## Appendix 10-11

TransCanada 2014 Corporate Social Responsibility Report Summary Booklet



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governance by the Canadian Society of Corporate Secretaries and consistently ranked in the top 10 per cent by other governance assessments

Shortlisted for best overall

In 2014, we continued to receive third-party recognition for our accomplishments, but we haven't stopped examining our own efforts, setting targets and continually striving for improvement in everything we do.

## International recognition in 2014

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achievements

Recognized with a top score for our actions to disclose carbon emissions and mitigate the business risks of climate change by the CDP (formerly the Carbon Disclosure Project)

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What matters to you, matters to us.

We look at corporate social responsibility not as a facet of our business, but as a reflection of the way we conduct our business and an expression of our core values of integrity, responsibility, collaboration and innovation.

#### A MESSAGE FROM RUSS

Through every moment and for every North American, energy touches our lives in countless ways. It heats our homes while we sleep, powers our businesses to move the economy and fuels our transportation, all with increasing achievements in efficiency and conservation.

Recently, the growing global demand for energy has also generated discussion around how we access the important resources we rely upon. As a leading energy infrastructure company, TransCanada is taking a proactive, open and collaborative approach to the dialogue, understanding that this complex issue requires balanced consideration of safety, society, the environment and economics.

For more than 60 years, we have considered every business decision in terms of our ability to achieve top performance in all of these areas. The result is an unwavering commitment to operating sustainably and delivering on the commitments we make to our stakeholders.

#### **NOTEWORTHY IN 2014**

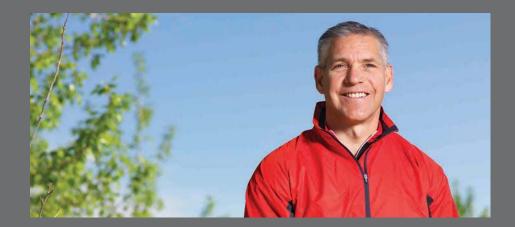
In 2014, we continued to receive third-party recognition for our accomplishments, but we haven't stopped examining our own efforts, setting targets and challenging ourselves to strive for continuous improvement.

That's why we spent \$1.3 billion in integrity and preventive maintenance programs in 2014. We also continued to invest meaningfully in our communities and strengthened our socio-economic program. And we began the rollout of our updated Environment Strategy, which focuses on environmental stewardship, protection and performance. We did all this while maintaining strong financial performance for our shareholders and to the benefit of the communities where we operate.

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I invite you to read this CSR Report online at www.csrreport.transcanada.com and welcome your comments at csr@transcanada.com



#### **SAFE OPERATIONS**

Pipelines continue to be the safest and most efficient method of transporting large volumes of natural gas and oil, and TransCanada's safety record is among the best in the world. But we recognize that is not good enough. No safety incidents are acceptable, and we will not be satisfied until we achieve our goal of zero incidents.

So, in January of 2014, when we had an incident along a natural gas pipeline south of Winnipeg, Manitoba, we worked around the clock to restore service and provide backup sources of heat to the 3,600 Manitobans who were affected over several winter days.

I was heartened by how the residents and businesses in those communities pulled together and supported our efforts and those of Manitoba Hydro and first responders on the ground to ensure public safety and address the needs of the community. We've also used the incident in Manitoba as a learning opportunity to strive even more rigorously toward our goal of zero incidents.

#### **LOOKING AHEAD**

In 2015, we will work toward alignment with Global Reporting Initiative G4 standards, allowing us to set targets and measure our performance in a manner that is more consistent with our industry peers as we continue our journey toward more comprehensive reporting. So while global recognition is encouraging, we know there are still things we can, and will, do better. That's where our focus lies now.

Ultimately, we look at Corporate Social Responsibility (CSR) not as a facet of our business, but as a reflection of the way we conduct our business and an expression of our core values of integrity, responsibility, collaboration and innovation.

TransCanada has been working hard behind the scenes for generations to deliver the natural gas, electricity and oil our society needs. We know how we respond to what matters to you will enhance your confidence in our business. It will also help us build the new and improved infrastructure that is required to meet the growing global need for affordable energy.

We invite you, as stakeholders in TransCanada's business and participants in the energy discussion, to tell us what you think of what we're doing and what we can do better. Because ultimately, we're working for you — the people who benefit from the energy we proudly transport and live as our neighbours in the many diverse communities where we operate.

Thank you for your continued interest in what we do.

Russ Girling President and CEO, TransCanada

TransCanada Corporate Social Responsibility 2014 03

Understanding your interests is of key importance to TransCanada, and our work in Corporate Social Responsibility (CSR) helps define how we are conducting business in the ways you've told us matter most to you — including our dedication to zero safety incidents and operating in a socially, environmentally and economically sustainable manner.

#### **ABOUT THIS REPORT**

While we've been producing our CSR Report since 2001, we continue to streamline our efforts with an eye to ensuring our CSR practices reflect our corporate values and are embedded within the work we do every day. Over time, we have formalized these actions into policies and procedures, and we summarize them annually in this report.

In 2012, we defined CSR for TransCanada as a "commitment to operating in an economically, socially and environmentally sustainable manner, while recognizing the interests of our stakeholders." In addition, we established a CSR office tasked with raising standards on our reporting and performance. We have invested time and resources to determine the most important issues facing our company

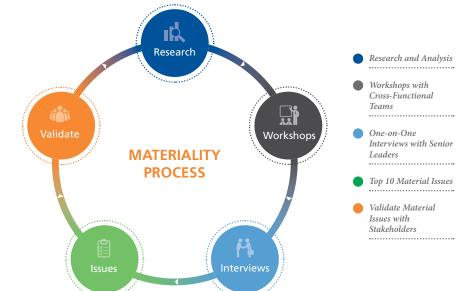
and develop more rigorous programs to track our performance, identify gaps and minimize risk.

In 2013, we undertook a materiality assessment that helped us define our top 10 material issues, and we reported on those areas in our 2013 CSR Report. In the future, we'll strive to validate our material issues externally, and one way we're doing that is by asking for your feedback on this report and the information we provide here.

But relying on our track record is not enough, which is why we respond to third-party organizations who measure consistency and transparency in CSR reporting. For the 13th year in a row, we were included in the Dow Jones Sustainability World Index and, in 2014, we regained a place on its North America Index.

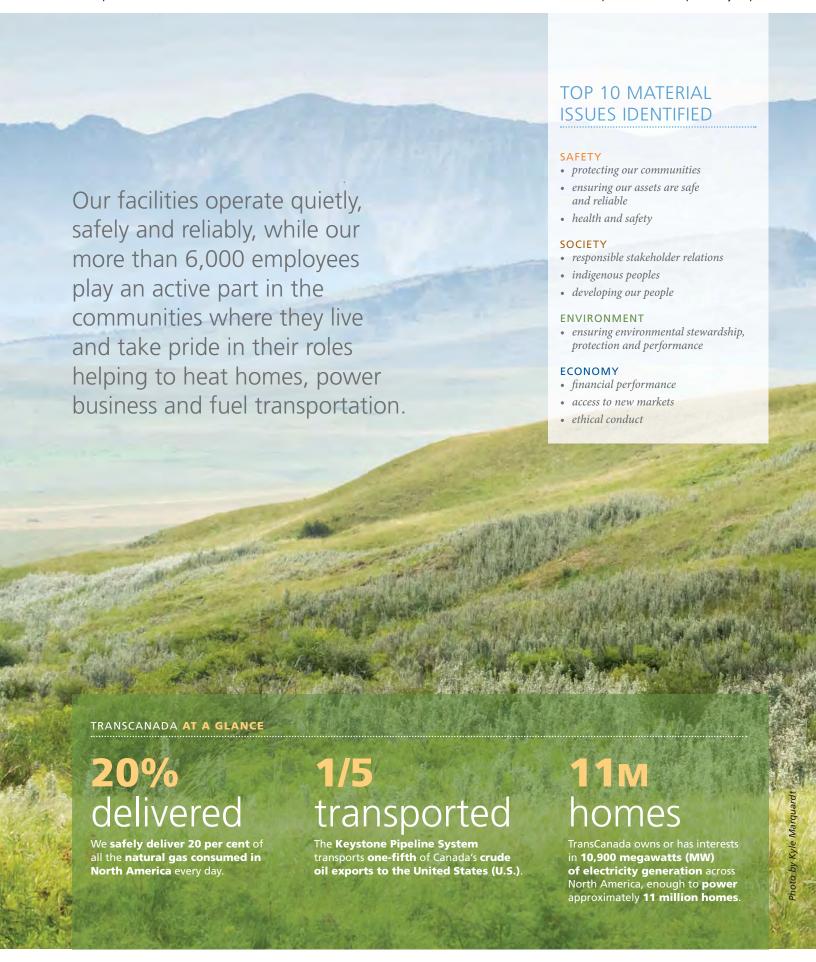


As one of the top-scoring companies in our industry, we qualified for inclusion in RobecoSAM's 2015 Sustainability Yearbook and received the Bronze Class distinction for excellent sustainability performance. We were also recognized as a leader for disclosing our carbon emissions and our strategy for mitigating the business risks of climate change by the London-based CDP (formerly the Carbon Disclosure Project).



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This external recognition is important because it tells us how we are performing compared to our peers on a global scale. But what's most important is our work with people like you. We recognize that, today, stakeholders are rightly demanding evergreater transparency and accountability. We need to demonstrate to you that our commitment is more than just words.

This report on our performance covers the period between January 1 and December 31, 2014. Unless otherwise stated, all dollar figures reported are in Canadian funds.

We have gathered data and examples from across the company to provide you with the evidence of the sustainable practices we are dedicated to carrying out in our daily business activities.

#### **ABOUT TRANSCANADA**

In October of 1958, the last weld was completed on TransCanada's Canadian Mainline — a pipeline system unlike anything the continent had seen before. In the months that followed, the first natural gas furnaces from west to east were switched on, forever revolutionizing indoor temperature control.

Fast forward more than 60 years, and, today, TransCanada safely delivers 20 per cent of the continent's natural gas supply. We also deliver one-fifth of Canada's crude oil exports to U.S. markets through our Keystone Pipeline System and generate enough electricity to power 11 million homes.

We have proudly operated these infrastructure assets across North America for decades, supporting a standard of living that is consistently improving with technological advances that are fuelled by energy. Our facilities operate quietly, safely and reliably, while our more than

6,000 employees play an active part in the communities where they live and take pride in their roles helping to heat homes, power business and fuel transportation.

# That's why we view the important work of building and maintaining long-term relationships with you as a cornerstone of our business.

We work from the ground up by engaging directly with the people who are involved in our projects, listening closely to your needs and concerns and responding with positive solutions. These relationships support public confidence in our business, allowing us to continue providing the energy our society needs while meeting the needs of our customers into the future.

#### **OUR THREE BUSINESSES**

#### Natural Gas Pipelines

We operate a network of 68,000 kilometres (km) (42,100 miles) of natural gas pipeline; enough to circle the Earth 1.7 times and supply 20 per cent of the natural gas consumed daily across North America. We are also North America's third-largest gas storage provider with 368 billion cubic feet of capacity.

#### **Liquids Pipelines**

Our Keystone Pipeline System transports one-fifth of Canada's crude oil exports to refineries in the U.S. that convert it into fuel and other useful products. Since it began operation in July 2010, Keystone has safely transported more than 900 million barrels of crude oil from Canada to U.S. markets.

#### Energy

TransCanada owns or has interests in 10,900 MW of generating capacity at 19 power-generation facilities. That's enough to power more than 11 million homes. In support of North America's growing demand for cleaner energy, one-third of the power we provide is generated from emission-less sources including nuclear, hydro, wind and solar.

#### **OUR MISSION, VISION AND VALUES**

#### **Our Mission**

To provide reliable supplies of energy across the continent — safely and responsibly. We are proud that millions of North Americans can depend on us for the energy they need.

#### **Our Vision**

To be the leading energy infrastructure company in North America, with a strong focus on pipelines and power generation opportunities located in regions where we have, or can develop, a significant competitive advantage.

#### Our Values

Values guide how we work, treat one another and operate at TransCanada every single day. Our values are integrity, responsibility, collaboration and innovation.

OUR CORPORATE VALUES

Integrity Responsibility Collaboration Innovation

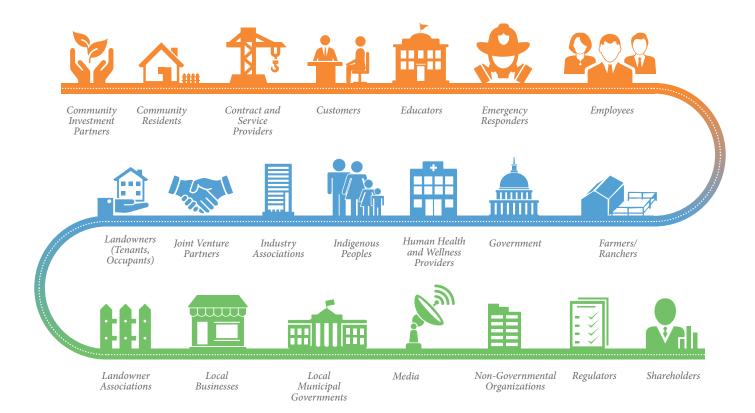
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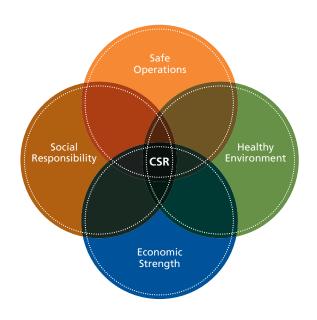


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#### TRANSCANADA'S STAKEHOLDERS



#### STAKEHOLDER EXPECTATIONS



In 2012, we defined CSR for TransCanada as a "commitment to operating in an economically, socially and environmentally sustainable manner, while recognizing the interests of our stakeholders."

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Our Board of Directors and management are committed to the highest standards of ethical conduct and corporate governance.

#### **GOVERNANCE**







#### **HOW WE ARE GOVERNED**

We believe that strong corporate governance improves corporate performance and benefits all stakeholders. Our board and management are committed to the highest standards of ethical conduct and corporate governance. The board has four standing committees: the audit committee; the governance committee; the health, safety and environment committee; and the human resources committee. The board does not have an executive committee. As president and CEO of TransCanada, Russ Girling is not a member of any of our committees, but is invited to attend committee meetings as required.

The board has formally adopted the corporate governance guidelines recommended by the governance committee. These guidelines address the structure and composition of the board and its committees, and clarify the responsibilities of the board and management.

TransCanada is a public company listed on the Toronto Stock Exchange (TSX) and the New York Stock Exchange (NYSE), and we recognize and respect rules and regulations in both Canada and the U.S.

#### Governance Highlights

Governance	
Size of Board of Directors (#)	11
Executive directors (#)	1
Percentage of independent directors	91%
Percentage of women on TransCanada board	27%
Average director age	63
Director retirement age	70
Separate chair and CEO	Yes
All committees independent	Yes
Annual director elections	Yes
Individual director elections	Yes
Average board meeting attendance	98%
Majority voting policy	Yes
Say on pay approval vote	94.28%
Number of board interlocks	0
Clawback policy	Yes
Double-trigger vesting on change of control	Yes
Director share ownership requirements	4x cash + equity retainer
Executive share ownership requirements	5x (CEO), 2x (other named executives)
In-camera sessions at every board and committee meeting	Yes
Code of business ethics	Yes
Board, committee and director evaluations annually	Yes
Board orientation and education program	Yes
CEO total direct compensation (\$ M)	7.86

As of March 2, 2015

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## The board has **key duties** and responsibilities,

delegates some duties to its four standing committees and discharges others to management for the day-to-day affairs of the business.

#### Role and Responsibilities of the Board

The board's primary responsibilities are to foster TransCanada's long-term success, oversee our business and affairs and management, and to act honestly, in good faith and in the best interests of TransCanada. The board's main objective is to promote our best interests, to maximize long-term shareholder value and to enhance shareholder returns.

#### Board Renewal

The governance committee regularly assesses the skill set of each director, and reviews it against the director retirement schedule, their ages and the composition of each committee. The review also takes into account the desirability of maintaining a reasonable diversity of backgrounds, and character and behavioural qualities such as integrity.

The governance committee, with input from the chair of the board and the CEO, is responsible for identifying suitable director candidates, and canvasses the entire board for potential nominees.

The committee also uses a third-party recruitment specialist to identify potential director candidates. The committee is responsible for assessing the individuals and proposing the strongest candidates for nomination. An evolving roster of suitable director candidates is maintained by the committee.

The committee looks for a mix of skills and experience required for overseeing our business and affairs. The board considers personal characteristics such as gender, ethnic background and geographic residence when looking at diversity; however, candidates are nominated as directors based on their background and ability to contribute to the board and committee meetings.

The committee ensures that the board seeks expertise in the following key areas:

- Accounting & finance
- Energy/utilities
- Engineering
- Governance
- Government/regulatory
- Health, safety and environment
- International markets
- Law
- Management/leadership
- Oil & gas/utilities
- Operations
- Risk management

Candidates who are being nominated for the first time must have experience in industries similar to ours, or experience in general business management or with corporations that are similar in size and scope. Candidates must also be willing to serve on the board, able to devote the necessary time to fulfil their duties and responsibilities, and be under 70 years old.

The committee recommends potential candidates based on their qualifications and independence and how these qualities balance with the skill set of the current board, the structure and composition of the committees and the director retirement schedule. This assessment helps the board determine the best mix of skills and experience to guide our business operations and our long-term strategy.

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#### Board Matrix

The matrix below shows the likely retirement year of the current non-executive directors based on current age, and the skills, committees, education and expertise of all our nominated directors. The governance committee considers these factors and others when discussing board renewal.

Director					ıs									
(expected retirement year)			Accounting & finance	Energy/utilities	Engineering	Governance	Government/regulatory	Health, safety and environment	International markets	Law	Management/leadership	Oil & gas/utilities	Operations	Risk management
Kevin E. Benson (2017)	Chartered Accountant	Audit (Chair) Governance	X			X	X				X		X	
Derek H. Burney (2016)	M.A. Political Science B.A. Political Science (Hon)	Audit Governance (Chair)		X		X	X		X		X			
Paule Gauthier (2016)	LL.M LL.B B.A.	Health, Safety and Environment Human Resources				X	X			X				
Russell K. Girling	MBA B. Comm	_	X	X		X	X	X			X	X	X	X
S. Barry Jackson (2023)	B.Sc. Engineering	Board Chair Governance Human Resources		X	X	X		X			X	X	X	
Paula Rosput Reynolds (2027)	B.A. Economics (Hon)	Health, Safety and Environment Human Resources (Chair)		X							X	X		X
John Richels (2021)	LL.B B.A. Economics	Health, Safety and Environment Human Resources	X	X		X		X		X	X	X	X	X
Mary Pat Salomone (2030)	MBA B.A. Engineering	Audit Health, Safety and Environment		X	X			X	X		X		X	
D. Michael G. Stewart (2022)	B.Sc. Geological Sciences (Hon)	Audit Health, Safety and Environment (Chair)		X				X			X	X	X	
Siim A. Vanaselja (2027)	Hon. BBA	Audit Governance	X			X			X		X			X
Richard E. Waugh (2018)	Hon. MBA B. Comm (Hon)	Governance Human Resources	X			X			X		X			X

As of March 2, 2015

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In order to achieve a diverse board, the governance committee focuses on the process surrounding director nomination. Each year, the **governance committee** reviews the general and specific criteria applicable to candidates to be considered for nomination to the board.

#### **Board Diversity**

TransCanada has been committed to a diverse board since 1999, when our corporate governance guidelines were revised to include a variety of diversity criteria, which bring a range of perspectives to the board that are not limited to gender diversity.

While the governance committee has not set a specific target for the number of women directors on our board, it believes that a diverse board with a variety of perspectives enhances our decision-making and helps keep the board informed and effective. We do not believe targets are an appropriate method of increasing diversity on the board.

Instead, we believe that a process-based method of reviewing directors on a variety of diversity factors (including gender) is more appropriate, particularly given the business environment in which TransCanada operates.

In order to achieve a diverse board, the governance committee focuses on the process surrounding director nomination.

Our corporate governance guidelines provide that, when choosing director nominees, the committee takes into account the diversity of backgrounds, skills and experience, and personal characteristics such as age, gender, and geographic residence among the directors along with the key common qualities required for effective board participation.

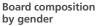
We have not adopted a written policy with respect to the identification and nomination of women directors because we believe that encompassing our diversity criteria in our written corporate governance guidelines is more appropriate than a separate written policy. The committee ensures that the list of potential director candidates discussed includes a reasonable number of qualified women candidates, but ultimate decisions are made based on the qualifications of the candidates and the expertise needs of the board.

Currently, 27 per cent of the board is composed of women directors.

The committee aims to maintain the composition of the board in a way that provides the best mix of skills and experience to guide our strategy and oversee ongoing business operations. TransCanada does not have term limits for directors, but does have a retirement policy to encourage board renewal. More information is available in the Management Information Circular online at www.transcanada.com and on SEDAR (www.sedar.com).

#### **Board Characteristics**

- We have an independent, nonexecutive chair
- We maintain an effective board size
- All directors except our CEO are independent
- The board is made up of knowledgeable and experienced directors who oversee processes to ensure that we promote ethical behaviour throughout TransCanada
- We have qualified directors who can make a meaningful contribution to the board and the development of our business
- There are significant share ownership requirements to align the directors' interests with those of our shareholders
- We undergo annual assessments of board, chair, committee and director effectiveness





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#### Independence

An independent board is a fundamental principle of governance. We believe that the majority of our directors must be independent in accordance with legal requirements, and consistent with the independence criteria of the regulations of the U.S. Securities and Exchange Commission (SEC) and rules of the NYSE.

The governance committee and the board review the independence of each board member and nominated director against these criteria once a year. They also review family relationships and associations with companies that have relationships with TransCanada when they review director independence.

The board has determined that all of the nominated directors are independent, except for Russ Girling because of his role as president and CEO. Other than Russ Girling, none of the directors have a direct or indirect material relationship with TransCanada that could reasonably be expected to interfere with the exercise of their independent judgment.

#### Independent Chair

The chair is appointed by the board, and serves in a non-executive capacity. We have had separate chair and CEO positions since our incorporation in 2003 and at our predecessor company since 1994. Barry Jackson has served as the independent non-executive chair since April 30, 2005.

The chair is responsible for ensuring that the board is organized properly, functions effectively and meets its obligations and responsibilities. The chair's role includes co-ordinating the affairs of the board, working with management (primarily the CEO), and ensuring effective relations with board members, shareholders, other stakeholders and the public.

#### Independent Advice

The board and each of its four standing committees can retain independent advisors to assist in carrying out their duties and responsibilities.

#### Serving on Other Boards

Our directors are limited to serving on a total of six public company boards to ensure we do not have overboarding or interlocking relationships that would conflict with a director's independence or interfere with fulfilling their board duties and responsibilities. We discuss the time commitment and duties and responsibilities with every candidate so they have a full understanding of the role and our expectations of directors. The governance committee monitors director relationships to ensure their business associations do not hinder their role as a TransCanada director or board performance overall.

