteer was responsible for their own transportation to and from the project site (for example, to the project in Peru, which took place in April 2013) and used a week of their personal vacation time.

*For more information on energy4everyone and the projects in which it is currently engaged, please visit e4e's Facebook page at <http://www.facebook.com/energy4everyone#!/energy4everyone>.*

### **EC9**

*Understanding and describing significant indirect economic impacts, including the extent of impacts.*

Enbridge generates positive direct and indirect economic benefits through our pipeline construction activities.

For example, it is estimated that in the U.S. in 2009, our construction of the Alberta Clipper and Southern Lights projects created more than 3,000 temporary construction-related jobs. The workers hired for these jobs earned family-supporting wages and benefits and made purchases estimated to total more than \$60 million at lodging facilities, restaurants, gasoline service stations, laundry facilities, convenience stores and other retail establishments, all of which provided an economic boost to communities along the pipeline right-of-way.

#### **Benefits to Aboriginal and Native American Individuals and Communities**

Building on the successes of 2011, and through construction of a number of pipeline expansion/extension projects (Christina Lake, Woodland, Wood Buffalo, Athabasca, Waupisoo, and Bakken), Aboriginal communities and member-owned businesses realized an economic benefit of approximately \$89.5 million in 2012. In the first quarter of 2013, project construction had yielded approximately \$28.8 million in additional direct and indirect spend to Aboriginal communities.

Furthermore, as part of our Aboriginal and Native American Policy, we offer contracting opportunities to qualified Aboriginal and Native American suppliers and contractors where appropriate, and encourage joint venture opportunities between Aboriginal/Native American businesses and non-Aboriginal/Native American businesses when they build capacity and support mutual business interests.

Since 2009, Enbridge has spent approximately \$150 million with Aboriginal businesses for the provision of services for our pipeline expansion/extension projects in Canada. For example, in 2011, Enbridge announced the twinning of the Athabasca Pipeline, which runs through the Cold Lake First Nation's traditional territory in northeastern Alberta. The \$1.2-billion project is creating more than 1,000 jobs for the area, including positions for inspectors, subcontractors, and construction workers. Enbridge has contracted with companies owned by the Cold Lake First Nation, such as Dechen for tree clearing and Nu Nennè-Stantec for environmental services. Combined, these contracts are worth approximately \$15 million and provide direct employment and sub-contracting opportunities

for First Nation members.

In 2012, Enbridge also provided over \$1.5 million to support community development initiatives such as scholarships, bursaries and training programs to Aboriginal communities in proximity to Enbridge's pipeline projects. We also contributed \$34,500 toward the construction of Heart Lake First Nation's new Pow Wow Arbour facility.

### **Buying and Hiring Locally**

Enbridge's CSR Policy states that "Enbridge will strive to provide employment and economic opportunities in the communities where we operate."

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# AWARDS AND RECOGNITION

## Corporate Social Responsibility Awards and Recognition

By focusing on our core values of Integrity, Safety and Respect, Enbridge has received many CSR-related awards and recognition over the years from independent third parties. Criteria such as sustainability; financial health; environmental performance; workplace health, safety and fairness; community relations; and public disclosure were considered in the following awards:

- **Alberta's Top 60 Employers** 2010, 2011, 2012, 2013
- **American Gas Association Safety Achievement Award** (Enbridge Gas Distribution; for best overall DART<sup>1</sup> rate among "mega-sized gas distribution companies with over 1,500 employees") 2012
- **Canadian Council for Aboriginal Business, Silver Level, Progressive Aboriginal Relations (PAR) Certification**—three-year certification, 2012-2014
- **Canada's Greenest Employers** 2010, 2011, 2012
- **Canada's Top 100 Employers** 2010, 2011, 2012, 2013
- **Canada's Top Employers for Canadians over 40** 2012
- **Canadian Gas Association Corporate Safety Award** (Enbridge Gas Distribution; for best overall safety performance for similar injury metrics, as well as motor vehicle incidents) 2012
- **CDP's Global 500 Carbon Disclosure Ranking** 2010, 2011, 2012, 2013
- **Corporate Knights Best 50 Corporate Citizens in Canada** 2010, 2011, 2012, 2013
- **Corporate Knights Global 100 Most Sustainable Large Corporations in the World** 2010, 2011, 2012, 2013
- **Dow Jones Sustainability Index (North America)** 2012, 2013
- **Dow Jones Sustainability Index (World)** 2012, 2013
- **Forbes 100 Most Trustworthy Companies in America** (Enbridge Energy Partners) 2010, 2012, 2013
- **FTSE4Good Index** 2010, 2012, 2013
- **Houston Business Journal's Houston's Healthiest Employer Awards** 2013 (Enbridge Energy Partners)
- **Options Bytown's Make Homelessness History Award** 2013 (Enbridge Gas Distribution)
- **RobecoSAM / KPMG Gold Class Sustainability Leader, Pipeline Sector** 2013
- **Smart Commute—Northeast Toronto's Employer of the Year Award / Smart Commute Gold Workplace designation** (Enbridge Gas Distribution) 2012

<sup>1</sup> The DART metric includes lost-time injury statistics by compiling employee 'Days Away from work, Restricted duties or Transfer to another job.'

# ***ACKNOWLEDGEMENTS***

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