The board believes that it is important for it to be composed of qualified and knowledgeable directors. As a result, due to the specialized nature of the energy infrastructure business, some of the nominated directors are associated with or sit on the boards of companies that ship natural gas or liquids through our pipeline systems. Transmission services on most of TransCanada's pipeline systems in Canada and the U.S. are subject to regulation and, accordingly, we provide non-discriminatory transportation services to all creditworthy shippers. The governance committee monitors relationships among directors to ensure that business associations do not affect the board's performance.

If a director declares that they have a material interest in a material contract or transaction that is being considered by the board, the director leaves the meeting so the matter can be discussed and voted on.

See the Management Information Circular on **www.transcanada.com** for the other public company boards each nominated director serves on.

#### Independent of Management

Our corporate governance guidelines stipulate that the board must meet at the end of each board meeting, in-camera, without management present. In 2014, the independent directors met separately before and at the end of every regularly scheduled board meeting.

Our board has adopted the policy of holding in-camera sessions at each meeting of its committees without management. Members of management meet with the independent directors upon request.

#### Principal Shareholders

Our directors and executives are not aware of any person or corporation that beneficially owns, directly or indirectly, or exercises control or direction over, more than 10 per cent of our outstanding shares.

#### Related Party Disclosures

While a disclosure process exists, TransCanada does not currently have any related party transactions to disclose (as of March 2, 2015).

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#### **Ethical Conduct**

Our code of business ethics incorporates principles of good conduct and ethical and responsible behaviour to guide our decisions and actions and the way we conduct business.

The code applies to all employees, officers and directors as well as contract workers of TransCanada and its wholly owned subsidiaries and operated entities in countries where we conduct business. All employees (including executive officers) and directors must certify their compliance with the code every year. Our policy strictly prohibits reprisals or retaliation against anyone who files an ethics concern or complaint in good faith.

The code covers potential conflicts of interest and requires employees to receive consent before accepting a directorship with an entity that is not an affiliate. The CEO and executive vice-presidents (our executive leadership team) must receive the consent of the governance committee. The board considers whether directors serving on the boards of all entities, including public and private companies, Crown corporations and other state-owned entities, and non-profit organizations, pose any potential conflict.

Internal audit handles most investigations, including any concerns about directors and senior management. This process is overseen by the audit committee.

More information and the charter of the audit committee are available online at www.transcanada.com.

For more information on ethical conduct policies and programs at TransCanada, please refer to page 87 in this report.

Serving Together on Other Boards While the board does not prohibit directors having common membership on other boards, the board reviews potential common membership on other boards as they arise to determine whether it affects the ability of those directors to exercise independent judgment as members of

None of our directors currently serve together on another board (as of March 2, 2015).

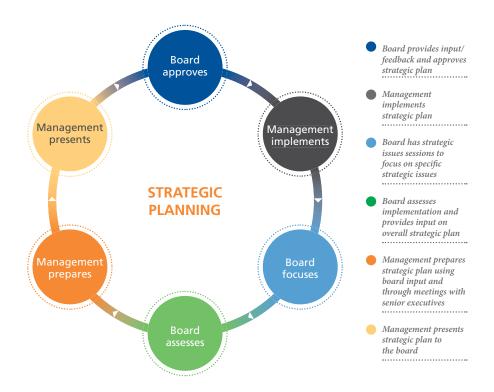
TransCanada's board.

#### Strategic Planning

The board provides oversight and direction in the strategic planning process to ensure management develops corporate strategies that support our vision to be the leading energy infrastructure company in North America. We set annual corporate objectives to support our core strategies for achieving growth and creating value for shareholders. These are established with and approved by the board every year.

The governance committee oversees the processes used for the preparation and articulation of our strategic plan.

In addition to the ongoing strategic planning process, the board and governance committee address emerging strategic issues throughout the year as they arise.



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April 2016 Page 17 of 96 TransCanada maintains a comprehensive corporate risk register which identifies principal risks associated with our business and **seeks input from across the organization** to ensure it reflects any new key business risks as our business grows and our environment evolves. In addition, 'top-of-mind' concerns are solicited from our senior executives and presented to the board.

#### Risk Oversight

The board and its committees are responsible for risk oversight, including overseeing management systems and processes for identification, evaluation, prioritization, mitigation and monitoring of risk.

#### Process

Our directors have a broad range of experience and skills in risk management and, as a result, the board is highly engaged and qualified to participate in a meaningful discussion of key business risks with management at board and committee meetings.

A key business risk is generally defined as an exposure that has the potential to materially impact TransCanada's ability to meet or support its business, operational or strategic objectives.

TransCanada maintains a comprehensive corporate risk register which identifies principal risks associated with our business and seeks input from across the organization to ensure it reflects any new key business risks as our business grows and our

environment evolves. In addition, 'top-of-mind' concerns are solicited from our senior executives and presented to the board. This process recognizes the dynamic and evolving business environment in which we operate and allows management to keep the board informed of existing and emerging risks and how those risks are managed or mitigated in accordance with TransCanada's risk parameters and risk tolerance.

All risks identified under the corporate risk register are categorized using a risk responsibility matrix which establishes clear accountabilities to the board, committee and executives responsible for specific oversight of each risk.

The governance committee oversees our risk management process. The committee reviews TransCanada's 'top-of-mind' business risks with management at each committee meeting and the risk responsibility matrix with management annually to ensure there is proper board and committee oversight according to the terms of their charters, and that we have management programs in place to mitigate those risks. It also recommends, along with the respective committee (or executive) assigned responsibility for specific risks, any enhancements to our risk management program and policies to the board.

Our risks are categorized according to these main areas:

- Corporate strategy
- Business strategy and execution
- Business opportunity
- Commercial operations
- Physical operations, and
- General corporate risk (including compensation risk)

In addition, all projects and opportunities recommended by management to the board for approval include specific descriptions on the associated risks. The risk discussion associated with each project forms a part of the board's determination of whether to approve projects or pursue opportunities.

Our process ensures that the board is fully informed of the interrelationship between the business environment and risks, and is intended to facilitate and stimulate discussion of our key business risks.

Our Annual Information Form (AIF) and Annual Report include more information about the risks applicable to TransCanada. The 2014 AIF and the 2014 Annual Report are available at www.transcanada.com and on SEDAR (www.sedar.com).

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#### Committee Responsibilities

TransCanada's committees are also involved in risk oversight in their respective areas to ensure a robust process with appropriate expertise, attention and diligence given to each key business risk. Generally, the audit committee oversees financial risk, the human resources committee oversees human resources and compensation risk, and the health, safety and environment committee oversees operational risk, people and process safety, security and environmental risks. The committees update the board on their risk oversight activities regularly.

The audit committee oversees management's role in monitoring compliance with risk management policies and procedures and reviewing the adequacy of our financial risk management. Our financial risk management strategies, policies and limits are designed to ensure our risks and related exposures are in line with our business objectives and risk tolerance. Risks are managed within limits that are ultimately established by the board, implemented by senior management and monitored by our risk management and internal audit groups. In addition, the committee also oversees cybersecurity and its related risks to TransCanada.

See Compensation governance in the Management Information Circular on **www.transcanada.com** and on SEDAR (**www.sedar.com**) for information about how we manage our compensation risk. Our management system for HSE is modelled after international standards, conforms to external industry consensus standards and voluntary programs, and complies with applicable legislative requirements and various other internal management systems.

## Health, Safety and Environment Committee

The health, safety and environment committee monitors compliance with our health, safety and environment (HSE) corporate policy through regular reporting from management. We have an integrated HSE management system that establishes a framework for managing HSE issues and is used to capture, organize and document our related policies, programs and procedures.

Our management system for HSE is modelled after international standards, conforms to external industry consensus standards and voluntary programs, and complies with applicable legislative requirements and various other internal management systems. It follows a continuous improvement cycle organized into four key areas:

- Planning: risk and regulatory assessment, objectives and targets, and structure and responsibility
- Implementing: development and implementation of programs, plans, procedures and practices aimed at operational risk management
- Reporting: document and records management, communication and reporting
- Action: ongoing audit and review of HSE performance

The committee reviews HSE performance and operational risk management on a quarterly basis. It receives detailed reports on:

- Overall HSE corporate governance
- Operational performance and preventive maintenance metrics
- Asset integrity programs
- Emergency preparedness, incident response and evaluation
- People and process safety performance metrics
- Developments in and compliance with applicable legislation and regulations

The committee also receives updates on any specific areas of operational and construction risk management review being conducted by management and the results and corrective action plans flowing from internal and third-party audits.

Each year, the committee's practice is to conduct a site visit and tour of at least one of our existing assets or projects under development as part of the committee's responsibility to monitor and review our HSE practices. The board is invited to join the committee at its site visit and the board also typically has a separate site visit each year.

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#### **HSE Commitment Statement**

The executive leadership team, management and employees at TransCanada are committed to being an industry leader in health, safety and environmental practices, to maintaining a safe and healthy workplace, and to protecting the environment.

#### **HS&E COMMITTEE OF THE BOARD**

Members	<ul> <li>D. Michael G. Stewart (Chair)</li> <li>Paule Gauthier</li> <li>Paula Rosput Reynolds</li> <li>John Richels (as of May 2, 2014)</li> <li>Mary Pat Salomone</li> </ul>
Meetings in 2014	3 regularly scheduled meetings (February, May and October)
Independent	5 independent directors, 100 per cent independent
Mandate	<ul> <li>The health, safety and environment committee is responsible for overseeing our health, safety, security and environmental practices and procedures.</li> </ul>
	<ul> <li>It monitors our compliance with applicable legislative and regulatory requirements, and oversees our policies, management systems, programs, procedures and practices to prevent or mitigate losses and to protect our people, assets, network and infrastructure from malicious acts, natural disasters or other crisis situations.</li> </ul>
	<ul> <li>It also reviews and reports to the board on actions and initiatives taken to mitigate risk related to health, safety, security and environment having the potential to affect our people, activities, plans, strategies or reputation.</li> </ul>

Also, in 2014, all of the board members participated in a special session devoted to operational risk management.

The health, safety and environment committee met separately with the vicepresident, community and sustainability at the end of the February and May meetings and with the executive vice-president, operations and engineering at the end of the October meeting. The committee also meets in-camera at the beginning of each meeting as necessary, and at the end of each meeting.

#### **COMPOSITION AND COMPENSATION**

#### **Board of Directors Composition**

For each individual's significant positions and commitments, and the nature of the commitments, please see the nominated directors' profiles in the Management Information Circular available on www.transcanada.com and on SEDAR at www.sedar.com.

#### **Director Tenure**

The governance committee reviews factors such as age, changes in principal occupation, consistently poor attendance, poor performance and other relevant circumstances that may trigger the resignation or retirement of a director.

Once a director turns 70, he or she will not stand for re-election at the next annual meeting. The board may waive the retirement age for a director if:

- they have not served seven consecutive years by age 70, or
- their continued service is in the best interests of the company, because of their specific skills and experience.

TransCanada does not use term limits for our directors. We do not believe term limits are an effective mechanism to promote board renewal.

#### **Executive Compensation**

TransCanada's compensation programs are designed to 'pay for performance' by rewarding employees, including our executives, for delivering results that meet or exceed our corporate objectives and support our overall strategy.

#### **Director Compensation**

Our director compensation program reflects our size and complexity, and reinforces the importance we place on delivering shareholder value. Director compensation includes annual retainers and meeting fees that are paid in cash and deferred share units to link a significant portion of their compensation to the value of our shares.

#### Compensation Governance and Policies The board, the human resources committee and the governance committee are responsible for the integrity of our compensation governance practices.

The human resources committee reviews and makes recommendations regarding executive compensation, and the governance committee does so for director compensation.

The board approves all matters related to executive and director compensation. The governance and human resources committees are responsible for reviewing compensation matters and making any recommendations to the board.

Both committees are entirely independent. Each human resources committee member is independent under the NYSE compensation committee independence requirements.

## Our compensation best practices include:

- Benchmarking director and executive compensation against size appropriate peer groups to assess competitiveness and fairness
- Limits on variable compensation payments
- Share ownership requirements for our directors and executives
- Incentive compensation reimbursement ('clawback') policy and anti-hedging policy
- Annual say on pay vote, exceeding 92 per cent approval for the last three years

The graph below shows the composition of our board by years of service.



- 55% 0-5 years
- **27% 6-10 years**
- 18% 11-15 years

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The human resources committee retains an independent compensation consultant to provide advice on compensation-related matters.

The committee created a mandate for the consultant that includes:

- Advising on compensation levels for the CEO and named executives
- Assessing the CEO's recommendations on the compensation of the other named executives
- Share ownership requirements for our directors and executives
- Attending all of its committee meetings (unless otherwise requested by the committee chair)
- Incentive compensation reimbursement ('clawback') policy and anti-hedging policy, and providing data, analysis or opinion on compensation-related matters requested by the committee or its chair, and
- Reporting to the committee on any matters that may arise related to executive compensation.

While Meridian (TransCanada's current compensation consultant) provides advice to the committee, it does not provide consulting or other services to TransCanada. Before engaging Meridian, and after considering all factors bearing on the consultant's independence, including those factors enumerated by the NYSE, the committee determined that Meridian is independent.

# The code of ethics incorporates principles of **good** conduct and ethical and responsible behaviour to guide our decisions and actions

## Policies and Guidelines to Manage Compensation Risk

The governance committee, the human resources committee and the board have instituted several policies to ensure that compensation risk is appropriately managed and that the interests of both directors and executives are aligned with those of our shareholders. These policies are derived from best practices in governance and legal requirements.

- Corporate goals: We adopt corporate goals consistent with our approved financial plan so that the board can monitor how compensation influences business decisions.
- Share ownership requirements: We have share ownership requirements for both directors and executives, reflecting the board's view that directors and executives can represent the interests of shareholders more effectively if they have a significant investment in TransCanada.
- Prohibition on hedging: Our trading policy includes an anti-hedging policy preventing directors and officers from using derivatives or other instruments to insulate them from movements in our share price. This includes prepaid variable forward contracts, equity swaps, collars and units of exchange funds.
- Reimbursement: If there is an incidence of misconduct with our financial reporting and we must restate our financial statements because of material non-compliance with a financial reporting requirement, our CEO and CFO are required by law to

reimburse TransCanada for incentivebased compensation related to the period the misconduct occurred. They must also reimburse us for any profits they realized from trading TransCanada securities during the 12 months following the issue of the misstated financial statements. In February 2015, we implemented our incentive compensation reimbursement policy which requires employees at the vice-president level and above to repay vested and unvested incentive compensation granted in the three-year period preceding a restatement of financial results or a material error in financial reporting if the restatement or error resulted from the employee's intentional misconduct. We will amend the policy as necessary to conform to any applicable laws, such as the final Dodd-Frank rules.

• Say on pay: We implemented a non-binding advisory shareholder vote on our approach to executive compensation starting in 2010. The results shown in the table below confirm that a significant majority of shareholders have accepted our approach to executive compensation. The approval vote as a percentage of shares voted in favour of our approach to executive compensation for the last three years is as follows:

Year	Approval vote (%)
2014	94.28
2013	92.67
2012	96.63

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 Code of business ethics: Our code of business ethics applies to employees, contract workers, independent consultants and directors. The code incorporates principles of good conduct and ethical and responsible behaviour to guide our decisions and actions and the way we conduct business.

## Aligning the Interests of Directors and Shareholders

The board believes that directors can represent the interests of shareholders more effectively if they have a significant investment in TransCanada. Directors must hold at least four times their annual cash plus equity retainer in shares or Deferred share units (DSUs) within five years of joining the board.

Directors can meet the requirements by purchasing TransCanada shares, participating in our dividend reinvestment plan or by directing all or a portion of their compensation to be paid in DSUs. We recalibrate the ownership values if the cash plus equity retainer is increased. If their holdings fall below the minimum level because of fluctuations in our share price, we expect directors to attain the minimum threshold within a reasonable amount of time set by the governance committee.

As president and CEO, Russ Girling must instead meet our CEO share ownership requirement which is four times his base salary. Russ Girling meets these ownership requirements. Effective February 13, 2015, the ownership requirement for Russ Girling was raised to five times his base salary, which he also meets.

As of March 2, 2015, all of our directors meet the share ownership requirements. Two recently appointed directors have five years from their respective appointment dates to meet the requirements.

## Aligning the Interests of Executives and Shareholders

We have share ownership requirements to align the interests of our executives and shareholders. The minimum requirements are significant and vary by executive level. As at December 31, 2014, the ownership requirements were:

Executive level	(multiple of base salary)
Chief Executive Officer	4x
Executive Vice-Presidents	2x
Senior Vice-Presidents	1x

Executives were required to have outright ownership of at least 50 per cent of the requirement in shares of TransCanada or units of TC PipeLines, LP. The remaining 50 per cent could be held in the form of unvested executive share units.

Effective February 13, 2015, the board approved an increase in the share ownership requirement for the CEO to 5 times base salary, and determined that all executives must meet their ownership requirements through shares of TransCanada or units of TC PipeLines, LP only.

Executives have five years to meet the requirement. Executives must 'buy and hold' 50 per cent of all stock options they exercise until they meet their share ownership requirements.

The committee reviews share ownership levels for each executive every year. It may use its discretion when assessing compliance if ownership levels fall below the minimum because of fluctuations in share price.

All of the named executives met their share ownership requirements in 2014.

#### **Executive and Director Compensation**

Detailed executive and director compensation information is available in our Management Information Circular online at **www.transcanada.com** and on SEDAR (**www.sedar.com**).

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I'm proud that for over 60 years we have demonstrated world-class safety performance and have one of the best safety records across our industry. Getting it right is more important than ever and we care deeply about the safety and people who work at, or live near, our facilities.

#### **JIM BAGGS**

Executive vice-president, operations and engineering

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Our goal is to ensure that our pipeline and energy facilities operate safely every day and that the public, our employees and the environment are never negatively affected by an incident involving our assets. We know that our performance in safety and reliability influences your level of trust in us.

We have a top industry safety record in terms of the rate and severity of incidents at our facilities; however, we still believe every incident is preventable and continue toward our goal of realizing zero safety incidents. There are many complementary programs within the organization to help us achieve this goal, including our robust pipeline integrity program, research and development investment in the latest innovations, our public awareness program and first-responder outreach.

Our people routinely take on leadership roles on industry-wide safety improvement initiatives and reviews, and we are eager to adopt and share best practices and technologies that promote safe and efficient operations. We ensure we learn from others' experiences as they learn from us.

## PROTECTING OUR COMMUNITIES

TransCanada invested \$1.3 billion in integrity and preventive maintenance programs in 2014.

Your safety is our number 1 priority, and we strive for zero incidents. TransCanada's holistic public awareness program is recognized through effectiveness surveys, benchmarking studies and industry association feedback as industry leading in preventing unauthorized activities, enhancing leak recognition and response, and promoting effective

emergency preparedness. This is a key component of TransCanada's commitment to protect your safety, and the safety of our employees, the environment and our assets. In 2014, a number of strategic activities took place to raise the bar further in terms of how we help keep you safe.

## OUTREACH TO IDENTIFIED STAKEHOLDERS

In 2014, we provided direct outreach to approximately 245,000 emergency responders, public officials and excavators through our public awareness program. We also reached more than 330,000 stakeholders through mailings, meetings and other events in their communities.

In addition, TransCanada maintains a partnership with Pipeline Association for Public Awareness (PAPA), a non-profit organization established to provide pipeline safety and emergency preparedness information to residents, businesses, farmers, excavators, emergency responders and public officials.

#### **PUBLIC AWARENESS CALENDAR**

Every year, TransCanada creates and distributes a calendar promoting pipeline safety awareness for landowners near our assets and along our pipeline routes. In 2014, 67,661 calendars were directly mailed to landowners in Canada and the U.S. and 2,575 were delivered to landowners in Mexico. Employees also receive the calendar, which helps to keep safety both a top priority and top of mind.

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#### THIRD-PARTY DAMAGE PREVENTION

Third-party damage is defined as impact or exposure resulting in the need to repair an underground facility. We mitigate this threat through our robust public awareness program, aerial patrols to monitor for unauthorized activities and our support of One-Call programs that allow anyone conducting excavations to request a free locate of the utilities on their property. Last year alone, TransCanada undertook 388 aerial patrols covering 365,000 km of pipeline.

All of these programs are driving down the frequency of third-party damage. The graph below illustrates TransCanada's performance on encroachments and the continual improvement of our programs. An encroachment can include unauthorized excavating, storing, dumping, building or planting in the pipeline right-of-way (ROW). We achieved a significant decrease (24 per cent) in unauthorized encroachments on our pipelines in 2014.

#### THIRD-PARTY DAMAGE — THE #1 THREAT TO OUR PIPELINES

#### Unauthorized **Pipeline** Encroachments

Normalized by 1000km of ROW and One Calls Normalized by ROW Canada, US and Mexico



The Youth Energy Safe program is delivered in schools and at community events, and equips students in Grades 4 to 6 and 10 to 12 with information about underground utility safety.

#### SAFETY EDUCATION — IN ACTION

In 2014, TransCanada launched a new program called Youth Energy Safe. The program is delivered in schools and at community events, and equips students in Grades 4 to 6 and 10 to 12 with information about underground utility safety, focusing on leak recognition and response, emergency preparedness and safe digging practices. It is our first youth-focused safety program and was created in response to requests from educators and community members looking to share pipeline safety messaging with a younger audience.

TransCanada piloted the program in Alberta and reached more than 2,000 students and more than 100 educators through classroom presentations and Safety Days, community-based agriculture safety events targeted at children and teens. We're dedicated to keeping the next generation of stakeholders safe through awareness and education.

In the fall of 2014, Grade 5 students at Calgary's Langevin School had the chance to locate a pipeline hidden under Astroturf, learn the colours of

different underground utility flags and smell a scratch-and-sniff surprise to help identify the scent of natural gas.

The Youth Energy Safe program reinforces Click-Before-You-Dig messaging and helps the students better identify potential leaks and learn how to respond.

"The Youth Energy Safe program is a result of significant research and input from students and teachers. It's another piece of TransCanada's comprehensive public awareness program that is designed to keep our stakeholders safe," says Michelle Wagner, program manager, public awareness at TransCanada.



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Over the course of a 40-year career as a firefighter, Deputy Chief Billy Goldfeder has responded to virtually every kind of emergency.

#### EMERGENCY PREPAREDNESS — IN ACTION

As the Deputy Chief of the Loveland-Symmes Fire Department in Loveland, Ohio, Billy Goldfeder says the key to effective fire response is knowing what you are facing and having the skills and equipment in place to deal with it. The biggest uncertainties for firefighters, he says, are the emergencies they seldom, if ever, encounter. This includes a natural disaster like a tornado or a hurricane, or an industrial event like an incident involving a pipeline.

"We call these low-frequency, high-risk events because they're something you don't see every day," he says. "They can present a big risk, but, because they are so low frequency, we are not always attuned to deal with them."

For Goldfeder, preparation for an unusual event like a pipeline incident has two simple components: "The first step is to identify if you have a pipeline in your district," he says. "The second step is to immediately develop a plan which includes critical training so you know what to do when you get there."

When Goldfeder attended the International Association of Fire Chiefs (IAFC) Fire-Rescue International conference in Dallas in August, he came upon a resource that provided just what he was looking for: the Industry Emergency Response Portal which was created through collaboration between the American Petroleum Institute, the Association of Oil Pipe Lines, the National Association of State Fire Marshals and the IAFC, along with Shell and TransCanada. The portal

provides links to information on pipelines and training on dealing with pipeline emergencies. Also in development is an application, to be unveiled in 2015, which enables first responders to check for exact locations on pipelines in their area and details on the product flowing through them.

"The Industry Emergency Response Portal represents the next generation of pipeline safety training available to emergency responders and firefighters," says Vern Meier, TransCanada's vice-president of pipeline safety and compliance.

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

TransCanada conducted more than 120 emergency drills and exercises across our entire network of assets in 2014. These simulations allow company personnel and external agencies to practise the skills and communication protocols required in the unlikely event of a serious incident involving one of our pipelines or facilities.

Our Emergency Preparedness and Response (EP&R) team is sharply focused on its strategic goal, "to effectively respond to and remediate emergencies in a timely and co-ordinated manner." With oversight and governance from a steering committee of senior management, EP&R develops and continually improves programs to:

- Provide robust and effective emergency response capabilities spanning the full scope and life cycle of our assets
- Achieve high standards of competency and awareness for employees, contractors, stakeholders, communities and emergency responders

In 2014, we participated in the Canadian Energy Pipeline Associations (CEPA) joint emergency management exercise. This exercise was held in Edmonton, Alberta and focused on CEPA's Mutual Emergency Assistance Agreement (MEAA) functionality. MEAAs enable members of CEPA to call upon each other to assist with emergency response situations, as needed. The purpose of the exercise was to provide participants with an opportunity to practise MEAAs on a simulated pipeline release/spill. It was a very valuable undertaking for TransCanada, and we were proud to be part of the first exercise of its kind for us to engage with our industry partners.

#### **ENSURING OUR ASSETS** ARE SAFE AND RELIABLE

While caring for your safety includes outreach and emergency preparedness, it also includes the preventive and maintenance work of the engineers and experts who make up the Pipeline Integrity and Facility Integrity and Reliability Management groups. Our goal is to keep our assets operating safely and reliably, every day.

#### **2014 MANAGEMENT SYSTEMS** AND PERFORMANCE

At TransCanada, we are committed to using a management systems approach for the continuous improvement of our day-to-day activities. TransCanada's management systems — including the Capital Project Management System (CPMS), Asset Management System (AMS) and Health, Safety and Environment Management System (HSE MS) — are "plan, do, check, and act" cycles and include measures of our overall safety program performance.

These management systems consist of standards, processes, and tools that provide structure to our risk control and safety management programs and are based on risk and quality management principles. Through these management systems, our assets achieve safety program performance requirements and targets consistent with TransCanada's objectives for cost, reliability, efficiency, quality, regulatory compliance, safety, security and environmental protection.



#### Capital Project Management System

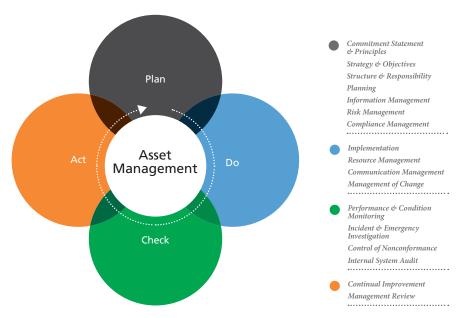
CPMS is a quality management framework that supports TransCanada's objective to excel in project delivery. It is based on industry-accepted best practices, International Organization for Standardization (ISO) 9001, for project management and quality management standards for large-scale construction projects.

CPMS consists of nearly 50 core processes that outline project management and quality management requirements for projects from proposal to implementation. It also includes procedures, forms, tools and templates that support meeting those requirements.

Our continual improvement procedures enable us to correct issues quickly, identify root causes, prevent future issues, and further refine our management processes over time. We believe all defects are preventable and are committed to continual improvement. As well, we endeavour to do business with suppliers and contractors who share our expectations for quality management and work with them to continually improve.

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#### **ASSET MANAGEMENT SYSTEM**



#### Asset Management System

Based on risk and inherent value of specific assets, the AMS consists of processes, techniques and tools that provide an integrated and scalable approach in decision-making.

The 17 elements of the AMS, based on the Publicly Available Standard (PAS) 55 structure, provide a consistent "plan-do-check-act" cycle for ongoing pipeline and facility integrity management and planned maintenance programs for all TransCanada assets.

Integrity Management Program (IMP)
One of the key programs within the AMS is the company's Integrity Management
Program. The IMP is a written methodology that defines who, what, where, when, and how specific pipeline- and facility-related integrity activities are to be conducted.

The IMP is used to provide consistent implementation, accountability, documentation, and performance measurement, and addresses:

- Required Activities
- Locations
- Schedules
- Processes and Procedures

Currently, there are six IMPs that govern our pipeline integrity activities:

- 1. U.S. High Consequence Areas Natural Gas Pipelines
- 2. U.S. Non-High Consequence Areas Natural Gas Pipelines
- 3. U.S. Liquid Pipelines
- 4. Mexico Natural Gas Pipelines
- 5. Canadian Natural Gas Pipelines
- 6. Canadian Liquid Pipelines

Through our management system approach of applying IMPs, the pipe integrity team focuses on the key areas that further our commitment to pipeline and public safety:

- The application and development of new technologies and tools
- Baseline risk assessments of all of our new assets
- Planning and executing on the Accelerated Assessment Program (AAP) which focuses on assessing the risk of pipelines that are not currently configured to be or have not been internally inspected with state of the art in-line defect detection tools
- Ensuring management system adoption continues to grow and foster optimal safety performance

The safety of our assets is important to us, and we strive for excellence by continually reviewing our performance as well as benchmarking ourselves against our industry peers throughout the world.

## Improvements to Integrity Management Program

TransCanada's IMP was audited by the National Energy Board (NEB) in 2013 and received various findings of our management system. In line with our commitment to compliance and public safety, the corrective actions were collaboratively developed and provided to the NEB in the form of a Corrective Action Plan (CAP). The CAP has been monitored and reviewed with the NEB on a regular basis and is in line with targeted commitments. The key elements that were targeted are highlighted in the table on page 30.

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### Four Tiers of Health, Safety and Environment

As an integral part of TransCanada's Business Management System, the HSE MS provides a systematic, four-tiered approach to HSE governance:

#### Tier 1 activities

Driven by regulatory specifications, internal risk analyses and best practices for safety and environment compliance, Tier 1 is the foundation for HSE governance. In 2014, we completed 235,944 Tier 1 activities.

#### Tier 2 internal inspections

Includes planned workplace and facility inspections designed to identify hazards. In 2014, we completed 587 Tier 2 inspections.

#### Tier 3 internal audits

These are triennial assessments of TransCanada's HSE MS across our various assets. In 2014, we had 11 action items open from previous audits and 34 new action items were generated from audits completed in 2014. Of these 45 total action items, we have closed 11.

#### Tier 4 external audits

Regulatory agencies, representing various jurisdictions, completed 22 inspections of our facilities in 2014. Of those, 19 inspections resulted in no findings and 3 inspections resulted in 32 corrective actions. There were no immediate priority corrective actions. There were no audits conducted by regulatory agencies during 2014.

#### **NEB NON-CONFORMANCE FINDING AND STATUS OF RESPONSE**

Element	Area of focus	Update
Hazard identification, risk assessment	High Pressure Piping	In 2014, a formal risk assessment program was developed to manage the integrity of high pressure piping at TransCanada's compression and measurement facilities. This program includes conducting investigative digs on unpiggable segments of piping.
Inspection, measurement & monitoring	Un-Pigged Pipe	In 2014, 1,051 km of previously un-piggable pipelines were assessed through inline inspection, tethered inspections, direct assessments, or direct exam with remediation.
Management review	Management Review	In 2014, a revised management review process and pipeline integrity scorecard was implemented. The revised process has improved alignment to our Pipeline Integrity department's organizational structure, commitment statement as well as goals, objectives and targets. Pipeline Integrity's business performance is reviewed monthly by senior management.

## HEALTH, SAFETY AND ENVIRONMENT MANAGEMENT SYSTEM

TransCanada's HSE MS encompasses an initial planning process for identifying hazards and assessing risk, followed by implementation of specific risk control and mitigation programs, performance evaluation, including any necessary corrective measures and, finally, a review of the overall HSE MS for suitability, adequacy and effectiveness against our HSE Commitment Statement. The complete cycle is repeated, resulting in ongoing continual improvement in HSE management. The approach is not only a regulatory requirement in Canada but also represents current industry best practices.

TransCanada's HSE MS makes safety training and certification, along with regular refreshers and updates, part of

the job. This includes training in hazardous material handling, first aid/CPR, fire and driver training, and other training and certifications demanded by specific jobs.

Its 11 ISO 14001 and Occupational Health and Safety Advisory Services (OHSAS) 18001 based elements provide the foundation for all of TransCanada's health, safety and environmental protection programs.

## PIPELINE INTEGRITY AND YOUR SAFETY

TransCanada is very proud of its safety record. Our safety programs and operational philosophy have protected the public and the environment for more than 60 years.

At the same time, we are aware of your concerns about pipeline safety. Specifically, you want to know if a pipeline incident

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will affect you. Every situation is unique, but TransCanada's safety procedures and integrity management program have served us and our pipeline neighbours well over the decades.

Here are some things you should know about pipelines and TransCanada's approach to safety:

- Statistics compiled by the U.S. Department of Transportation confirm that the age of a pipeline is not a leading cause of pipeline incidents. On the contrary, well-maintained pipelines can operate safely for decades.
- Regulations for pipeline materials and operation are different in rural and urban areas. In general, pipelines in urban areas are thicker and inspected more frequently than those in the open countryside. Both are safe; the varying thickness in pipe is to address the increased amount of activity around our pipelines in urban areas.
- The vast majority of TransCanada's pipelines are in rural areas well away from population centres.
- TransCanada uses high-quality steel and the best construction practices when building pipelines. All pipe is pressure-tested to a pressure well above normal operating pressure before being put into operation.
- All of our pipelines are monitored in control centres 24 hours a day by trained operators who respond immediately to any indication of abnormal operation.
- Our pipelines are cathodically protected, which means a low-voltage electric current is induced in the vicinity of the pipeline to inhibit external corrosion.
- Special internal monitoring tools (called "pigs") are used to detect anomalies involving loss of wall thickness,

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including corrosion. When certain anomalies are detected, the pipeline segment in question is excavated and visually inspected. It is either repaired on the spot or replaced. Internal inspection tools, called "pigs," are pushed along inside the pipeline using the pressure of the natural gas or oil itself. These tools inspect the pipe's integrity through a variety of methods.

- Pipeline right of way is routinely patrolled from the air for visual signs of disturbances and using sophisticated instrumentation to detect natural gas leaks. Ground patrols with hand-held leak detectors are also employed in some instances.
- The pipeline industry is strictly regulated for safety. TransCanada's assets are routinely audited by relevant state, provincial and federal agencies.

As outlined in Emergency Preparedness (page 27), in the unlikely event that an incident occurs, TransCanada proactively maintains detailed emergency preparedness and response programs to minimize the consequences.

## FACILITY INTEGRITY AND RELIABILITY MANAGEMENT

Facility Integrity and Reliability Management (FIRM) is the process used by TransCanada to meet the requirements of the Asset Management System framework for all facilities and equipment in Canada, the U.S. and Mexico.

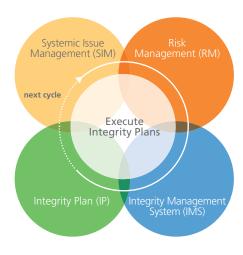
Integrity Management procedures contribute to sustaining and maximizing the value of TransCanada's energy assets through the development and maintenance of risk-based Integrity Management Strategies and Integrity Plans.

The FIRM program is composed of four workflow procedures that establish a consistent structure for all engineering disciplines. The four procedures are:

- Systemic Issue Management identify, classify and prioritize facility integrity issues
- Risk Management identify threats, define and approve risk mitigations
- Integrity Management Strategy develop approved strategic plans for managing integrity of facilities and equipment assets
- Integrity Plan develop tactical integrity plans

Each engineering discipline is responsible for managing facility integrity and reliability in accordance with the FIRM procedures.

#### **INTEGRITY MANAGEMENT**



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#### **RESEARCH AND DEVELOPMENT**

The pipelines, oil and gas facilities and power plants owned and operated by TransCanada are considered to be among some of the most technologically advanced in the industry. Our track record of implementing innovative solutions to meet customer needs spans over 60 years, and we continue to conduct significant research and development (R&D).

Today, we have one of the industry's largest R&D programs, investing over \$38 million in R&D projects across North America in 2014. To complement our extensive internal R&D program, we also conduct research in partnership with industry associations and peers, academia, government and non-government organizations in Canada, the U.S. and Mexico. This enables us to pool resources and share results to improve standards across the industry.

At TransCanada, we ensure that every R&D dollar we spend aligns with our corporate values. Our R&D initiatives exemplify TransCanada's un-wavering commitment to improving industrywide standards and ensuring our growing portfolio of energy infrastructure assets meets the needs of people who rely on us to deliver their energy safely and reliably today and well into the future.



#### RESEARCH AND DEVELOPMENT - IN ACTION

Professor Adrian Gerlich was named by the Natural Sciences and Engineering Research Council of Canada (NSERC) as the TransCanada Industrial Research Chair in Welding for Energy Infrastructure at the University of Waterloo in 2014. Finding thought leaders such as Gerlich to head up research projects — like the one he's undertaking with NSERC and TransCanada in his new role — is critical to achieving state-of-the-art innovation. His enthusiasm for studying the microstructural behaviour of weld material has the potential to help shape the future for the pipeline industry in terms of advancing safety, integrity and quality.

"Something the public might not be aware of is that this is the most focused research effort on pipeline welding nearly anywhere in the world," Professor Gerlich adds. "I'm familiar with almost all the other major welding institutes around the world and virtually none of the other universities can claim to have even more than a couple students dedicated to welding of pipeline materials. But we're going to have five or six at one time, which is a significantly bigger effort than most other places."

The partnership at the University of Waterloo exemplifies one example of TransCanada's extensive R&D program that supports research taking place across North America at major post-secondary institutions.

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### **2014 INCIDENTS**

Our count of leak incidents in 2014 was the lowest in our history; although, we are never satisfied with an incident rate of more than zero.

TransCanada experienced three significant failures on our pipeline networks in 2014. Through the effective execution of TransCanada's emergency preparedness and response plans, employees successfully managed all consequences and impacts. In each case, TransCanada immediately enacted its emergency preparedness and response plans, and automatic shut-off valves were used to isolate the affected valve section

All lines have since been safely returned to service with no injuries or significant environmental impacts.

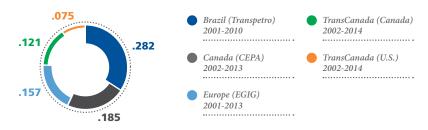
In-service Incident Rates by Year

(Canada + U.S. Leaks and Rupture) (per 1,000 km/yr)

- Cumulative Incident Rate
- 0.33 0.30 0.27 0.25 0.22 0.20 0.19 0.18 1980 1985 1990 1995 2000 2005 2010 2014

TransCanada Pipelines Systems vs. International **Onshore, Natural Gas Transmissions Systems Incident Rate Comparison** 

(per 1,000 km/yr)



Note: U.S. Pipeline and Hazardous Material Safety Administration failure data is not included because its failure reporting criteria is significantly different, which makes the statistics difficult to compare.

- Two of the events occurred on in-service natural gas pipelines: one on a portion of the Canadian Mainline System in Alberta and the other on the Canadian Mainline System in Manitoba. The third event occurred on an in-service natural gas pipeline in the U.S. on the ANR System in Michigan.
- On January 25, a line break occurred on the Canadian Mainline near Otterburne, Manitoba. Our emergency response team was able to restore power, gas, and heat to families in a timely manner by supporting and ensuring the safety of the affected population. The premier of Manitoba and impacted people were deeply appreciative of TransCanada's attention to the safety, comfort and care of the community and environment.
- On February 18, a line break occurred on the Ferrier North Lateral, in a remote area of northern Alberta. TransCanada's emergency response team was on the ground within hours and able to ensure the safety of and provide support to those impacted. Local officials commended TransCanada for its focused and sincere attention to the safety of the people as well as the protection of the surrounding environment.
- On September 16, a line break occurred on the ANR Southwest Mainline at Benton Harbor, Michigan.

TransCanada has conducted comprehensive failure investigations into all three incidents, as it does with any pipeline and facility incident. These investigations identify causal and contributing factors in order to improve all our asset integrity programs and to pursue the goal of preventing all incidents.

Safety of the public, employees, contractors and the environment is a top priority at TransCanada, and we are intent on driving toward the ultimate goal of zero incidents.

### **Incident Rates**

When compared to industry, TransCanada continues to lead the pack in low pipeline incident rates and improving our in-service incident rates, year over year.

TransCanada compares our performance to that of other pipeline operators globally. We continue to have lower incident rates than national and global averages.

However, we believe that every incident, however minor, can be prevented. This is why our ultimate goal is zero incidents.

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### Four key safety undertakings in 2014

### 1. Updated Health, Safety and Environment Commitment Statement

New language was added to the HSE Commitment Statement to further confirm that employees are immune from discipline for good faith reporting of suspected incidents of non-compliance with applicable laws, regulations and authorizations, as well as hazards, potential hazards, incidents involving health and safety, or the environment and near hits.

### 2. Employee and Contractor Safety Summits

Safety summits are held throughout the year with employee groups and contractors. These summits are an opportunity to create a common understanding of TransCanada's expectations and requirements in order to achieve our goal of zero incidents.

### 3. Quality and Safety Summit

In 2014, 300 TransCanada industry partners, suppliers and service providers, together with about 100 employees — senior leaders and representatives from quality, safety and supply chain management — participated in TransCanada's Quality and Safety Summit, themed, "It's a New Day!" TransCanada is committed to creating and sustaining a combined culture of quality and safety excellence.

### 4. Employee Safety Handbook

The purpose of the handbook is to provide all personnel, including TransCanada employees and contract workers under TransCanada control/direction, with the basic safety principles and health and safety requirements that apply at TransCanadamanaged facilities, work locations and project sites. 2014 was the first year that the handbook was issued in three languages (English, French and Spanish) to support the three countries in which we operate.

•••••

### **HEALTH AND SAFETY**

TransCanada takes a holistic approach to occupational health and safety, with multiple complementary programs that address the workplace and home, the individual and family, our employees and contractors. We allow no compromise in the welfare of employees and contractors, making health and safety integral to planning and execution, a priority in the field, in our offices and in the boardroom.

### **SAFETY INITIATIVES**

We're proud of our safety record, but won't be satisfied with anything less than a zero-incident workplace. We appreciate that achieving this goal demands a robust safety culture including continuously adapting how we think and act, on and off the job.

As required by regulations and industry best practices, TransCanada's HSE MS makes safety training and certification, along with regular refreshers and updates, part of the job. This includes training in Workplace Hazardous Materials Information System, first aid/CPR, fire and driver training, and other training and certifications demanded by specific jobs.

# Through safety programs and initiatives, we know our efforts are making a difference.

### Safety 24-7 Program

A key component of TransCanada's company-wide strategy to make health, safety and environment top of mind and around the clock, Safety 24-7 encourages employees to share off-the-job incidents, supports extended family safety training and provides information on a range of safety topics for home, recreation and the environment.

### Safety Summits

In 2014, TransCanada continued to host Safety Summits across the continent to build awareness and understanding of our safety culture, align programs and approaches, and discuss the root causes of incidents and corrective actions. More than 400 attendees representing operations, major projects, construction management, and integrity management attended.

### Safety Hazard Awareness Reporting Events

Our ability to track incidents over time — including near hits — gives us a bird's-eye view of trends so that we can prevent potentially significant incidents from occurring. Safety Hazard Awareness Reporting Events (SHARE) are proactive incident or issue notifications that focus on near hits, Safety 24-7, safe acts and safe observations.

At TransCanada, we believe that proactive reporting, both on and off the job, instils a safety culture of looking after yourself and others around you. We share information via the HSE Management reporting system, which is accessible to all employees. The information may generate a hazard alert (material defect, or activity that under different circumstances may cause injury), business process improvement or simply be an opportunity to share lessons that TransCanada colleagues may find useful.

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2014 SHARE reporting provided a wealth of actionable information:

- Employees and contractors reported 20,899 proactive events involving near hits, safe acts, safety observations and Safety 24-7s (collectively SHARE reports)
- SHARE reports included identification and/or removal of hazards, such as removing potential tripping hazards, and employees and contractors adjusting their driving to fit proper weather and road conditions.
- Employees and contractors reported 2,362 near hits, 65 per cent (1,541) of which were reported by contractors
- On average, 1.28 events were reported per 2,000 hours worked (based on combined employee and contractor SHARE counts and year-to-date hours reported)
- One SHARE event was reported for every 1,560 hours worked

### EMPLOYEE AND CONTRACTOR SAFETY

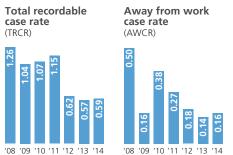
Throughout TransCanada, employee and contractor safety is a priority. Safe, supportive workplace environments, procedures, training, tools and resources all work toward reducing injuries and incidents.

We use internal and external resources to focus on key areas of health promotion and illness prevention, short- and long-term disability management, employee and family assistance counselling programs, illness/injury absence reporting and health issue management.

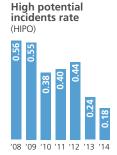
Our overall philosophy and approach to developing corporate safety targets is to set them such that we drive continuous improvement year after year. In 2014, safety performance for all of the safety

### In 2014, there were no employee fatalities.

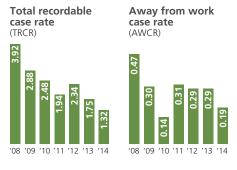
#### **EMPLOYEE SAFETY**

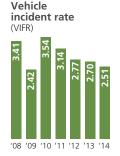


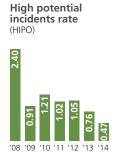




### **CONTRACTOR SAFETY**







metrics met or exceeded our corporate safety targets.

### **Total Recordable Case Rate (TRCR)**

refers to the number of recordable cases related to a common exposure base of 100 full-time employees. Recordable Cases are all work-related deaths and illnesses, and those work-related injuries which result in: loss of consciousness, restriction of work or motion, transfer to another job, or require medical treatment beyond first aid. (Bureau of Labor Statistics, Record Keeping Guidelines for Occupational Injuries and Illnesses)

## Away From Work Case Rate (AWCR) refers to an incident, which results in an

injury or illness that prevents an employee from returning to work on the next scheduled shift. The number of away from work cases, where the employee would have worked but could not because of occupational injury or illness, is related to a common exposure base of 100 full-time workers. This performance indicator is often referred to as the lost time case rate. (Bureau of Labor Statistics, Record Keeping Guidelines for Occupational Injuries and Illnesses)

Vehicle Incident Frequency Rate (VIFR) refers to the number of recordable vehicle incidents related to a common exposure base of 1,000,000 kilometres driven. A recordable vehicle incident is any incident (regardless of fault) involving a fleet or rental motor vehicle which results in an injury to any person or damage to any vehicle or property, unless the vehicle was safely and legally parked at the time of

the incident. (American National Standards

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Institute [ANSI] standard D. 16.1 — 1989 "Manual on Classification of Motor Vehicle Traffic Accidents" — 5th Edition)

### **High Potential Incidents Rate (HIPO)**

refers to incidents with a high potential to result in a serious, debilitating injury to the worker related to a common exposure base of 100 full-time employees. Examples of HIPO include, but are not limited to, high speed vehicle incidents, vehicle rollovers, high voltage or high pressure incidents, injuries to the head, falls from heights, etc.

### **HEALTH PROGRAMS**

### Employee and Family Assistance Program (EFAP)

TransCanada's EFAP is delivered by a network of professional advisors who are available day or night to give confidential assistance with concerns that affect our employee's personal, family, work life or general well-being. In addition to traditional counselling services, the EFAP program also provides resources in areas such as legal, childcare, eldercare, nutrition, critical stress and addictions.

Overall use of the EFAP decreased slightly in the U.S. from 4.74 per cent to 3.59 per cent and decreased in Canada from 20.98 per cent in 2013 to 18.97 per cent in 2014. TransCanada's EFAP Program usage within Canada and the U.S. is comparable to industry utilization. Use of the EFAP program by expatriates in Mexico increased significantly from 5.0 per cent in 2013 to 19.05 per cent in 2014 as a result of increased communication and awareness of the resources. Health Services and management will continue to encourage the use of the EFAP, particularly with a focus in the U.S. where utilization lags, as the EFAP can be a significant means of preventing or mitigating certain sources of illness (stress, depression, etc.).

### Alcohol and Drug Program

Throughout the year, we conducted Department of Transportation (DOT) random testing of the U.S. employees holding safety sensitive roles. We successfully met our annual 25 per cent testing rate required by the DOT. There were zero non-compliant results for random tests in 2014, a strong performance compared to industry performance of 1 to 2 per cent positive random tests per year.

In 2014, we conducted 295 preemployment tests, resulting in two non-compliant test results. TransCanada conducted three post incident tests, all of which were negative for alcohol or drugs. One reasonable cause test was completed in 2014 in which the result was not in accordance with the company's alcohol and drug policy.

### We continue to administer a pre-site access program on construction sites within British Columbia (B.C.), Alberta, Saskatchewan and Manitoba.

The pre-site access program is for employees accessing a TransCanada construction site, which is defined by company criteria and provincial regulations. There were 54 site access tests completed and zero non-compliant site access tests in 2014.

In 2014, we began providing increased training to our leaders on testing for reasonable cause and post-incident requirements. This will continue into 2015 and, due to increased training and awareness, TransCanada may see a possible increase in ad hoc testing activity in the future.

### Active Living Program

TransCanada's Active Living Program is a company-wide program designed to encourage our employees and contractors to increase the amount of physical activity in their everyday lives. Proper nutrition and physical activity are important components of a healthy lifestyle. Making small changes, or continuing an established healthy routine, will help lead to an improved overall well-being. Benefits to an active lifestyle include more energy, reduced stress, stronger muscles and bones, and a lower risk of health problems such as heart disease, stroke and diabetes.

An Active Living website was developed and a total of 1,320 employees from across the company participated in this program in 2014 — a 31 per cent increase over 2013. More than 600 employees participated in a three-week pedometer challenge with the goal of completing 10,000 steps per day. The total number of steps logged was equivalent to 48,280 km (30,000 miles). The response to the challenge was overwhelmingly positive and additional challenges will be incorporated into the Active Living Program in 2015.

Health Services continues to develop the Active Living Toolkit to assist 'wellness champions' across the company to develop and administer a physical activity or health challenge. This now includes two challenges: the "Healthy Points Challenge" which is aimed at increasing health decisions on a daily basis through a competitive points-based system and the "Maintain Don't Gain Challenge," which was designed to incorporate nutrition, healthy decisions, increased physical activity, and enhanced stress management into the daily lives of our employees during the holiday season. We will continue to develop and improve each of these challenges throughout 2015.

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### HEALTHY LIVING - IN ACTION

From August 26 to September 1, 2014, the world came to Edmonton, Alberta, for the TransCanada Corp. World Triathlon Grand Final

The event officially closed the 25th annual World Triathlon Series, which included eight triathlon races worldwide. In the months leading up to the event, the International Triathlon Union (ITU), local

organizing committee, community partners, government and corporate sponsors worked together to ensure the event was an epic experience for athletes, coaches, community members and participants.

During the event, employees of corporate sponsors, including TransCanada as title sponsor, had a chance to race on an elite level course with their colleagues. TransCanada had the largest team of all of the sponsors with 32 participating employees.

"We have a great Active Living Program at TransCanada that encourages all of us to be healthy and stay active in whatever sport we enjoy," says Rick Coutts,

corporate racer and vice-president of construction quality and project management at TransCanada. "I was very happy to see us step up to support the ITU championships, and I was just really excited to be there and to be able to compete."

The TransCanada triathlon team did a fantastic job, as did all the racers and participants in the event. The International Triathlon Union has just released its 2015 schedule where, once again, the world's elite triathletes will compete for the coveted title of world triathlon champion. TransCanada has supported sport, culture and economic growth across North America for more than 60 years.

### **Ergonomics Program**

Ergonomics is an applied science concerned with the human need considered in designing tools and equipment so the interaction between the person and their work environment is effective and safe. TransCanada's office ergonomics programs continued to be utilized within the Calgary and Houston offices. There were 224 assessments, and 11 followup assessments completed in Calgary and 42 assessments completed in Houston in 2014. The number of assessments in Calgary has dropped slightly; however, the assessments in Houston have almost doubled due to increased awareness and a building move. The number of requests is anticipated to increase further in 2015 with increased awareness of the program both within the office and field environments.

As of January 2014, ErgoRisk, our ergonomics service provider, has been completing our new hire ergonomic evaluations. It completed 1,441 spot checks for new hires and employees who moved locations. This early emphasis on correct workstation setup and guidance on how to use the workstation properly is expected to reduce the potential negative effects of pain syndromes that arise from poor postures. It is anticipated that employees will experience these issues less frequently, and the long-term goal is to mitigate days lost. This proactive approach should result in a decrease in the number of full assessments completed in Calgary in 2015.

### Lifestyle Management and Disease Prevention

In 2014, Health Services conducted face-to-face educational sessions on the

topic of Mental Health Resiliency. These sessions, entitled Thriving Under Pressure: Resiliency at Work, were developed with the assistance of our EFAP provider, and focused on assisting employees with finding positive ways to cope with stress, change and adversity. The presentation was built around the premise that, although we are often unable to control the changes going on around us, we are responsible for how we choose to respond to those changes. The focus of the presentation was on choosing a positive attitude about change and allowing that to impact actions.

In addition, Health Services facilitated approximately 55 awareness presentations (in-person or WebEx) on a variety of health, lifestyle and industrial hygiene topics. The health education awareness topics are selected as a result of both internal health trending statistics and industry focus points.

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Making sure stakeholders like you are engaged and respected is critical to TransCanada's success.

We know that transparently sharing information and seeking your input will result in better plans — for us, for you and for our communities as a whole. TransCanada's values — integrity, responsibility, collaboration and innovation — lay the foundation for how we work with each other and with you.

By treating our stakeholders respectfully, and engaging early and often, we are able to attract and retain good employees, plan and develop new projects, and sustain community-based initiatives for positive local benefit.

While we have strong relationships with thousands of communities and tens of thousands of landowners backed by generations of co-operation and trust, we are also committed to earning public confidence from those communities we haven't worked with yet. Our stakeholder relations teams work together to engage with communities on an ongoing basis so that we can continue to learn what matters most to you.

The trust and strong relationships we foster in our communities enable us to competitively build and operate our assets, and continue delivering your energy safely and reliably every day.

### RESPONSIBLE STAKEHOLDER RELATIONS

Our business is built on solid relationships with our stakeholders. We demonstrate our commitment to each of our neighbours every single day, because it's the right thing to do.

Employees and contractors are expected to consider these guiding principles when interacting with stakeholders:

- Identify and consider the perspectives of our stakeholders
- Be visible, present and approachable in the community
- Recognize that diverse thoughts, opinions and experiences contribute to better decisions and outcomes
- Take ownership and accountability for our decisions and outcomes
- Track, measure and publicly report on our performance to learn and improve

### **COMMUNITY INVESTMENT**

At TransCanada, we don't just build energy infrastructure. We also build relationships.

Whether it's partnering with community groups, supporting local initiatives or encouraging our employees to be involved in their neighbourhoods, our goal is to build strong and vibrant communities across North America.

Giving back to the communities where we operate always has been and always will be part of our everyday culture. It's all part of being an employer of choice, a good neighbour and a trusted community partner.

### **Defining Community Investment**

For TransCanada, community investment is a voluntary contribution on behalf of the company in support of a not-for-profit, registered charity or social enterprise that generates clear and demonstrable value to the communities where we live and work.

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### **OUR FOCUS AREAS**

We concentrate our efforts in three focus areas: safety, community and environment.

#### Safety

We are committed to the safety and well-being of the communities near our operations. We fund initiatives that enable emergency personnel to respond quickly and effectively to local needs and focus on emergency preparedness, accident prevention and education, and training.

#### Community

We are committed to building strong and vibrant communities. We support organizations and initiatives that bring communities together, develop leadership and engage citizens.

### **Environment**

We are committed to protecting the environment. We work with national and local organizations, to conserve important habitats, protect species at risk and educate individuals about the importance of the environment.

### Disaster Relief

Responding to community needs can take many shapes. In 2014, TransCanada contributed over \$300,000 in disaster relief to organizations in Canada, the U.S. and Mexico. These contributions supported local flood recovery efforts in Manitoba, Saskatchewan, South Dakota, Missouri and Nebraska, assisted families impacted by hurricane Odile in Los Cabos, Mexico and funded disaster preparedness initiatives in Missouri.

TransCanada's partnership with IAFC is intended to aid in the development of education and infrastructure related to emergency response and preparedness in North America.

### SAFETY PARTNERSHIP EXAMPLES

### **Supporting First Responders**

In 2014, TransCanada donated more than \$1.3 million toward safety-related initiatives. Many of these contributions supported North America's first responders.

One of TransCanada's key partnerships involves an \$825,000 donation to support the International Association of Fire Chiefs (IAFC) and their 1.2 million emergency responders. In 2014, TransCanada was able to work with IAFC, the American Petroleum Institute, the Association of Oil Pipe Lines, the National Association of State Fire Marshals and Shell to launch the Industry Emergency Response Portal. The portal, which provides information on pipelines and pipeline emergencyrelated training, represents the first of many partnership outcomes.

TransCanada's partnership with IAFC is intended to aid in the development of education and infrastructure related to emergency response and preparedness in North America — especially around energy and pipeline safety. The partnership also enables IAFC members to take part in TransCanada's regional emergency field exercises, experiencing and practising responses to situations — such as hazardous materials response and rescue — that could occur at any pipeline location.

### Safety Days

For TransCanada, building a culture of safety within the company and in the communities where we operate is important. That's why we support the Progressive Agriculture Safety Day® program which provides training and resources for local communities to host a one-day event focused on community safety and health.

Safety Days allow TransCanada's public awareness team to deliver underground utilities safety information and reinforce the message to call or click before digging.

By collaborating with organizations like Progressive Agriculture Foundation, Ag for Life and the Canadian Agricultural Safety Association, TransCanada ensures that Safety Day events receive the financial support they need to reach more communities across Canada and the U.S.



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TransCanada supports educational institutions and initiatives that enhance student learning, **promote innovation** and facilitate skills development.

#### COMMUNITY PARTNERSHIP EXAMPLES

#### 4-H

TransCanada has supported 4-H, one of the largest youth development organizations in the world, for more than 15 years. The goal of 4-H is to develop citizenship, leadership, responsibility and life skills in youth through experiential learning programs. Our partnership with 4-H aligns with TransCanada's objectives of bringing communities together, developing leadership and engaging citizens.

Support for 4-H includes a partnership to support the Texas 4-H Congress and One-Day 4-H. Texas 4-H Congress allows members aged 15 to 18 to experience a five-day, simulated legislative experience where 350 members utilize the state capital facilities to learn the legislative process, and submit, debate and pass legislation dealing with issues of concern to them. One-Day 4-H asks that all 4-H members, parents, leaders and volunteers participate in a day of community service.

TransCanada, 4-H and Mississippi State University have also partnered to develop the TransCanada-Mississippi Community First Program. The program supports 4-H members as they deliver training to Mississippi county officials on the role of social media as a communication tool with community members on a daily basis and during emergencies.

### **Education and Training**

TransCanada supports educational institutions and initiatives that enhance student learning, promote innovation and facilitate skills development. These efforts not only benefit the communities in which we operate, but also provide a skilled future workforce for our industry.

After consultation with local residents, community leaders and Aboriginal groups in northern B.C., TransCanada learned there was a need to invest in skills development and longer term education legacy programs. To address this need, we created the Pathway to Pipeline Readiness program in 2014, which focuses on building northern B.C.'s skilled labour force and growing workers' transferable skills.

The program involves developing regional partnerships with local organizations such as the Prince George Nechako Aboriginal Education and Training Association, the University of Northern British Columbia, the College of New Caledonia and Northwest Community College to ensure residents receive the kind of essential skills and relevant trades training needed to participate in pipeline and other development projects.

### National FFA Organization

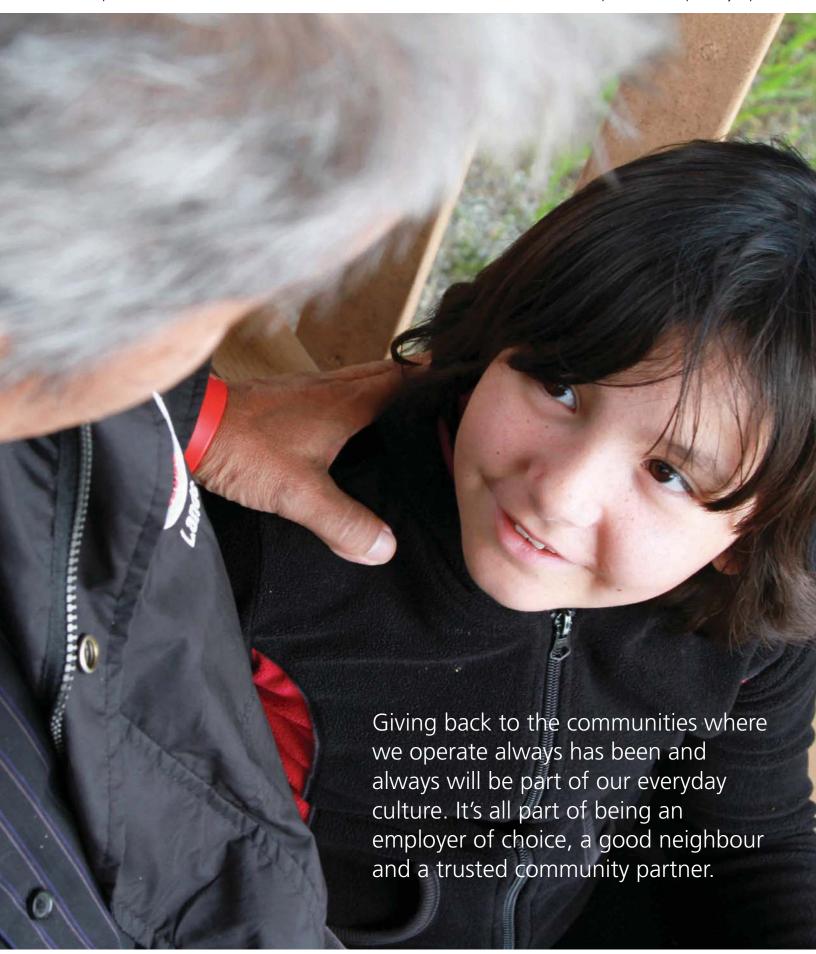
Few organizations have the reach of the FFA, which includes 7,600 local chapters and chartered members in all 50 states and two U.S. territories. The organization is federally chartered to provide agricultural education in the U.S. and produces some of the most highly skilled, sought-after leaders for companies.

TransCanada invests in a number of National FFA Organization initiatives, all of which support the organization's mission to make a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success.

In addition to providing financial support to the organization, TransCanada also participates in FFA events to educate the public about the importance of calling before they dig or cross and to create a culture of safety in communities throughout North America.

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In 2014, TransCanada partnered with over 85 non-profit organizations and spent more than \$2.6 million on protecting, enhancing and restoring North America's environment.

### ENVIRONMENTAL PARTNERSHIP EXAMPLES

#### **Pollinators**

TransCanada takes environmental concerns seriously and believes we have a responsibility to protect the environment for future generations. North America has seen a dramatic decline in pollinator populations. The growing threat to pollinators is a major concern for all of us as we rely on them for almost a third of our food production.

TransCanada is working with Pollinator Partnership to create an awareness campaign to promote the importance of pollinator conservation.

The campaign includes the creation of regional planting guides to encourage pollinator-friendly gardening and improving training for pesticide applicators.

### Nature Conservancy of Canada

For more than a decade, TransCanada has been working with and donated more than \$2.7 million to the Nature Conservancy of Canada (NCC), Canada's leading land conservation organization.

In 2013 and 2014, we supported NCC in its efforts to conserve almost 31,000 acres of natural ranching lands in the slopes of eastern Alberta with the Waldron Grazing Co-operative Ltd., which is the largest conservation easement in Canadian history. TransCanada has three pipelines that cross through the Waldron, all of which have been there for more than 60 years. The Waldron project is a great example of environmental conservation and energy infrastructure coexisting. See page 65 for more details on this partnership.



### **AUDITS AND REPORTING**

### London Benchmarking Group (LBG) Canada

TransCanada is a founding and active member of LBG Canada, whose mission is to improve the management, measurement and reporting of community investment.

Each year, TransCanada participates in a detailed, line-by-line audit of its entire community investment portfolio.

The results enable TransCanada and external stakeholders to be confident that reported figures are accurate while also benchmarking our program against industry peers.

### Committee Encouraging Corporate Philanthropy (CECP)

TransCanada is a member of the CECP, which brings together and empowers senior executives from the world's leading companies to invest in society and their communities.

Each year, through its Giving in Numbers Survey, CECP collects and reports data on numerous aspects of corporate giving programs internationally. CECP has been surveying leading multinational companies annually, collecting more than \$250 billion in comparative corporate philanthropy data since 2001. This report presents a profile of corporate philanthropy and employee engagement while also determining how corporate community engagement is evolving.

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	2014 numbers in millions
Community Investments — direct only (\$M)	14.6
Community Investments — including funds leveraged through outside sources (\$M)	20.6
Investments as a percentage of total revenue	0.14
Investments as a percentage of pre-tax profit	0.52
Investment per employee (\$/employee)	2,444
Number of logged employee volunteer hours	11,553
Employee charitable donations (\$M)	0.97

Community Investment Audited Portfolio

In 2014, TransCanada directed more than \$14.6 million to over 1,400 non-profit organizations across North America.

Taking into consideration contributions to community projects that can be directly linked to TransCanada's involvement (but are not included in the investment cost), we helped generate an additional \$6 million in support from other companies, governments and TransCanada employees.

TransCanada benchmarked against its peer energy companies in CECP:



0.14 per cent

CECP average is 0.10 per cent for energy companies



Investments as a percentage of pre-tax profit

0.52 per cent

CECP average is 0.57 per cent for energy companies



\$2,444

CECP average is \$3,150 for energy companies

### **EMPLOYEE GIVING** AND VOLUNTEERING

In 2014, TransCanada continued to see growth in its new giving and volunteering program. Through the program called Empower, we support and encourage personnel to give back to their communities in ways that resonate with them personally by:

- Matching their charitable donations
- Matching volunteer time with financial contributions to support the causes they care about
- Providing opportunities for them to volunteer in their communities
- Providing support for team volunteering and fundraising

In 2014, TransCanada saw an eight per cent increase in giving and nearly double the volunteering from the prior year. More than 600 new people were made eligible for the program.

Canadian and U.S. employees, combined with TransCanada's matching contribution, donated more than \$2.24 million to charities across North America to support the communities where they live and work. In addition to these generous donations, employees logged 11,553 volunteer hours for charities in their communities.

Total monetary donations in 2014 \$2,247,264.92



Canada: \$1,901,326.43 U.S.: \$345,938.49

Total logged volunteer hours in 2014 11.553 hours



Canada: 9,454 hours U.S.: 2,099 hours

Participation rates in employee volunteering and giving program



Canada: 26% U.S.: 16%

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On September 4, a brave team of nine TransCanada employees rappelled down a building in support of persons with disabilities through the Easter Seals Drop Zone. TransCanada had the largest team participating and raised more than \$23,000 for Easter Seals.

#### EMPOWERMENT — IN ACTION

Leaping from tall buildings, planting seedlings and helping restore flooddamaged homes are just a few of the things employees got up to throughout September 2014 during the first inaugural Get Empowered! campaign — a monthlong giving, volunteering and engagement campaign through Empower, our giving and volunteering program. In just 30 days, our people logged 2,700 hours of volunteer time and gave more than \$500,000 to causes they care about in our communities across North America. Program participation dramatically increased as well as our Empowered employees from across all our operating areas got involved.

How far would you go to help people in need? How about 30 storeys down! On September 4, a brave team of nine TransCanada employees rappelled down a building in support of persons with disabilities through the Easter Seals Drop Zone. TransCanada had the largest team participating and raised more than \$23,000 for Easter Seals.

Equipped with safety gear and an overview of the habitat, a team of TransCanada volunteers made the journey out to Pine Lake, Alberta, on September 15 for a hands-on habitat restoration experience with Nature Conservancy Canada (NCC). In one day, a group of TransCanada volunteers planted 628 native shrubs in three forested islands at NCC's HG Lawrence property.

On September 17 and 19, teams of TransCanada volunteers eagerly climbed aboard a bus to High River to help our neighbours in need through a partnership with Habitat for Humanity Southern Alberta. Since the devastating floods of 2013, many High River residents are still struggling to restore their homes and return to normalcy. Teams of eight took up power tools, hand tools, paint brushes and gardening tools to help move a local resident's home to the finishing stages after more than a year of restoration work.

More than 100 employees in the Houston office got empowered by participating in raffles and charity-based scavenger hunts. Other areas of the company got involved in ways that resonated with their communities, including food drives to benefit the humane societies, mentoring recruitment drives, bake sale for puppy rescues, Ice Bucket challenges for ALS, profile photo fundraisers in support of a firefighters' burn treatment centre, and much more.

While the campaign lasts just 30 days, Empower is available year-round, allowing employees and in-house contractors to support causes and opportunities they care about. Donations are matched at 100 per cent up to a personal cap and volunteer time is rewarded at an hourly rate.

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### **COMMUNITY ENGAGEMENT**

TransCanada is dedicated to fostering and maintaining positive relationships with the thousands of communities in which we engage and operate. In 2014, we engaged communities early and often on more than 100 proposed projects across Canada, the U.S. and Mexico. We were also visible, present and approachable in more than 700 communities, six Canadian provinces and 31 U.S. states. In addition, we developed new initiatives and best practices to continually improve our ability to listen, provide accurate information and respond to stakeholder interests in our communities.

### **Engagement on Energy East**

Since the Energy East Pipeline Project was announced in 2013, the project community relations team has been working closely with communities along the route. In 2014, the team held 55 open houses and engaged more than 4,900 of our neighbours. Our presence at 42 tradeshows and conferences allowed us to meet 13,000 more community members interested in the project.

We're actively building on the positive reputation that TransCanada already holds in areas where the existing natural gas pipeline will be converted, and fostering new relationships in areas where TransCanada doesn't yet have operations.

To align with this active community engagement, the project team has met new neighbours by supporting events and initiatives through community investment programs that resonate meaningfully in individual communities.

### **Energy East Community Investments**

In 2014, we invested more than \$550,000 in local organizations to help strengthen and celebrate these communities, enhance their well-being and to protect the local wildlife and environment.

Energy East invested in an initiative aimed at providing affordable childcare to young families, which ultimately allows families to stay in their communities rather than seek these services elsewhere or relocate to larger cities. We also helped an isolated fire department purchase a vehicle which will enable them to respond to emergencies in terrain that their current equipment could not reach. We sponsored initiatives to help educate children and their families about the importance of conserving our environment, and to those that directly protect habitats of species along our route.

The Energy East team also donated over \$200,000 to communities along the project's route that were affected by the devastating 2014 summer floods. Taking the time to learn what mattered most for each community, we helped towns repair the damage caused, ensure that damaged emergency response equipment was repaired or replaced and funded training and flood pumps. Our goal was to help ensure communities were positioned to respond effectively to future emergencies.

### **Engagement in Northern B.C.**

In 2014, the Coastal GasLink and Prince Rupert Gas Transmission (PRGT) teams developed a skills training and education program designed to improve capacity within communities neighbouring their respective pipeline routes.

After years of engagement with stakeholders and Aboriginal communities in northern B.C., we understood that improving access to training and educational opportunities to communities in the north was a key component of having a skilled, local labour force for both TransCanada and our industry as a whole.

Coastal GasLink and PRGT have two distinct programs for northern B.C. to fund and support Aboriginal and local students and the labour force:

- Pathway to Pipeline Readiness Program focuses on local workforce readiness
- The Education Legacy Program looks for opportunities to build longterm community capacity through educational initiatives

### Coastal GasLink and Prince Rupert Gas Transmission Community Investment

In August, PRGT led a partnership with the University of Northern British Columbia (UNBC) to create an Occupational Health and Safety Officer program through its Continuing Studies department. PRGT was involved in the development of curriculum to ensure training reflected the needs of pipeline construction activities and covered the cost for more than 25 students, from communities along the PRGT pipeline route, to attend the Prince Georgebased program.

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In 2014, TransCanada made a major contribution to building sustainable infrastructure at UNBC with the support of a new pipeline connecting the UNBC bio-energy plant with student residences and the future growth area planned for the campus.

TransCanada also committed to directly recruiting three graduates from the program to work on the construction of PRGT and to connect graduates with the contract company that will be constructing the PRGT project for additional potential opportunities.

By the end of 2014, Coastal GasLink and PRGT also finalized agreements with the Prince George Nechako Aboriginal Education and Training Association (PGNAETA), the College of New Caledonia and with the Northwest Community College. These agreements will provide financial support for students enrolled in essential skills programs, skilled trades and industrial safety certification courses, and will enhance the college's program delivery, particularly for more rural and remote communities.

Coastal GasLink and PRGT are investing in long-term education through the Education Legacy Program for northern B.C.

The foundation for a good education starts early. That's why TransCanada launched a partnership with the Breakfast Club of Canada. Our support of Breakfast Club of Canada helps provide kids with the energy they need to learn and enables them to become life-long learners. Thanks to a pilot partnership, which runs from 2014 to 2016 with Breakfast Club of Canada, four new schools (210 students) will receive the breakfast program in communities across northern B.C.

The Club provides students with a healthy breakfast in a safe and supportive environment at the start of every school day.

Our partnership with the Club enables TransCanada to contribute to the health and vitality of these communities.

Community feedback performed as part of the Coastal Gas Link Project and the Prince Rupert Gas Transmission Project indicated that education and literacy are important to residents in northern B.C..

In 2014, TransCanada made a major contribution to building sustainable infrastructure at the UNBC with the support of a new pipeline connecting the UNBC bio-energy plant with student residences and the future growth area planned for the campus. The Sustainable Communities Demonstration Project will significantly reduce UNBC's consumption of fossil fuels for heating, and serve as a useful teaching, research and demonstration platform for rural and remote northern communities.

Further partnerships in 2015 and beyond will help TransCanada leave a positive legacy in northern B.C. communities — long after our pipelines are in the ground and natural gas begins to flow — and investing in education is an essential part of that legacy.



### EMERGENCY RESPONSE COMMUNITY INFORMATION CENTRES (CICS)

TransCanada is committed to protecting the communities where we live, operate and engage. In 2014, we developed and launched a successful Community Information Centre (CIC) initiative to serve as an outreach hub for providing communities with critical information during incidents.

Building on best practices developed over decades of engagement and operations, the CIC process has been established to quickly mobilize our community relations, land and Indigenous relations teams to engage with all stakeholders in an impacted community. In addition to TransCanada's emergency preparedness and response program, CICs reflect our commitment to responding to and remediating emergencies in a timely manner.

In 2014, TransCanada launched three CICs to respond to pipeline incidents in Otterburne, Manitoba; Ferrier, Alberta; and Benton Harbor, Michigan. The CICs received hundreds of visitors including affected residents, public officials, local emergency response experts and members of the media.

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The Otterburne CIC was visited by Manitoba Premier Greg Selinger and staff. TransCanada representatives shared information regarding safety, warming centres, service outages, local operations and numerous other topics raised by stakeholders.

In addition to providing critical information, some CICs were also established to serve as a central community location for providing restitution and supplies to impacted residents and businesses.

In Otterburne, TransCanada responded to a service outage in cold temperatures by providing heaters and other forms of restitution to impacted stakeholders.

In Benton Harbor, CIC visitors were connected with local land agents who provided restitution and accommodations to stakeholders. In all cases, TransCanada set up toll-free lines and an email address with the public to offer an additional means of outreach.

Stakeholder feedback regarding 2014 CICs was extremely positive with numerous public officials and impacted residents expressing thanks. In Otterburne, the Executive Director of the Provincial Emergency Measures Organization (EMO) sent a letter to TransCanada President and CEO Russ Girling praising our response efforts, while other members of the EMO said the department would use the CIC

as a model for how to handle future emergency situations. In Benton Harbor, a landowner sent our project team a thank you letter for our Land team's work in engaging residents following the incident. Public officials in Benton Harbor shared similar feedback during calls. Stakeholder input on 2014 CICs will be used to continually improve this initiative in the years to come.

### **SOCIO-ECONOMICS**

TransCanada contributes to the social and economic well-being of communities that are adjacent to, or potentially affected by, our business. We endeavour to create opportunities for qualified and competitive local and diverse suppliers and individuals to benefit from our projects and operational activities. This is important because it allows us to develop long-term business relationships where we benefit from the activity and the supplier benefits from the work.

### SUPPLIER DIVERSITY AND LOCAL PARTICIPATION PROGRAM

In 2014, TransCanada commenced development of a Supplier Diversity and Local Participation program.

This program will provide an integrated approach for planning, executing, measuring and reporting supplier diversity and local spending in the communities where we do business. It includes an overarching framework, business policy, processes and tools to enhance supplier diversity, local participation and capacity development opportunities. The desired outcome is to provide required services to execute TransCanada's business while realizing greater economic benefits for the local communities in association with our projects, and to improve the visibility of TransCanada where we build and operate.

The Supplier Diversity and Local Participation program is guided by the following principles:

- Encourage the identification, qualification, employment and contracting of local and diverse suppliers and individuals across TransCanada's supplier lifecycle management process
- Develop and execute procurement policies, processes, systems and tools that enable greater participation by qualified and competitive local and diverse suppliers and individuals
- Identify and communicate, where possible, viable contracting and procurement opportunities for which qualified local and diverse suppliers and individuals can compete
- Support targeted community investments that contribute to the development of local and diverse suppliers and individuals
- Design, implement and support education and training programs that help develop the skills, knowledge and capacity of local and diverse suppliers and individuals
- Track company performance, wherever possible, with regards to supplier diversity and local participation, and regularly report the results internally and externally

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### **INDIGENOUS PEOPLES**

TransCanada's relationship with Indigenous peoples can be captured in one word — respect. Respect for the distinct history, cultures and legal status of Indigenous peoples and their unique relationship to the land. This, combined with responsiveness to community interests, is the pillar upon which TransCanada has built enduring relationships that support specific local needs and TransCanada's business objectives.

We seek to involve Indigenous communities in all aspects of project development as well as contributing to the longterm aspirations of Indigenous peoples through community investment, capacity development and economic opportunities.

### **ENGAGING INDIGENOUS COMMUNITIES**

TransCanada is committed to meaningful engagement. We do this by supporting each community's interests as we engage regarding our activities.

TransCanada employs engagement processes which vary depending on the nature, scope and location of each project and the individual concerns and interests of each community.

Commitment of resources to enable project review supports fair, inclusive participation. We recognize Aboriginal traditional knowledge as valuable contributions that inform our project planning and mitigation strategies.

The support of community-led traditional use studies and 363 Aboriginal participants who took part in 5,331 field studies over three years on the North Montney Mainline Project illustrates our commitment to meaningful engagement.

Our commitment to developing a representative workforce is demonstrated with Indigenous peoples being represented throughout the organization including Human Resources, Legal, Supply Chain Management, Environment, Engineering departments as well as Operations.

Project agreements that frame ongoing community relationships are designed to meet the individual circumstances of each community and are another way we demonstrate our commitment to mutually built partnerships.

### Indigenous Engagement Highlights

- TransCanada acknowledges the unique governance of Indigenous communities, their relationship to the land and legal standing through agreements that form the basis for a respectful and ongoing relationship with communities potentially affected by our activities.
- TransCanada has engaged with more than 300 Indigenous communities in the US and Canada.
- Five graduates from the Mohawk Council of Akwesasne (MCA) Archaeological Field School monitoring program were hired as members of the field crews that completed the Stage 2 and 3 archaeological field studies for the Eastern Mainline Project. The five participants spent a total of 897 hours in the field.
- In the U.S., the Native American Relations Team has organized tours to see pump station operations with Tribal leaders and members and municipal leaders, providing first-hand observation of facilities in operation.

### PEOPLE AND CONTRACTING

TransCanada believes our activities should bring benefit to the people who live in the regions where we operate.

We have heard and responded to the business and employment aspirations of the Indigenous businesses community.

For our Canadian projects, it begins by requiring general contract bidders to provide an Aboriginal engagement strategy that is weighed in the evaluation process. General contractors are also required to provide designated opportunities to qualified Indigenous people and businesses first. In the U.S., we support Native American business participation by encouraging the use of Native American suppliers.

In addition to including Indigenous peoples and businesses in construction-related opportunities on our projects, we continue to work with communities and organizations to develop and implement training initiatives to enhance skills development that will increase project participation.

Our commitment to developing a representative workforce is demonstrated with Indigenous peoples being represented throughout the organization including Human Resources, Legal, Supply Chain Management, Environment, Engineering departments as well as Operations.

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Our corporate values guide the spirit in which we act on our Aboriginal Relations Policy (Canada) and Native American Relations Policy (U.S.) and our **commitments to Indigenous peoples** across our three operating countries in North America.

### Indigenous Peoples and Contracting Highlights

- TransCanada continues to increase procurement of services from Indigenous businesses. In 2014, we generated \$104 million in work for Indigenous businesses or their jointventure partners, an increase of 56% since the 2013 amount of \$66.5 million.
- In 2014, TransCanada was one of several industry peers to partner with the communities of Whitefish Lake First Nation and Buffalo Lake Métis Settlement, Alberta Works (an Alberta government employment training support agency), Tribal Chiefs Employment Services, and the Alberta Labourers Training Trust Fund to establish a joint venture relationship with contractors and all the trade unions that participate in pipeline work. The joint venture aimed to conduct a six week Pipeline Construction Training Program to prepare the 28 participants, members of the community, for real pipeline employment. This initiative led to employment with project general contractors and operations subcontractors.
- Energy East Pipeline Project teamed up with an environmental contractor to conduct two training sessions that provided 56 Saskatchewan and Manitoba First Nation community members with health and safety training in addition to geotechnical investigation worksite preparation skills. The total of 48 positions filled by Aboriginal participants on geotechnical investigation worksites included two Liaisons/Elders; 19 Drilling Assistants; 27 Labourers (land clearing, site decommissioning, steam cleaning or bleaching, and other general labour roles). First hires are expected to begin work in spring 2015.
- TransCanada sponsored a marine mammal observer (MMO) training program in Quebec for eight First Nations members. The MMOs were responsible for acting to ensure the protection of marine species of concern. Two of the graduates were employed in monitoring activities on the Cacouna Marine Terminal Project for five weeks in fall 2014 to collect baseline data on marine life in their natural habitat. without any disturbances. One of the Aboriginal participants completed further training to gain more observation skills. Aboriginal candidates are now interested in pursuing work in this field as MMOs.



TransCanada contributed to the Kline-za caribou herd penning program, a research initiative supported by West Moberly First Nations and Saulteau First Nations as part of a recovery action plan to support the ongoing management of caribou in the South Peace region of B.C.

CONTRACTING HIGHLIGHTS

**56%** increase

In 2014, we generated \$104 million in work for Indigenous businesses or their joint-venture partners, an increase of 56% since the 2013 amount of \$66.5 million.

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### SUPPORTING DIVERSE COMMUNITIES — IN ACTION

Between July 20 and 27, 2014, athletes and teams from 13 Canadian provinces and territories, and 13 regions around the U.S. converged on Regina, Saskatchewan, to compete in the North American Indigenous Games (NAIG).

In total, 5,000 athletes, 1,000 coaching staff, 3,000 volunteers and 200 cultural and entertainment performers attended the event.

"TransCanada was thrilled to sponsor the Regina 2014 NAIG," says Andrea Jalbert, TransCanada vice-president, community and sustainability.

"Through our community investment program, we support organizations and initiatives that bring communities together. The NAIG did just that welcomed athletes, teams and families from North American Indigenous communities as they celebrated excellence in sports and culture."

As part of this partnership, TransCanada:

- Donated 250 tickets to residents of north-central Regina to attend the Opening Ceremony, promoting access to quality cultural activities
- Provided 4,000 pins to competing athletes giving away an additional 1,000 pins during the games
- Sponsored the Cultural Village Main Stage, featuring an impressive lineup of performances

Athletes and teams from 13 Canadian provinces and territories, and 13 regions around the United States converged on Regina, Saskatchewan, to compete in the North American Indigenous Games.

### Investment in Indigenous Initiatives

Through TransCanada's community investment program, we support initiatives that nurture the spiritual, mental, physical and emotional wellbeing of Indigenous communities in North America. TransCanada supports a wide range of community activities through both project-specific and corporate community investment programs.

We fund initiatives that:

- Create healthy foundations for success, growth and learning.
- Build life skills, confidence and life-long resiliency.

- Remove barriers and prepare and equip communities with skills and entrepreneurial abilities so that they are ready to work and participate in the economic benefits of our projects.
- Support community aspirations for self-sufficiency.

### Examples of 2014 Community Investments in Indigenous Initiatives

- TransCanada supports Indspire, Canada's largest Indigenous charity, to support their Oil and Gas Trades and Technology Bursary (OGTT) which is part of the Brighter Futures: Bursaries and Scholarship Awards Program.
- North Montney Mainline Project and Prince Rupert Gas Transmission Project in conjunction with Geoterra Integrated Resource Systems Ltd. conducted a Youth and Elder Natural Resource Training and Mentorship Program that combined traditional knowledge taught by elders with safety orientation and training in forestry field data collection techniques. This hands-on experience demonstrated the value of collaboration to the preservation of traditional knowledge and its significant role in project planning. Eighteen youth and eight elder teachers from 15 Aboriginal communities participated in the six week program.

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- For the community of Nipissing District, Ontario, TransCanada supported the Talking Circle Multimedia Program. The program entails the development of a multimedia education tool to revitalize and preserve Aboriginal language and culture.
- TransCanada made a donation to the annual pilgrimage and celebration event for members of the Blackfoot Confederacy, consisting of the Kainai, Piikani, Siksika and Blackfeet (Montana) First Nations in Alberta.
- TransCanada funded the delivery of driver training to residents on the Wahgoshig First Nation reserve. The inability to provide driver training was identified as a barrier to employment for residents of the remote community, which is located over 70 kilometres from the nearest driver education program.
- TransCanada supports the Great Plains Rodeo Ambassador Program through sponsorship of local rodeo athletes. The recipients are chosen for their achievements in being positive community role models and will participate as TransCanada ambassadors at rodeos throughout the Great Plains region of Nebraska, Wyoming, Montana, North Dakota and South Dakota. The eight men and women of the 2014 program represent the Cheyenne River, Oglala, Rosebud and Lower Brule Tribes.

Across thousands of North American communities, TransCanada's values lay the foundation for how we work with each other, stakeholders and Indigenous peoples.

We are dedicated to doing what's right and we are committed to building strong relationships with Indigenous peoples across the continent for every project we undertake and through the lifecycle of our operations.

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### **DEVELOPING OUR PEOPLE**

Our strong core values and development opportunities are TransCanada's edge in a competitive market.

We attribute much of our success to our talented and diverse workforce. Our definition of success is broad and includes our safety record, professionalism and dedication to our values. All these successes speak to the quality of our people and, indeed, contribute to our financial strength as a company.

Currently, TransCanada employs more than 6,000 people across North America. We continue to rely on our human resources team, as well as senior management and leaders, to ensure the right people are in place to support our ongoing success. Upcoming challenges include unprecedented capital growth requiring a highly skilled workforce, tough industry competition for talent and the reality of a large number of baby boomers approaching retirement.

In 2014, TransCanada hired 927 new employees, including 152 in the U.S. and 38 in Mexico. The median age of employees at TransCanada is 44. At present, 15 per cent of Canadian and 34 per cent of American employees are eligible for retirement. Those percentages will likely increase to 30 per cent and 50 per cent respectively in the next five to seven years.

### **EMPLOYEES BY COUNTRY**

Total number of employees	4314	4823	5437	6059
Mexico	8	58	91	135
U.S.	1648	1771	1859	1914
Canada	2658	2994	3487	4010
	2011	2012	2013	2014

### **VOLUNTARY, INVOLUNTARY AND TOTAL EMPLOYEE TURNOVER PERCENTAGES**

	2011	2012	2013	2014
Employee voluntary turnover rate (%)	5.2	3.8	4.1	4.1
Employee involuntary turnover rate (%)	1.5	1.1	1.4	3.4
Employee total turnover rate (%)	6.7	4.9	5.5	7.5

#### **BUILDING CAREERS**

TransCanada values people and helps employees build long and fulfilling careers. We encourage each employee to talk with his or her leader and map out a career path that meets both TransCanada's and the employee's goals.

We support employees on their journey through formal and informal learning that includes online and classroombased programs in personal development, operating procedures and safety training.

New employees receive orientation training, workshops and company-sponsored certifications. Eligible employees can also access a range of programs that support higher learning goals by offering leave from work and financial assistance for tuition, fees and books.

Our longstanding Engineers-in-Training (EIT) program is a good example of our efforts to develop the next generation. In 2014, more than a hundred employees were enrolled in the EIT program, with 40 per cent female engineers. The program uses ongoing training, mentoring and field rotation to recruit and groom junior employees as technical experts and leaders.

Based on the success of EIT program, we are also exploring the development of a Technologists-in-Training program for spring of 2015.

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We support employees on their journey through formal and informal learning that includes online and classroom-based programs in personal development, operating procedures and safety training.

### Leadership Development

"Leveraging the perspectives and skillsets of our female workforce and valuing all diversity makes TransCanada a better company and just makes good sense," Jim Baggs, executive vice-president, operations and engineering and diversity officer

TransCanada continues to increase representation of diversity in leadership. With women making up 22 per cent at the executive leadership level and vice presidents approaching 20 per cent women, we continue to strive for increased representation across the organization from all diversity groups with our targeted leadership development programs and succession planning process playing an important role.

Our new leader orientation program sets the foundation for new leaders and the performance leadership programs ensures leaders are equipped to support the effective performance and development of their team members.

### Using Social Media for Recruitment

TransCanada's outreach is rapidly growing as we deploy social media to more effectively attract a talented pool of professionals.

Our LinkedIn page surged from 28,000 followers in 2013 to 48,000 in 2014, which represents a 71 per cent increase. Many of these followers are from veterans groups, including Hiring our Heroes, Vets Job Bank and Joining Forces.

TransCanada uses Twitter, @TransCanadaJobs, in outreach efforts by posting a steady stream of employment opportunities.

### **DIVERSITY**

We believe that diversity drives innovation and collaboration, and sustains continued growth. Inclusion creates a work environment where productivity, integrity and responsibility thrive, and where our core values are realized.

As a company that operates in three countries, across multiple provincial and state lines, having a diverse workforce is essential. TransCanada's diversity and inclusion vision is "to reflect the communities in which we live and work and ensure everyone is respected and feels that they can contribute to their full potential."

To support our diversity and inclusion efforts internally, all new employees are required to complete TransCanada's diversity training within 30 days of starting their job. Our external efforts include speaking about diversity at job fairs we

attend and presentations we make at major universities, colleges, technical institutes and professional conferences.

### We want to attract the most diverse range of candidates to opportunities at TransCanada.

In 2014, we developed our 2014-2016 Diversity and Inclusion Strategic Plan to attract the most diverse range of candidates. To guide our strategy and provide an external benchmark, TransCanada adopted the Canadian Human Rights Commission's Human Rights Maturity Model (HRMM). While the HRMM is a Canadian model, the framework is grounded in fundamental human rights principles and, therefore, applies to all our locations, including the U.S. and Mexico.

### Veterans Add Value to the Workplace

Part of TransCanada's diversity strategy is to attract Canadian and U.S. military veterans to its organization. We recognize and value the dedication, discipline and commitment these individuals bring to the workplace.

Since 2000, we have invested more than \$1.4 million in veteran initiatives and memorials, and today nearly 10 per cent of our U.S. workforce is comprised of military veterans. We channel most of our efforts through the U.S. Joining Forces program in the U.S. and community partnerships like Helmets to Hardhats (H2H) and Veterans in Piping (VIP).

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### VETERAN EMPLOYMENT — IN ACTION

One of our newest veteran recruits is Stewart Campbell whose more than 20 years in the Canadian Armed Forces prepared him well for a career at TransCanada.

Stewart Campbell joined the roster of Canadians being honoured in 2013 with the new Queen Elizabeth II Diamond Jubilee Medal for lifetime contributions, achievements or service to his country. In Campbell's case, he earned medals on all three accounts.

Stewart served his country for 17 years as an Army Logistics Supply Chain officer with the Canadian Armed Forces and supported Operations, either as "boots on the ground" or as domestic operational support from Canada, all over the world, including Germany, the First Gulf War, Cambodia, Bosnia, Darfur, Haiti, and Rwanda.

After he retired from the military in 1997, he launched a career in the corporate world, where he quickly rose to executive level positions, but still looked for ways that he could continue to improve the lives of others. For 15 years, he has been working with his former military colleagues on a project called "A Leg Up," which is a fundraising program to buy specialized high quality prosthetic limbs for injured military soldiers.

Today, Stewart is a Manager in Supply Chain at TransCanada. Stewart was attracted to our reputation for excellence in the work that we do and our strong sense of community and willingness to support veterans.

The VIP Program, developed by the United Association of Journeyman and Apprentices of the Plumbing and Pipe Fitting Industry's (UA) in partnership with the U.S. Military, provides returning veterans with 16 weeks of accelerated welding training and two weeks of transitional training to help them adjust to civilian life and seek meaningful employment.

H2H Canada helps connect former military personnel with career opportunities from the nationwide construction trades and registered employers. Candidates can access information about careers and apprenticeships via the Internet from anywhere in the world. The H2H profile they complete will assist in communicating the transferable skills acquired during military service to potential employers.

### **Diversity Partnerships**

We participated in several diversity partnerships and events in 2014, including:

- Community Futures Treaty 7 Disability Employment Symposium
- Women in Energy Forum in which Wendy Hanrahan, executive vicepresident corporate services for TransCanada was a panelist discussing "Leading Through Change"
- Inclusion Works, Canada's largest Indigenous Conference and Career Fair in Vancouver

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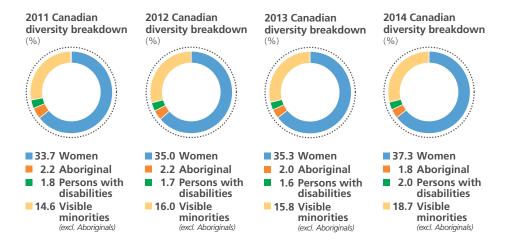
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### **EMPLOYEE RECOGNITION**

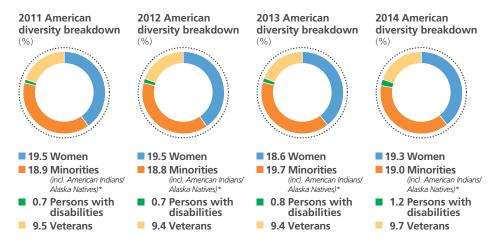
Frequent and genuine recognition strengthens relationships with colleagues and creates a positive work environment. Recognition motivates individuals and teams, boosts performance and contributes to our shared success.

TransCanada's Spotlight program makes it easy for all employees to show their appreciation in tangible ways. The program enables any employee to shine a spotlight on a colleague's assistance, to celebrate career milestones, and recognize colleagues who demonstrate TransCanada's core values.

### **CANADIAN DIVERSITY ANALYSIS**



### **AMERICAN DIVERSITY ANALYSIS**



<sup>\*</sup> The 2013 CSR Report contained an error in labelling that has been corrected.

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### **Environmental Stewardship**

means considering our corporate values in every interaction we have with the environment.

### **Environmental Protection**

is about developing and maintaining environmental policies and management systems that help us preserve the integrity of the environment and sustainability of our operations.

### **Environmental Performance**

is a reflection of our efforts in stewardship and protection. It's how we systematically measure and communicate our environmental works proactively and transparently.

### TRANSCANADA'S ENVIRONMENT STRATEGY

# We recognize that how we interact with the environment is of vital importance to you.

It is to us, too. That's why TransCanada's updated Environment Strategy reflects TransCanada's long-term corporate culture when it comes to environmental stewardship, protection and performance. It guides our decisions every day when building and operating energy infrastructure.

Our Environment Strategy goes beyond simply complying with all applicable environmental laws and regulations; we strive for excellence at every level of the organization.

We are committed to protecting the environment. Not just because we have to, but because we want to. As one of North America's leading energy infrastructure companies, we respect the diversity of the landscapes where we operate and consider the environmental and cultural aspects of our business activities while fulfilling our obligation to meet the continent's growing demand for safe and reliable energy.

### ENVIRONMENTAL STEWARDSHIP

Environmental stewardship is about taking responsibility for our environmental impacts.

### **ENVIRONMENTAL RESPONSIBILITY**

We take responsibility for minimizing the environmental impacts of our operations by reducing our land disturbance, carbon intensity, energy consumption and water use.

### Protecting the Land

Over the course of our more than 60-year history, TransCanada has successfully reclaimed hundreds of thousands of acres of land in many different ecological regions following pipeline construction and other facility construction throughout North America.

Once our projects are constructed, TransCanada reclaims the land to maintain equivalent land capability and re-establish the land's biodiversity.

Our commitment to the protection of the land does not end with successful reclamation after construction. During operations and throughout the life of our assets, TransCanada follows a comprehensive environmental management program and continues to collaborate with landowners, communities and other stakeholders, respecting the cultural and environmental aspects of the lands we operate within.

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Our ongoing goal is to responsibly manage and minimize our environmental footprint. One of the reasons that we are considering the Energy East Pipeline Project is that almost 70 per cent of the pipeline is already in the ground. Of the remaining 30 per cent, more than half will run alongside existing industrial rightsof-way and infrastructure. All of this will reduce the project's environmental impact and costs from the outset.



ENVIRONMENTAL RESPONSIBILITY — IN ACTION

This collaboration with TransCanada has enabled us to gain a better understanding of the oil and gas industry in North America

In 2014. TransCanada looked to more energy efficient gas turbines with a Memorandum of Understanding (MOU) with General Electric (GE).

"We strive to remain an innovator and to continue testing new technology that could result in cost savings and emission reductions within our facilities," says David Montemurro, TransCanada's vice-president, facilities and pipeline projects. "We're pleased to sign the MOU to highlight our commitment toward the development of a more energy efficient gas turbine."

Using key industry insights from TransCanada, GE has announced the launch of a new 16.5 megawatt (MW) gas turbine, developed to meet the oil and gas industry's evolving challenges.

"This collaboration with TransCanada has enabled us to gain a better understanding of the oil and gas industry in North America," says Rafael Santana, CEO and president, turbomachinery solutions, GE Oil & Gas. "Together, we will develop a solution specifically tailored to meet market challenges around increasing efficiency, reducing waste emissions and increasing reliability."

The 'NOVALT16' gas turbine will raise the standards of efficient and reliable pipeline compressions, power generation and oil and gas plant compression applications, thereby helping to meet increasing energy demand across the world.

Development and testing of the NOVALT16 engine began in 2013. Completed units, including all auxiliary systems and controls, are planned for release to the market in early 2016.

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### Managing Carbon Intensity

As supporters of North America's move to a balanced energy mix, TransCanada has invested more than \$5 billion in emissionless energy sources. Today, more than half the power we generate comes from lowand non-emitting sources such as natural gas, nuclear, hydro, wind and solar.

#### Water

TransCanada recognizes water and water systems as a fundamental component of the ecosystems where we operate. The protection of our water resources is of the utmost importance to both the environment and our business.

In accordance with all applicable regulatory requirements and environmental impact assessment processes, TransCanada identifies and characterizes water-related issues — both from a geographic (regional) or temporal perspective — in the planning and permitting stages of asset development.

When a potential exists for our proposed facilities or infrastructure to interact with natural water resources, evaluations are conducted to understand the nature and extent and, if necessary, specific plans are developed and implemented to ensure all resources are protected to maintain their natural function within the environment.

Water is responsibly managed by our operations through a comprehensive environmental management program. For our pipeline assets, for example, where water is sometimes utilized in hydrostatic testing (pressure testing using water), 99.7 per cent of the water used in this process is tested, treated and returned to the environment. For our Canadian power generation facilities, 40 per cent of water intake is recirculated in the power process and 19 per cent is discharged. Discharge water is continuously monitored prior to being discharged.

We have achieved a Low Impact Hydropower Institute (LIHI) certification for the bulk of our hydro generation in New England. LIHI is a non-profit organization dedicated to reducing the impacts of hydropower generation through the certification of hydropower projects that have avoided or reduced their environmental impacts.

#### **ENVIRONMENTAL INNOVATION**

We invest in research and development to encourage environmentally beneficial technologies and techniques.

The pipelines, oil and gas storage facilities and power plants owned and operated by TransCanada are among the most technologically advanced in the industry.

TransCanada has played a key role in advancements related to reducing the environmental impacts not only of our own activities, but across the industry. There are dozens of examples of how TransCanada's work has set the standard in terms of environmental innovation. We've received international recognition for initiatives such as applying directional drilling versus open cut for larger river crossings, pioneering the use of innovative winter construction techniques to reduce impacts through all agricultural lands, prairie and cultivated ecosystems, investing in the preservation and enhancement of endangered species habitats and adopting and developing new technology to reduce greenhouse gas emissions from our operations. As well, TransCanada continually works to study and predict the effect of pipelines on soil and groundwater conditions to ensure every possible step is taken to mitigate impacts.

### Environmental Research and Development

We are invested in numerous largescale research projects, such as studying the use of ultraviolet light to treat soil contaminated by historic use of persistent organic chemicals and the innovative Subsoil Pelletizer Research project, which saw the injection of compost-material pellets into the subsoil along pipeline corridors to enhance reclamation of plant species following construction.

TransCanada also invests heavily in research into better understanding and minimizing the impacts of pipeline rights-of-way (ROWs) on sensitive wildlife species, such as grizzly bears and caribou. These long-term research studies include gathering data on habitat selection processes for wildlife, predator-prey encounter modelling and the overall influence of ROWs on wildlife behaviour patterns.

Results of these research projects — which exemplify successful collaboration between industry partners, government and non-government organizations, Indigenous peoples, communities and academia — will help TransCanada and industry partners understand and predict wildlife response to industrial activities, and assist with resource management and recovery efforts in wildlife habitats along the thousands of miles of industry rights-of-way that produce and transport energy across North America.

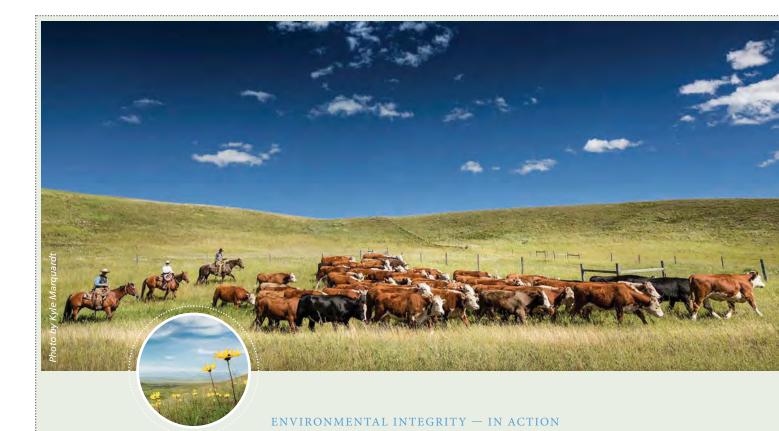
### **ENVIRONMENTAL INTEGRITY**

We treat the environment with respect, demonstrate high environmental standards and ensure environmental commitments made to our stakeholders are viewed as requirements.

TransCanada takes actions every day to demonstrate our commitment to environmental integrity. For example, any environmental commitments we

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Waldron Ranch comprises 30,535 acres of natural lands in the rolling foothills on the eastern slopes of the Rocky Mountains in southwestern Alberta.

In 2014, Nature Conservancy Canada (NCC) celebrated the completion of its fundraising to purchase a conservation easement on this spectacular land from the co-operative of 72 ranchers who own it, protecting the landscape indefinitely for traditional ranching activity and as important wildlife habitat for species including grizzly bear, wolf and elk. It is the largest conservation initiative of its kind in Canadian history, and one in which TransCanada has played an indirect role.

TransCanada is a longtime supporter of NCC as is clear with contributions totalling \$2.7 million to the NCC's conservation programs since 2003.

We are the owner and operator of pipelines that have run through the Waldron lands for over 60 years. TransCanada's infrastructure on the Waldron includes the Burton Creek Compressor Station, the original Nova Gas Transmission Ltd. pipeline and the Foothills pipeline.

"TransCanada works with groups trying to find if there's a way we can re-establish rough fescue and other native species," says Ian Jerrard, TransCanada's local land agent in the Waldron area, who has worked for decades with local landowners and other stakeholders during project planning, construction, operation and maintenance. "And we work hard with the landowners to achieve something that's at least as good as it was before we came to the area."

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make to our stakeholders throughout development and construction of our projects get tracked and completed to ensure the expectations of regulators, governments and individuals are met.

### **ENVIRONMENTAL COLLABORATION**

To achieve environmental solutions with wide-reaching impact, collaboration is mandatory. TransCanada develops strategic partnerships and advocates to help solve issues and promote solutions.

### Collaborating with Indigenous Communities

TransCanada's environment team and Indigenous Relations team work together to implement the stewardship goals outlined in TransCanada's Environment Strategy when working on areas of traditional use affected by our activities. This shared effort reflects the company's commitment to collaboration and sound environmental practices in the communities on whose traditional lands we operate.

### Caribou Penning Project Helps Rebuild the Herd

Nineteen caribou cows and calves took to the rich forest west of Chetwynd, B.C. in the summer of 2014 following a conservation project to rebuild dwindling numbers in the Klinse-Za caribou herd.

After discussions with the local First Nations groups, the PRGT joined the West Moberly and Saulteau First Nations, the B.C. government and local industry to protect and encourage the herd's growth. Funding was provided for a penning project to protect the females and their newborns from predators during and after giving birth. In early July, after the young were mobile enough to elude predators, volunteers encouraged the 19 caribou to leave the pen.

As with all TransCanada projects, PRGT is dedicated to working with local and Indigenous groups to identify worthwhile environmental initiatives like the Klinse-Za caribou penning project, which aligned closely with our Environment Strategy.

### Collaborating with our Communities

We work closely with our communities to ensure the environmental initiatives we're supporting are the ones that matter most to them. Some examples of this are highlighted below.

### Ravenswood Generating Station

Since 2010. TransCanada has been a supporter of the Friends of Queensbridge Park, part of New York City's Partnerships for Parks program, which supports and champions a growing network of leaders caring and advocating for neighbourhood parks and green spaces to transform these spaces into dynamic community assets. TransCanada provides the Friends of Queensbridge Park with approximately \$13,000 (USD) per year and also contributes volunteer time. Employees from TransCanada's Ravenswood Generating Station in Long Island City, New York, came out in full force in 2014 for the twice yearly "It's My Park Day," planting bulbs, painting fences and making other general repairs to the park.

"As our longtime and tireless supporter, we are indebted to TransCanada for the integral part it has played in facilitating the revitalization of our wonderful park and promoting it as a safe, scenic and healthy green space to be enjoyed by all community members," says Elizabeth McQueen, President, Friends of Queensbridge Park.

WILDLIFE HAVEN

70

YEARS

TransCanada's partnership with
Wildlife Haven stands to span over
70 years with support that began in
1994 and a 50-year land lease signed in 2014.

#### Wildlife Haven

Our projects are long-term and so are our relationships. TransCanada's 20-year partnership with the Wildlife Haven Rehabilitation Centre in Ile-des-Chenes, Manitoba, is now poised to extend for another 50 years. This relationship has seen decades of funding and personnel support for wildlife rescue and rehabilitation, and education for the surrounding communities.

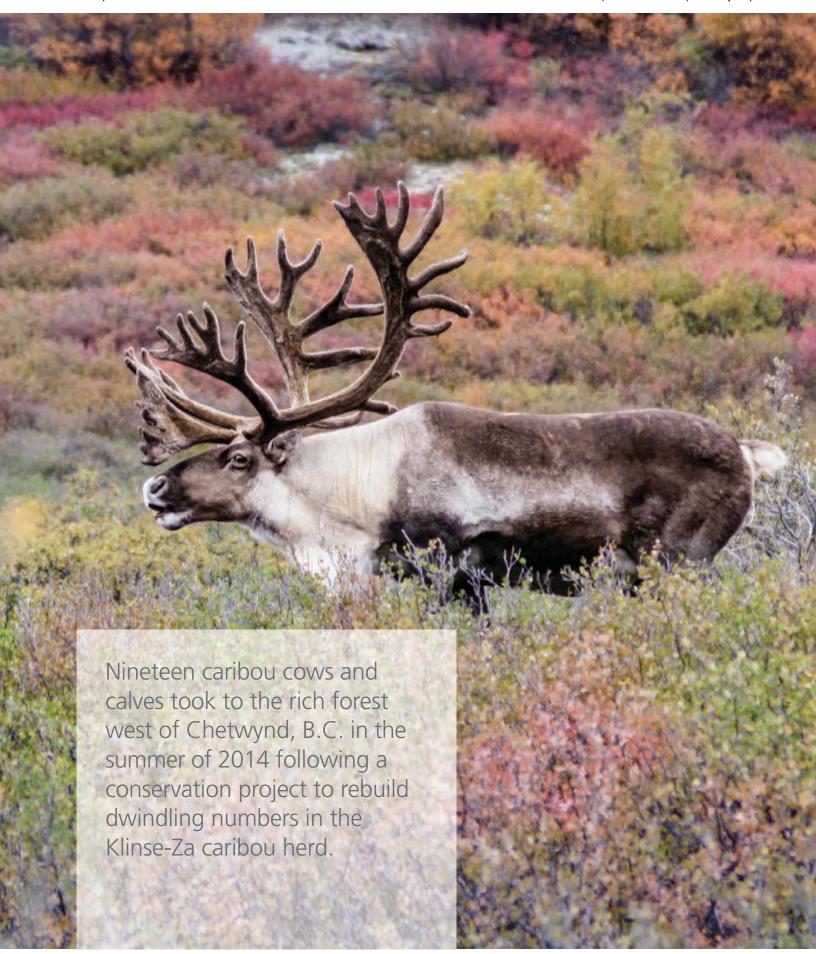
The partnership is so successful, in 2014 TransCanada entered into a long-term community land lease with Wildlife Haven, offering a 50-year donation of 18 acres of land immediately adjacent to TransCanada's Station 41, and TransCanada helped Wildlife Haven kick off its \$2.5 million capital campaign with a donation of \$500,000.

### **Engaging Employees**

TransCanada's Environment Strategy belongs to all TransCanada employees and contractors. We make a collective commitment to environmental stewardship, protection and performance. Employees are routinely engaged in the environmental discussion through various media, including training programs, formal and informal communication materials and employee surveys.

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A particularly successful employee engagement event is TransCanada's annual Environment Week Speaker Series, a business-focused conference-style event which allows senior leaders of the company to engage employees with factual information on TransCanada's businesses. The series focuses on the current, relevant and critical environmental issues that affect our business and how these issues are managed, and aims to motivate and empower employees to use this factual information to engage others.

More than 1,500 employees participated in the 2014 Environment Week Speaker Series, an increase of 50 per cent over 2013, with each session filled to capacity within 24 hours of registration opening.

### **ENVIRONMENTAL PROTECTION**

We preserve the integrity of the environment through a comprehensive management system. This system is driven by an integrated <u>Health</u>, <u>Safety and Environment Commitment Statement</u> and an environmental management program that guides the proactive management of our risks and requirements.

### **ENVIRONMENTAL MANAGEMENT**

As part of our cycle of continuous improvement, TransCanada makes ongoing enhancements to our environmental management program to meet changing and more robust regulatory requirements, address evolving stakeholder expectations and support our continuous commitment to the environment.

### ENVIRONMENTAL MANAGEMENT POLICIES AND PROGRAMS

### **Environmental Management System**

TransCanada uses an integrated Health, Safety and Environment Management System (HSE MS). It is modelled after ISO 14001 and OHSAS 18001, which provide the framework to address health, safety and environmental issues. Accountability for the HSE Commitment Statement lies with the CEO.

The basis of TransCanada's HSE MS is to ensure effective planning, implementation, monitoring, continuous improvement of plans and processes associated with our health, safety and environmental programs. In conjunction with our Asset Management System (AMS) and our Capital Projects Management System (CPMS), the HSE MS system is further supported by a set

of programs and procedures that ensure compliance with regulatory requirements and support development and adoption of best management practices.

TransCanada's HSE MS applies across the company to all business lines, assets and TransCanada operated, partially owned entities.

## ENVIRONMENTAL PROTECTION THROUGHOUT THE LIFE CYCLE OF OUR ASSETS

We work to minimize our environmental footprint as we strive to meet the energy needs of North Americans. We're committed to protecting the environment throughout the complete life cycle of our assets, from business development to project planning and design, through construction and operations to remediation and final decommissioning.

### **Business Development**

Protection of the environment is good business. TransCanada has integrated environmental principles into our business development strategy. In addition to renewable generation opportunities, TransCanada is also focusing development initiatives in regions where aging generating fleets are in conflict with new and proposed environmental rules. Providing solutions to aging coal generating plants in Arizona or oil-fired steam plants in Mexico are examples of how TransCanada considers protection of the environment in developing business strategies.

We also strive to identify ways of meeting energy needs in the most innovative ways possible. America needs efficient and innovative ways to gets its new-found natural gas supply to market with minimal environmental impact; specifically, the growing supply from the Marcellus and Utica basins in the mid-northeast need to



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be delivered to the Gulf Coast. ANR Pipeline Company, as a subsidiary of TransCanada, is actively pursuing modifications to its Southeast Mainline System to accomplish this. In lieu of building all new greenfield pipeline systems, ANR is investing in modifications to its existing footprint. This will allow gas to flow in 'reverse' mode from the basins to the south eliminating the need to install additional pipe in the ground, reducing environmental impact and creating significant cost savings.

#### Project Planning and Design

TransCanada completes a detailed environmental impact assessment for every project. The environmental impact assessment includes extensive field studies which examine all existing natural resources along our proposed project footprint, such as vegetation, soils, wildlife, water resources and wetlands, protected areas and land use. Also integral to the environmental impact assessment process is TransCanada's engagement with Indigenous communities, landowners, local residents and other stakeholders to identify and understand their use of the lands and any additional unique environmental concerns.

Information gathered from the environmental impact assessment is used in design considerations including pipeline route selection, facility site selection and to inform project-specific environmental protection plans.

#### **Procurement**

TransCanada's supply chain management group strives to engage contractors and suppliers that align with TransCanada's commitment and approach to the environment, community, governments and Indigenous peoples. Suppliers come to understand our standards through communication and training on corporate policies and procedures and the full life cycle management of supplier performance.

#### Construction

In order to conserve and protect the environment through construction and into operations, information gathered for an environmental impact assessment is used to develop projectspecific environmental protection plans. TransCanada's post-construction reclamation and monitoring program ensures that the essential biophysical characteristics are proactively managed ensuring equivalent land capability and biological diversity are maintained or reestablished after construction.

#### **Operations**

TransCanada has an extensive environmental management program to ensure ongoing, day-to-day protection of the environment, including detailed operating procedures, extensive employee training and routine inspections and audits. TransCanada also has a comprehensive Emergency Management System (EMS) designed to protect the health, safety and welfare of people, and avoid effects to property, company operations or the environment in the event of an emergency.

#### Remediation and Decommissioning

TransCanada is dedicated to the protection of people and the environment when completing remedial activities, such as

mitigating impacts from historical operating activities and spills. Our comprehensive environmental risk management framework ensures that the most beneficial and leadingedge remedial strategies are applied.

TransCanada continually strives to be an industry leader when completing decommissioning activities by maximizing system performance while balancing customer requirements. Decommissioning projects are managed through a regulatory structure which considers environmental and social impacts on the localized ecosystems and communities in which the facilities operated. Reclamation ensures that the effects of TransCanada's developments on the land are not permanent and enables the return of the site to a state of equivalent pre-construction land capability.

#### **Energy East Environmental** Impact Assessment

As with many of our projects, the type and amount of environmental data collected in 2014 for TransCanada's proposed Energy East Pipeline was significant. It involved collecting data from six provinces to support our application. This data demonstrates the level of effort required to gather information in order to understand and assess the potential environmental interactions of a project of the size and scale of Energy East. The development of the Energy East environmental and socio-economic impact assessment involved over 900 scientists and environmental assessment specialists completing environmental field work and analyses, including:

- Wildlife biologists
- Vegetation ecologists
- Marine scientists
- Atmospheric scientists
- Socio-economic specialists
- Traditional land use facilitators

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TransCanada is committed to building B.C.'s liquefied natural gas export industry in a safe and environmentally responsible manner.

ENVIRONMENTAL PROTECTION — IN ACTION

TransCanada's Coastal GasLink Project and Prince Rupert Gas Transmission Project have received environmental assessment certificates from the British Columbia Environmental Assessment Office (BC EAO).

To prepare for the applications, the project teams conducted a combined 2.4 million hours of environmental, engineering and construction field work on or near the proposed pipeline routes, while gathering information about current and traditional land use, social and economic conditions and community priorities in the project area.

A combined 20,000+ pages of environmental, economic, cultural, social and heritage documentation was sent to the BC EAO in support of the applications.

"These are significant milestones for our Coastal GasLink Pipeline Project and our Prince Rupert Gas Transmission Project. It demonstrates TransCanada's commitment to building B.C.'s liquefied natural gas export industry in a safe and environmentally responsible manner," says Russ Girling, TransCanada's president and CEO.

- Geographic information systems (GIS) technicians
- Archeologists and paleontologists
- Aquatics and fisheries scientists
- Soils scientists

Environmental field work has taken place in more than 180 individual municipalities

across Canada. In addition to providing the information required for the Energy East environmental impact assessment, the data collected is also provided to provincial databases that then contribute to the scientific knowledge repositories used by all Canadians across the country.

#### Mexico Topolobampo Project

The preservation of 200-year-old giant cacti and re-population of 30,000 plants along the right-of-way are among one of many ways we cared for the environment during construction of TransCanada's 530-kilometre (329-mile) Topolobampo Project in Mexico.

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Like projects in Canada and the U.S., our projects in Mexico undergo an environmental impact assessment (EIA) process. This EIA requirement includes the obligation to rescue plants and animals that are rare and endangered.

As part of our efforts on our Topolobampo Project in Mexico, TransCanada hired a team of local professional biologists, ecologists and botanists to work ahead of construction activities to locate, identify and relocate plants to outdoor greenhouses along the route. Plants include the giant cacti, some of which are two centuries old. A stem of the cactus is selected and then cut off under supervision of a registered biologist or forest engineer, then relocated to one of the greenhouse areas.

We may start out with 4,000 individual plants, but end up with between 30,000 to 50,000 plants that we'll put back onto the right-of-way — ensuring we leave the land in a condition that is equal to, or even better than, we found it.

#### **CLIMATE CHANGE**

Climate change is at the forefront of environmental interests at TransCanada. As an energy infrastructure company, we recognize our role in the larger energy system, including our own emission of greenhouse gases (GHGs). We're doing our part to manage our GHG emissions through the programs and initiatives we have in place that meet, and often exceed, regulatory requirements.

TransCanada has had a climate change strategy for several years. TransCanada is committed to the management of climate issues across our operations. We have established lines of accountability and responsibility for climate change throughout our organization.

Updates on the company's initiatives to manage GHG emissions are presented to the health, safety and environment committee of TransCanada's Board of Directors. Our president and CEO, Russ Girling, who also sits on the board, holds the highest level of direct responsibility for climate change issues. Additional responsibilities are divided among TransCanada's main areas of business: natural gas pipelines; liquids pipelines; power generation and gas storage; operations and engineering; and corporate development.

TransCanada recognizes stakeholder concerns related to increasing GHG emissions and the need for sensible public policy frameworks focused on managing emissions. To that end, we engage with policymakers, participate in industry association working groups and fund research organizations that disseminate public work on climate change.

TransCanada has publicly documented climate change-related activities for nearly 20 years. TransCanada has been voluntarily reporting to the London-based CDP (formerly the Carbon Disclosure Project) since 2006. In 2014, TransCanada received our highest-ever score of 99A-on our CDP report. We ranked second in disclosure score among Canada's 200 largest companies by market capitalization. Since 2012, TransCanada has been among Canada's top-scoring companies and named to the country's Climate Disclosure Leadership Index.

# Investing in a Balanced Energy Future

- We have invested more than \$5 billion in emission-less energy sources
- Approximately one-third of the power we produce comes from emission-less energy
- Cartier Wind is the largest wind development in Canada. TransCanada is a 62 per cent owner in this \$1.1 billion facility in Québec
- TransCanada owns 13 hydroelectric facilities in New Hampshire, Vermont and Massachusetts, producing 583 MW of clean electricity
- TransCanada operates eight solar facilities in Ontario, supplying renewable power under a long-term contract
- Bruce Power provides approximately 2,500 MW of power generation capacity near Tiverton, Ontario.
   The Ontario government's 2013 Long-Term Energy Plan outlined its intentions on nuclear power's role in the fuel mix going forward. The potential refurbishment of six Bruce Power units was included within this plan, and Bruce Power is actively considering the site's refurbishment options within this context

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#### **GHG** Emissions Management

While our processes employ low-emissions fuels and technologies, the addition of new natural gas and liquids pipelines and expansion of our power portfolio will lead to an increase in TransCanada's absolute GHG emissions.

The two major categories used to describe GHG emissions are direct and indirect emissions.

#### WHERE DO TRANSCANADA'S GHG EMISSIONS COME FROM?

	Natural gas pipelines	Power facilities	Liquids pipelines
Direct emissions: result from the operation of our facilities	Most of these emissions result from the combustion of natural gas used as a fuel source by our natural gas pipeline system. Natural gas is the primary fuel used by turbines and reciprocating engines that drive compressors located along the pipeline. Compressors "push" the gas through the pipeline. carbon dioxide (CO <sub>2</sub> ) is also emitted by natural gas-fired boilers that provide heat for compressor stations, and by the infrequent use of auxiliary or backup generators that provide the stations with electricity during service interruptions.	Many of our power facilities, including the hydro, wind, solar and nuclear facilities, generate no direct GHG emissions.  Natural gas combustion is the main source of GHG emissions at our natural gas-fired power plants. Coal combustion is the main source of GHG emissions at the coal-fired power plants for which we have agreements to purchase power from the facilities.	There are very low GHG emissions from pumping operations. Pumping stations are mainly electrically-driven and, therefore, have no emissions from normal pumping operations. However, similar to natural gas pipelines, there are auxiliary power units used during power outages which generate some GHG emissions.
Indirect emissions: produced by companies that	For all our facilities that consume elused for the electrical generation.	ectricity, the amount of indirect emiss	ions varies according to the fuels
generate electricity used by our facilities	Compressor stations connected to the electrical grid will generate indirect emissions.	Some of our power facilities, in addition to generating electricity, purchase power from the electrical grid. This purchased electricity will generate indirect emissions.	Pumping stations, which push oil along the pipeline, connected to the electrical grid will generate indirect emissions.

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The following information outlining TransCanada's direct and indirect GHG emissions is an excerpt of our CDP report<sup>1</sup>. The full report is available from **www.cdp.net**.

#### **EMISSIONS MANAGEMENT PROGRAMS AND SUPPORTING RESEARCH**

Technological innovation is critical to managing the complex and interrelated issues surrounding GHG and air emissions. TransCanada has a multi-decade legacy of investing in research and innovation to manage GHG emissions.

#### TRANSCANADA'S GHG MANAGEMENT PROGRAMS AND RESEARCH LEGACY

#### **Methane Management**

Supersonic nozzles were designed to capture methane from dry gas seals. This technology was transferred to Dresser Rand for marketing worldwide.

Methane biofiltration converts methane to CO<sub>2</sub> and was tested for use on pipeline components which are engineered to release methane as part of normal operations.

Blowdown emissions consist of natural gas, or methane, that is vented to the atmosphere from pipelines, compressors and yard piping to allow for repairs and maintenance. We explored methane capture from compressor station blowdown options for addressing these emissions.

Fugitive emissions are small methane leaks from pipeline equipment, such as compressor seals and valves, as well as engineered releases related to pipeline operations. Fugitive emissions measurement techniques allow TransCanada to measure these emissions from our Canadian pipeline operations and work to reduce them where possible.

#### **Energy efficiency**

In previous years, TransCanada has partnered with Rolls-Royce to conduct turbine performance trials at our Nordegg Compressor Station. These trials indicate the RB211-6761 turbine can deliver a reduction in fuel consumption and GHG emissions, compared with earlier models. TransCanada recently entered into an agreement with Rolls-Royce to test and trial a new version of the RB211 combustor, which may lead to even greater efficiency and millions of dollars in fuel savings annually.

#### Carbon capture

Capturing  $CO_2$  from compressor engine exhaust through oxy-combustion which improves the  $CO_2$  capture efficiency.

Participation in geological sequestration studies to investigate opportunities to capture and use industrial emissions of carbon dioxide for other purposes.

1 TransCanada's GHG emissions reporting boundary was the same 2012-2014 period. For those years, we report emissions on an equity share basis for our Canadian and U.S. assets. We anticipate including our Mexico assets in our 2014 CDP disclosure, to be submitted to the CDP in June 2015 and released publicly in fall 2015. Other international assets, the Keystone Pipeline system, our power purchase agreements (PPAs) and oil storage direct and indirect emissions, are excluded. In addition, indirect emissions are calculated but not disclosed for our natural gas pipelines in the United States, British Columbia, Ontario and Québec. For additional details on our GHG reporting boundary, please see Section CC8.4a of our CDP reports, publicly available at www.cdp.net.

## Environmentally Sensitive Resources Databases

In order to quickly and effectively protect the environment from a potential emergency response situation, TransCanada maintains a database of environmentally sensitive resources along the Keystone Pipeline right-of-way. TransCanada utilizes this database in our oil spill response preparedness planning, and it is an essential reference tool to assist responders in identifying the most sensitive sites or resources to prioritize for protection and cleanup.

#### Minimizing the Impacts of a Spill

In the unlikely event of a significant spill, TransCanada's emergency response plan is designed to implement the most modern strategies, techniques and equipment to clean up any environment along the pipeline. We work with regulatory agencies to develop our strategies based on conditions such as land or surface water, weather, receptors, geology, soil type, the amount of oil spilled and the type of oil. Ultimately, the responsible environmental regulatory agency would outline the remediation criteria that we need to meet. Typically, we would implement proven mechanical cleanup methods, such as suction equipment (i.e., vac trucks), hand removal, excavation, absorbents and skimmers.

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#### It's About Prevention

While we acknowledge that a significant leak on our pipeline is possible, it's highly unlikely. We do everything we can to prevent leaks from occurring. We continuously monitor our pipeline from our operational control centre.

We fly the pipeline route regularly to inspect its condition, and we have a regular in-line inspection schedule which sees a high-resolution inspection tool sent through the pipeline, which is capable of detecting even the smallest potential risks.

This allows us to implement maintenance programs to ensure the pipeline stays safe. It's in all our interests to have safe, secure and reliable energy transportation sources for North America. That's why we're investing billions of dollars to construct the safest, most modern and technologically advanced pipelines possible.

#### **WASTE MANAGEMENT**

TransCanada is committed to the proper management of waste materials in order to protect human health and the environment. TransCanada employs a comprehensive waste management process across all business areas and jurisdictions.

TransCanada's waste contractors are managed through a rigorous procurement, full life cycle management process.

The process includes a safety, technical and quality prequalification to ensure contractors meet TransCanada's industry-leading safety standards and possess the technical expertise and quality infrastructure to manage our wastes in full compliance with all regulatory and TransCanada requirements.

Some materials are reused in the daily operation of our assets, including waste hydrocarbons which are used as one source of fuel for power generation.

A large number of waste materials, including used batteries and lube oil, are recycled. Used pipe and other waste metals, after being vetted through strict company procedures, are normally able to be recovered as scrap and repurposed.

#### Paper Reduction Strategy

At TransCanada, we make efforts to reduce, reuse, recycle or recover our waste materials. And sometimes, it's little changes that make a big difference.

In 2013, TransCanada used 200 million sheets of paper in Canada and the U.S. In 2014, we made a commitment to reduce paper use with the implementation of new printing initiatives. By requiring employees to log in to the printer and collect their print jobs immediately, we reduced the potential for wasted or forgotten print jobs and saved over 530,000 pieces of paper in just eight months.

TransCanada now electronically distributes our employee magazine instead of printing, resulting in an average annual reduction of 1.1 million pieces of paper, 17,000 envelopes, \$40,000 in printing costs and \$57,000 in postage, equating to an annual savings of approximately \$100,000.

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#### **ENVIRONMENTAL PERFORMANCE**

At TransCanada, we systematically measure and communicate our performance in a proactive and transparent manner. As part of our cycle of continuous improvement, TransCanada is making enhancements to our environmental management program in 2014 and 2015, including a more holistic and consistent process for setting goals, objectives and targets for key program areas.

#### **GREENHOUSE GAS EMISSIONS**

#### Direct Greenhouse Gas Emissions\*

Direct (tCO <sub>2</sub> e)**	2011	2012	2013	2014
Pipeline	5,923,182	5,928,354	7,074,995	7,300,000
Power	5,526,008	6,341,096	5,070,126	5,300,000
Total	11,449,190	12,269,450	12,145,121	12,600,000

TransCanada's direct GHG emissions reporting boundary is based on equity share for our Canadian and U.S. assets. International assets, the Keystone Pipeline system, our power purchase agreements and oil storage emissions are excluded.

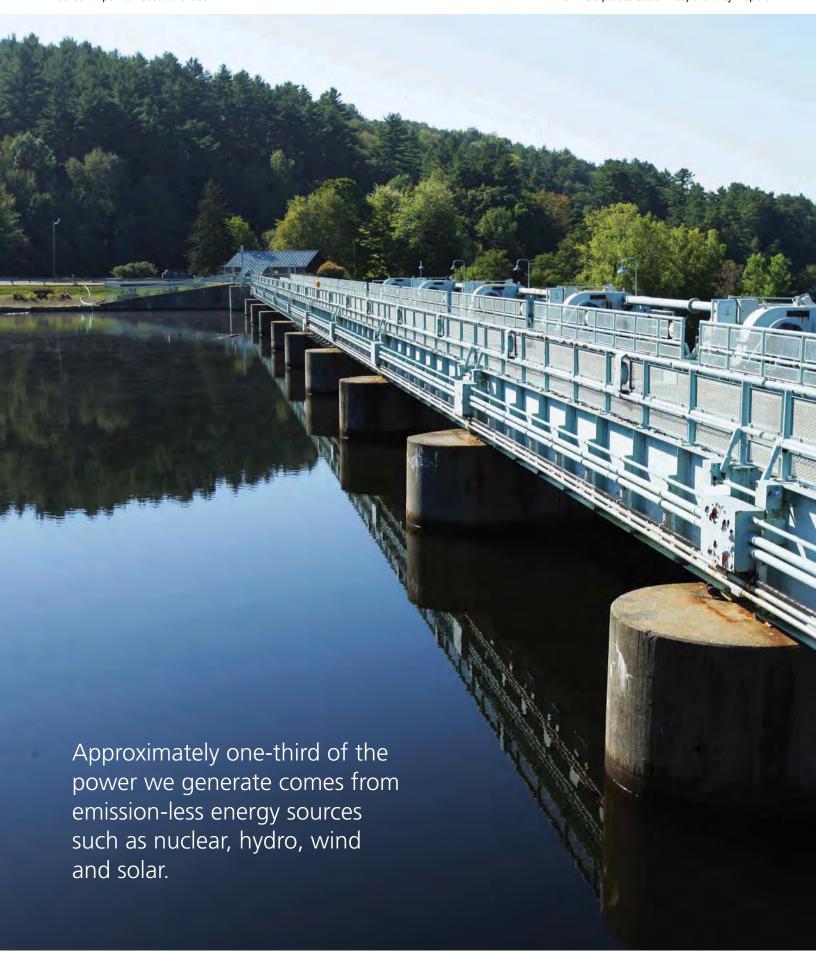
#### Indirect Greenhouse Gas Emissions

Indirect GHG emissions are disclosed in our CDP reports, publicly available at **www.cdp.net**.

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<sup>\*\*</sup> Tonnes of carbon dioxide equivalent



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#### **CRUDE OIL SPILLS**

TransCanada takes extensive preventive measures to ensure that our pipelines are as safe as possible. In the unlikely event of a crude oil spill, TransCanada has extremely comprehensive and prescriptive emergency response plans in place to quickly and effectively minimize risk to people and the environment.

In 2014, we had 10 reportable crude oil spills totalling 226 litres (see table below). All crude oil spills in 2014 were the result

of minor mechanical or maintenance issues at valves or other components and were contained wholly within our facilities; none were the result of a pipeline leak. All causative issues have been repaired or addressed. All crude oil spills were cleaned up with no adverse impact to the environment. TransCanada investigates and learns from all crude oil spills to make system-wide improvements in order to prevent similar recurrences.

Country	Spills	2011	2012	2013	2014
Canada	Number of Reportable Crude Oil Spills	38	44	27	9
	Total Volume (litres)	497	283	3,104	67
U.S.	Number of Reportable Crude Oil Spills	8	0	2	1
	Total Volume (litres)	65,753	0	95	159

A reportable spill is defined as one that is reportable to a regulatory body, such as a federal or provincial or state regulator. Prior to July 1, 2014 in Canada, all TransCanada crude oil spills, regardless of volume, were reportable to the Canadian Transportation Safety Board. The higher number of reportable spills prior to 2014 reflects this previous requirement.

#### **REGULATORY PERFORMANCE**

Regulatory compliance is integral to TransCanada's environmental management program and the primary guiding principle of our <u>Health</u>, <u>Safety and Environment Commitment Statement</u>. In 2014, TransCanada had one regulatory fine in the amount of \$1,000. The United

States Coast Guard fined TransCanada's Ravenswood Generating Station for a release of 30 gallons (114 litres) of turbine oil resulting from a leak in the facility's Unit 20 west circuit oil cooler. All coolers of this type are currently under an integrity and automatic replacement program.

Environmental Fines (\$s)	2013	2014
Energy Operations	7,500	1,000
Gas and Gas Storage Operations	1,000	0
Oil Operations	_	0
Project Development	2,690	0
Total	11,190	1,000

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Your community benefits from the economic success of our operations as we pay taxes and employ staff With \$59 billion in assets in 2014, we paid \$582 million in taxes in that year alone. Our energy infrastructure is integral to the economy itself. It is relied upon every day to safely deliver 20 per cent of the continent's natural gas supply, move one-fifth of Canada's crude oil exports to U.S. markets and generate enough electricity for 11 million homes — one-third of which comes from emission-less sources.

We also have \$46 billion in new commercially secured pipeline and power generation projects in development to help meet the world's growing demand for affordable energy, delivered safely, responsibly and reliably.

As we work with you to embark on the period of unprecedented growth that lies ahead, our 60-year track record of commitment to safety, society, the environment and strong economic performance remains unwavering.

We also recognize we can achieve these ambitious growth goals by remaining guided by our values in how we work with you, treat one another and operate every day. Our Code of Business Ethics is firmly rooted in those values. It's about doing what's right.

#### TRANSCANADA AT A GLANCE



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#### **FINANCIAL PERFORMANCE**

As new technology has unlocked oil and gas supplies that are paving the way toward energy self-sufficiency and the ability to export our energy products to meet the needs of overseas markets, significant investment in new infrastructure is required to secure North America's energy future. Building on a solid track record, TransCanada is playing a central role in developing that future; our diverse asset base of natural gas and liquids pipelines, gas storage and power generation facilities provides a solid foundation to realize our vision of becoming the continent's leading energy infrastructure company.

2014 was a year of many accomplishments for TransCanada, as we resolved a number of challenges facing our existing business over the last few years, successfully advanced several of our new pipeline and power generation projects and captured more high-quality growth opportunities across the continent. We have established a portfolio of commercially secured growth projects that is expected to transform our company by the end of this decade and drive significant value for shareholders.

Our top priority continues to be an unwavering focus on maximizing the value of our assets, ensuring they operate safely, efficiently and are being used to their full potential. We moved forward by successfully repositioning some of our key long-haul natural gas pipeline systems that have been under pressure from changing market dynamics in recent years.

#### RENEWED STABILITY AND GROWTH

The restructuring of the Canadian Mainline's tolling framework has resulted in greater stability and competitiveness for the Mainline System through a settlement we reached with the three major local distribution companies in Ontario and Québec that the National Energy Board (NEB) approved in late 2014.

The settlement will enhance access of northeastern U.S. natural gas production to markets served by TransCanada facilities and provides long-term stability for the Mainline System over the next 15 years.

It also facilitates \$500 million in new capital projects to add needed capacity in the Eastern Triangle region while ensuring we can recover our system-wide costs. We also moved forward with significant expansion to the southern arm of the Eastern Triangle, filing an NEB application for the \$1.5 billion Eastern Mainline Project that will add capacity in the Toronto-to-Ottawa corridor to ensure the markets in southern Ontario and Québec continue to have abundant supplies of natural gas into the future.

The addition of 245 km of new pipe under the Eastern Mainline project will allow us to convert approximately 3,000 km of Mainline facilities that are not fully contracted to crude oil service for the Energy East Pipeline Project. Doing so will help to reduce costs and increase stability for gas shippers while continuing to ensure that eastern Canadians have the gas supply they need to heat their homes, schools and hospitals.

Similarly, the future of our ANR Pipeline in the U.S. was enhanced through longterm commitments to move almost two billion cubic feet per day of natural gas from the Marcellus and Utica regions to key market destinations for an average term of 23 years. This included support for a program to reverse the flow on ANR's Southeast Main Line to enable more natural gas to move south to the Gulf Coast, where markets are experiencing a resurgence of demand for industrial use and planned liquefied natural gas (LNG) export terminals. This successful re-contracting ensures the ANR Pipeline will be used to its full potential and provides a solid base to explore further expansions to transport growing gas supplies to key North American markets.

#### **2014 FINANCIAL HIGHLIGHTS**

- Net Income attributable to common shares: \$1.7 billion or \$2.46 per share
- Comparable earnings: \$1.7 billion or \$2.42 per share
- Comparable earnings before interest, taxes, depreciation and amortization: \$5.5 billion
- Funds generated from operations: \$4.3 billion
- Capital expenditures, equity investments and acquisitions: \$4.9 billion
- Common share dividends declared: \$1.92 per share
- \$109 million in income taxes paid
- \$473 million in property taxes paid in 2014

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#### **OUR STRATEGIC PRIORITIES**

- Ensuring our existing asset base operates safely, efficiently and generates maximum value for shareholders.
- Successful completion of \$12 billion in small- to medium-sized capital projects by the end of 2017 and \$34 billion of commercially secured large-scale projects by the end of the decade.
- Capturing additional low-risk opportunities that contribute to earnings growth in the short, medium and long term.
- Maintain our financial strength and flexibility to grow our dividend and continue to prudently fund our industry-leading capital program.

The Napanee Generating Station will be an essential component of Ontario's electrical system, delivering on-demand power to address rising electricity demand, replace retired coal, help manage changes in nuclear capacity due to planned refurbishments/retirements and provide a source of power to backstop intermittent wind and solar generation.

#### STRATEGIC PRIORITIES — IN ACTION

TransCanada's \$1.2 billion Napanee Generating Station (NGS), a 900-MW, combined cycle, natural gas-fuelled electricity generating station located in the Town of Greater Napanee in Eastern Ontario, will begin construction in 2015.

Extensive environmental studies covering air quality, noise, human health, terrestrial and aquatic environments, archeological and heritage resources, and socio-economics concluded that NGS will have little or no effect on the environment and surrounding community, both during construction and operation.

NGS will use the latest in generating and environmental controls technology, including dry low NOx burners and a selective catalytic reduction system which will make it one of the most efficient and cleanest generating stations in Ontario.

The NGS will be an essential component of Ontario's electrical system, delivering on-demand power to address rising electricity demand, replace retired coal, help manage changes in nuclear capacity due to planned refurbishments/ retirements and provide a source of power to backstop intermittent wind and solar generation.



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#### **ACCESS TO NEW MARKETS**

Energy is essential to our modern way of life. Whether it's the refined oil we use daily for transportation and in our consumer products, the natural gas that heats our homes and fuels our industry, or the electricity that lights our cities and powers our technology, the world's appetite for affordable energy supplies continues to grow.

At the same time, efforts to improve energy efficiency and reduce environmental impacts are presenting new opportunities and challenges for companies like TransCanada that are dedicated to delivering the energy the world needs, safely and reliably.

Our record of safety and reliability, coupled with respectful and long-standing relationships with the communities where we operate, has made TransCanada one of North America's most sought-after partners in energy infrastructure. With an unprecedented \$46 billion of commercially secured capital projects in development across the continent, the confidence we inspire is evident in the scope of our portfolio.

Beyond the energy it will deliver, each new project we undertake is an opportunity for further job creation, community investment and economic stimulus. It allows us to engage more closely on the ground, and demonstrate responsiveness, accountability and a balanced approach to sustainable development of energy resources.

# ASSETS THAT BEGAN CONTRIBUTING TO EARNINGS IN 2014

#### Gulf Coast Extension (\$2.6 B)

In January, the Gulf Coast extension of the Keystone Pipeline System began commercial service, delivering crude oil from the market hub at Cushing, Oklahoma, to refineries in Port Arthur, Texas. This expanded the Keystone Pipeline System to a 4,247 km (2,639 miles) pipeline system which has delivered more than 830 million barrels of crude oil from Canada to the U.S. to date.

#### NGTL Expansions (\$300 M)

In 2014, the NGTL System saw \$300 million in new assets begin operation. NGTL continues to be the primary gathering system for Alberta and northeastern B.C., moving growing production from the Duvernay, Montney and Horn River plays.

#### Tamazunchale Extension (US\$600 M)

In Mexico, the US\$600-million extension of the Tamazunchale Pipeline over extremely rugged terrain demonstrated our expertise in engineering and project management and commitment to responsible development. Construction was completed in November 2014.

#### Ontario Solar (\$240 M)

We also took possession of another four solar generation facilities in Ontario as they began producing emission-free electricity under 20-year contracts with the Independent Electricity System Operator (IESO), bringing our total solar capacity to 76 MW, enough to power more than 12,000 homes.

# **DEVELOPMENTS AND PROJECT ANNOUNCEMENTS IN 2014**

#### Upland Oil Pipeline (\$600 M)

In November 2014, we completed a successful binding open season for the Upland Pipeline. The \$600 million pipeline would provide crude oil transportation from, and between, multiple points in North Dakota and interconnect with the Energy East Pipeline System at Moosomin, Saskatchewan.

Subject to regulatory approvals, we anticipate the Upland Pipeline to be in service in 2018. The commercial contracts we have executed for Upland Pipeline are conditioned on the Energy East Pipeline proceeding.

#### NGTL Expansions (\$3.1 B)

We continue to experience significant growth on the NGTL System as a result of growing natural gas supply in northwestern Alberta and northeastern B.C. from unconventional gas plays and substantive growth in intrabasin delivery markets. This growth is driven primarily by oil sands development, gas-fired electric power generation and expectations of B.C. west coast LNG projects. This demand for NGTL System services is expected to result in approximately 4 billion cubic feet per day (Bcf/d) of incremental firm services with approximately 3.1 Bcf/d related to firm receipt services and 0.9 Bcf/d related to firm delivery services. We will be seeking regulatory approvals in 2015 to construct new facilities to meet service requests of approximately 540 km (336 miles) of pipeline, seven compressor stations, and 40 meter stations that will be required in 2016 and 2017 (2016/17 Facilities). The estimated total capital cost for the facilities is approximately \$2.7 billion.

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Including the new 2016/17 Facilities, the North Montney Mainline, the Merrick Mainline, and other new supply and demand facilities, the NGTL System has approximately \$6.7 billion of commercially secured projects in various stages of development.

#### North Montney Mainline

The \$1.7 billion North Montney Pipeline is a proposed extension and expansion of the NGTL System to receive and transport natural gas from the North Montney area of B.C. The hearing for the application before the NEB to build and operate this project concluded in December 2014. The NEB issued its report and recommendation to approve the project in April 2015.

#### Merrick Mainline

In June 2014, we announced the signing of agreements for approximately 1.9 Bcf/d of firm natural gas transportation services to underpin the development of a major extension of our NGTL System.

The proposed Merrick
Mainline will transport natural
gas sourced through the NGTL
System to the inlet of the
proposed Pacific Trail Pipeline
that will terminate at the
Kitimat LNG Terminal at
Bish Cove near Kitimat, B.C.

The proposed project will be an extension from the existing Groundbirch Mainline section of the NGTL System beginning near Dawson Creek, B.C. to its end point near the community of Summit Lake, B.C. The \$1.9 billion project will consist of approximately 260 km (161 miles) of 48-inch diameter pipe.

NORTH MONTNEY MAINLINE

\$ 1.7

billion

The \$1.7 billion North Montney
Pipeline is a proposed extension and expansion of the NGTL System to

Subject to the necessary approvals, which include the regulatory approval from the NEB for us to build and operate the pipeline and a positive final investment decision for the Kitimat LNG project, we expect the Merrick Mainline to be in service in 2020.

receive and transport natural gas

from the North Montney area of B.C.

#### 2015 Revenue Requirement Settlement

We received NEB approval on February 2, 2015 for our revenue requirement settlement with our shippers for 2015 on the NGTL System. The terms of the one-year settlement include continuation of the 2014 return on common equity of 10.10 per cent on 40 per cent deemed equity, continuation of the 2014 depreciation rates and a mechanism for sharing variances above and below a fixed operating, maintenance and administrative expense amount that is based on an escalation of 2014 actual costs.

## Canadian Mainline Expansions (\$500 M)

In addition to the Eastern Mainline
Project, we have executed new short
haul arrangements in the Eastern Triangle
portion of the Canadian Mainline that
require new facilities, or modifications to
existing facilities, with a total capital cost
of approximately \$475 million and expected
in-service dates between November 1, 2015

and November 1, 2016. These projects are subject to regulatory approval and, once constructed, will provide capacity needed to meet customer requirements in Eastern Canada.

2015 — 2030 Tolls and Tariff Application On November 28, 2014, the NEB approved the Canadian Mainline's 2015 — 2030 Tolls and Tariff Application.

The application reflected components of a settlement between the Canadian Mainline and the three major local distribution companies in Ontario and Québec. The approval of this application provides a long-term commercial platform for both the Canadian Mainline and its shippers with a known toll design for 2015 to 2020 and certain parameters for a toll-setting methodology up to 2030. The platform balances the needs of our shippers while, at the same time, ensuring a reasonable opportunity to recover the capital from our existing facilities and any new facilities required to serve existing and new markets.

Highlights of the approved application include:

- Our commitment to add increased pipeline capacity that allows eastern Canadian markets more access to Dawn and Niagara area supplies
- Renewal provisions that will give us the tools to gain more certainty over capacity requirements
- Fixed price tolls on one-year and longer firm transportation service
- Continued pricing discretion for shorter term and interruptible service
- A known revenue requirement along with an incentive sharing mechanism that targets a return of 10.10 per cent on a deemed common equity of 40 per cent, with a possible range of outcomes from 8.70 per cent to 11.50 per cent

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On January 22, 2014,
TransCanada announced
that the Gulf Coast Project
— the safest pipeline
ever built on U.S. soil —
began delivering crude oil
from Cushing, Oklahoma,
to state-of-the-art
refineries in Texas.

#### ENERGY DELIVERY — IN ACTION

The completion of this US\$2.6-billion crude oil pipeline provides a safe and direct connection between the important oil hub in Cushing and delivery points on the U.S. Gulf Coast.

"This is a very important milestone for TransCanada, our shippers and Gulf Coast refiners, who have been waiting for a pipeline to supply crude oil directly from Cushing," said Russ Girling, TransCanada's president and CEO in a press conference announcing the in-service date. "This project is a critical, modern piece of American energy infrastructure that allows producers to safely connect growing production with the world's most efficient refiners on the U.S. Gulf Coast. It also provides those American refineries the opportunity to use more of the crude oil produced in both Canada and the U.S. for decades to come."

Construction of the 784 km (487-mile) crude oil pipeline involved more than 11 million hours of labour, completed

by 4,844 U.S. workers, more than 50 contracts with manufacturers and companies building the pipeline, and equipment from across the U.S. It also includes the addition of 2.25 million barrels of new crude oil storage capacity at Cushing.

This is in addition to the 8,969 men and women who constructed the initial Keystone Pipeline System, and more than 9,000 more Americans waiting to build Keystone XL.

The Gulf Coast Project not only had significant positive impacts on the lives of the men and women who built this world-class infrastructure project, but it also brought considerable economic impacts to the communities along the route. The project gave local businesses a healthy boost in sales, provided opportunities for growth and community investment.

• The continued use of a deferral account that compensates for the differences between actual revenues and the fixed toll arrangement, plus an agreement that any overall variance in revenues for the 2015-2020 period is assigned to the eastern area shippers for the period beyond 2020.

Eastern Mainline Expansion (\$1.5 B)

In October 2014, we filed an application seeking NEB approval to build, own and operate new facilities for our

existing Canadian Mainline natural gas transmission system in southeastern Ontario (Eastern Mainline Project).

The new facilities are a result of the proposed transfer of a portion of the Canadian Mainline capacity from natural gas service to crude oil service as part of our Energy East Pipeline and an open season that closed in January 2014.

\$1.5
billion
The \$1.5 billion capital project will add 0.6 Bcf/d of new capacity in the Eastern Triangle segment of the Canadian Mainline

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The \$1.5 billion capital project will add 0.6 Bcf/d of new capacity in the Eastern Triangle segment of the Canadian Mainline and will ensure appropriate levels of capacity are available to meet the requirements of existing shippers as well as new firm service commitments. The project is contingent upon the Energy East Pipeline and is subject to regulatory approvals expected to be issued simultaneously with regulatory approvals for the Energy East Pipeline. The project is expected to be in service by second quarter 2017.

#### AN UPDATE ON KEYSTONE XL

TransCanada and our shippers remain committed to Keystone XL despite the unprecedented delays we have faced on this much-needed project. We are pleased that the Final Supplemental Environmental Impact Statement issued by the U.S. Department of State at the end of January 2014 reinforced previous conclusions that Keystone XL will be built and operated with minimal impact on the environment.

The report also reiterated the benefits of the project, noting that Keystone XL will enhance American energy security, create more than 40,000 jobs and generate billions of dollars in economic activity for the U.S.

The Nebraska Supreme Court's decision in early 2015 validated the pipeline's route in the state, allowing the Department of State to complete its National Interest Determination process. We expect Keystone XL to begin service approximately two years after receiving a Presidential Permit that will allow the pipeline to cross the Canada-U.S. border.

#### **ETHICAL CONDUCT**

At TransCanada, we are committed to meeting our obligations ethically and under all applicable laws and regulations.

#### **COMPLIANCE**

As a regulated company, TransCanada is subject to many regulatory requirements, including those of the National Energy Board, the Federal Energy Regulatory Commission and the North American Energy Reliability Corporation, among others. In addition, TransCanada's regulated pipelines are subject to tariffs that we must comply with. To the extent that the requirements of more than one jurisdiction apply, we use the highest of the various standards.

TransCanada also complies with all laws and regulations related to protection of health, safety and the environment, employment, political contributions and government lobbying, financial reporting and fraud prevention, among others.

#### **CODE OF BUSINESS ETHICS (COBE)**

At TransCanada, our COBE helps us put our values into practice in all of our daily decisions and activities. The COBE provides personnel with the expected standards of conduct to ensure that TransCanada's reputation for honesty, integrity and reliability is maintained. TransCanada prides itself on being a company that all of our stakeholders can count on to make the right choices and do the right thing.

#### Inter-Affiliate Interactions

As a transmission provider, TransCanada is subject to Codes of Conduct in Canada and the Standards of Conduct in the U.S. These Codes/Standards of Conduct are intended to ensure that our nonregulated affiliates do not receive an unfair advantage over other customers, whether as a result of discriminatory

treatment or the sharing of information, personnel or resources. The Canadian Codes also prohibit the cross-subsidization of our non-regulated affiliates at the expense of our transmission customers.

#### **Training**

Each new employee receives compulsory training in the COBE and every employee must reaffirm annually to the chief compliance officer that their behaviour has been, and will continue to be, consistent with the code's elements.

While contractors are not required to complete training or to certify, they are bound by all applicable laws, regulations and corporate policies, including the COBE.

We also have mandatory company-wide training on inter-affiliate interactions and corporate security, and avoiding bribery and corruption training is provided in person to individuals working in high-risk areas.

#### Avoiding Bribery and Corruption

TransCanada has developed an avoiding bribery and corruption policy to provide TransCanada personnel with the required tools for making business decisions and actions that comply with applicable laws and regulations. Guidance is provided in the policy for dealings with agents, mergers, acquisitions, joint ventures and partnerships, gifts, meals and entertainment provided to government officials, community investment, political donations, and government lobbying as well as guidance for ensuring TransCanada's books and records are complete and accurate.

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#### **Governance Documents**

TransCanada has implemented various corporate governance documents to provide guidance to personnel on their conduct when doing business on behalf of TransCanada. Governance documents include, but are not limited to: guiding principles, corporate policies, corporate programs and corporate standards. The corporate policy and practices committee makes key decisions involving the creation, review and management of corporate governance documents for TransCanada.

#### **Compliance Structure**

The audit committee of the Board of Directors is the governing body that has ultimate oversight of TransCanada's ethics and compliance program. TransCanada's chief compliance officer leads the program, chairs the executive-level compliance committee and reports to the audit committee of the Board of Directors on ethics and compliance-related matters. TransCanada has more than 60 compliance co-ordinators throughout the organization who are subject-matter experts for their compliance areas. The compliance co-ordinators work together with the corporate compliance department and internal audit to facilitate the compliance program and work to ensure the effective management of compliance issues and risks, provide training, guidance and support to employees, promote a culture of ethics and provide support to TransCanada's personnel to make the right choices and do the right thing.

#### Internal Audit

Internal audit manages the ethics helpline and conducts any ethics and compliance-related investigations and audits. Internal audit also works closely with the corporate compliance department and the harassment investigation co-ordinator and privacy officer to ensure legal and ethical violations are dealt with appropriately.

#### Reporting

TransCanada provides personnel with various resources for reporting actual or suspected violations or to seek guidance. These resources are leaders, human resources consultants, compliance co-ordinators, corporate compliance department, internal audit and the law department. Should anyone be uncomfortable speaking to any of these resources, or prefer to remain anonymous, the ethics helpline is another resource for reporting or seeking guidance. The ethics helpline is operated by an independent third-party service provider. All calls to the ethics helpline are free of charge, and can be made in English, French or Spanish 24 hours a day, seven days a week, 365 days a year\*.

#### Number of Ethical Issues Received

Year	Received
2012	57
2013	49
2014	55

\* All ethical issues received are investigated. To make a report by telephone, call 1-888-920-2042 in Canada and in the U.S., or 001-800-840-7907 in Mexico, or visit the TransCanada Ethics page online, at www.transcanada.com/ethics.

#### Compliance Investigations and Reports

Regardless of the means used to report, each report is taken seriously and it is investigated and addressed as appropriate, in accordance with TransCanada's procedure for the investigation, management and reporting of instances of non-compliance. Harassment issues are investigated by the harassment investigation co-ordinator in accordance with the harassment free workplace policy.

#### Non-Retaliation Policy

We support and encourage reporting of suspected incidents of non-compliance with applicable laws, regulations and authorizations, as well as hazards, potential hazards, incidents involving health and safety or the environment and "near misses."

We take every report seriously, investigate each report to identify facts and make improvements to our practices and procedures when warranted.

In 2014, we reviewed the COBE and other policies and made a number of enhancements to bring greater clarity around reporting and confirming immunity from disciplinary action or retaliation for the good-faith reporting of those concerns. We encourage employees to feel comfortable reporting any actual or suspected breaches and retain an independent company to log and track incidents. Each issue is retired only upon resolution. We ensure immunity for the good-faith reporting of such concerns.

# ANTI-CORRUPTION AND COMPLIANCE AFFILIATIONS

TransCanada and other employers participate in organizations that provide training and promote the advancement of ethical conduct in organizations. These organizations include the Compliance & Ethics Leadership Council of the Corporate Executive Board, the Society of Corporate Compliance & Ethics, the Conference Board of Canada Corporate Ethics Management Council, the Institute of Internal Auditors, the Association of Certified Fraud Examiners and the Information Systems Audit and Control Association.

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#### FORWARD-LOOKING INFORMATION

We disclose forward-looking information to help current and potential stakeholders understand management's assessment of our future plans and financial outlook, and our future prospects overall.

Statements that are forward-looking are based on certain assumptions and on what we know and expect today, and generally include words like anticipate, expect, believe, may, will, should, estimate or other similar words.

Forward-looking statements in this report may include information about the following, among other things:

- anticipated business prospects
- our financial and operational performance, including the performance of our subsidiaries
- expectations or projections about strategies and goals for growth and expansion
- expected cash flows and future financing options available to us
- expected costs for planned projects, including projects under construction and in development
- expected schedules for planned projects (including anticipated construction and completion dates)
- expected regulatory processes and outcomes
- expected impact of regulatory outcomes
- expected outcomes with respect to legal proceedings, including arbitration and insurance claims
- expected capital expenditures and contractual obligations
- expected operating and financial results
- the expected impact of future accounting changes, commitments and contingent liabilities
- expected industry, market and economic conditions.

Forward-looking statements do not guarantee future performance. Actual events and results could be significantly different because of assumptions, risks or uncertainties related to our business or events that happen after the date of this report.

Our forward-looking information is based on the following key assumptions, and subject to the following risks and uncertainties:

#### ASSUMPTIONS

- inflation rates, commodity prices and capacity prices
- timing of financings and hedging
- regulatory decisions and outcomes
- foreign exchange rates
- interest rates
- tax rates
- planned and unplanned outages and the use of our pipeline and energy assets
- integrity and reliability of our assets
- access to capital markets
- anticipated construction costs, schedules and completion dates
- acquisitions and divestitures.

#### RISKS AND UNCERTAINTIES

- our ability to successfully implement our strategic initiatives
- whether our strategic initiatives will yield the expected benefits
- the operating performance of our pipeline and energy assets
- amount of capacity sold and rates achieved in our pipelines business
- the availability and price of energy commodities
- the amount of capacity payments and revenues we receive from our energy business
- regulatory decisions and outcomes
- outcomes of legal proceedings, including arbitration and insurance claims
- performance of our counterparties
- changes in market commodity prices
- changes in the political environment
- changes in environmental and other laws and regulations

- competitive factors in the pipeline and energy sectors
- construction and completion of capital projects
- costs for labour, equipment and materials
- access to capital markets
- interest and foreign exchange rates
- weather
- cybersecurity
- technological developments
- economic conditions in North America as well as globally.

You can read more about these factors and others in reports we have filed with Canadian securities regulators and the U.S. Securities and Exchange Commission (SEC).

As actual results could vary significantly from the forward-looking information, you should not put undue reliance on forward-looking information and should not use future-oriented information or financial outlooks for anything other than their intended purpose. We do not update our forward-looking statements due to new information or future events, unless we are required to by law.

#### **NON-GAAP MEASURES**

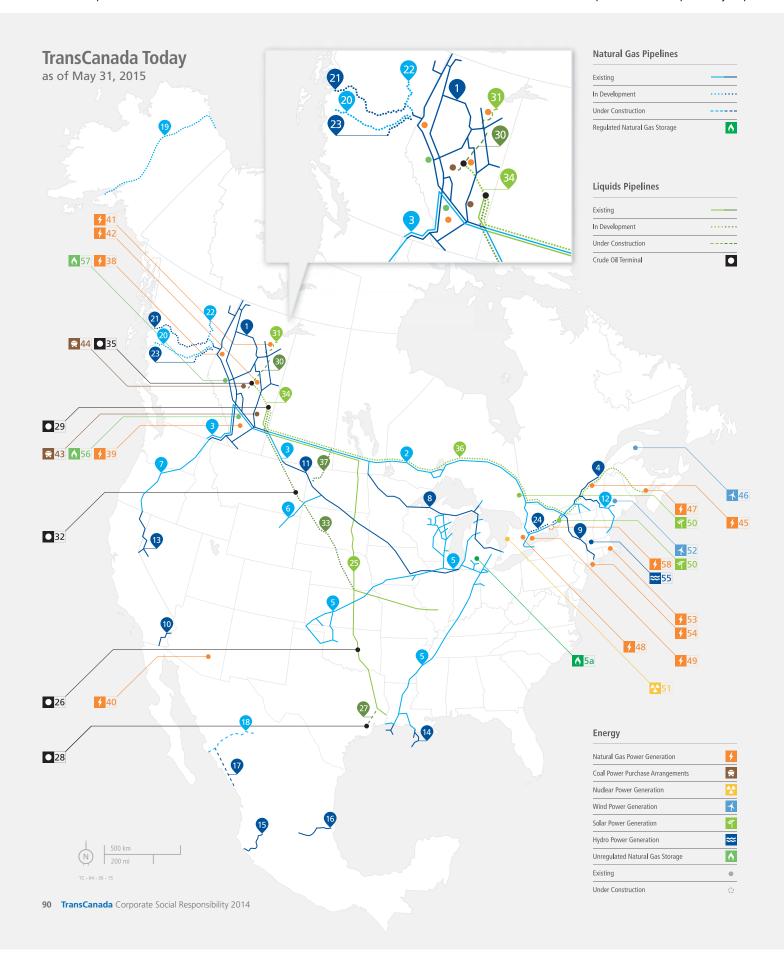
We use the following non-GAAP measures:

- funds generated from operations
- comparable earnings before interest, taxes, depreciation and amoritization

These measures do not have any standardized meaning as prescribed by U.S. generally accepted accounting principles (GAAP) and, therefore, may not be similar to measures presented by other entities. For more information on reconciliations of non-GAAP measures to the most closely related GAAP measures, refer to TransCanada's 2014 Annual Report filed with Canadian securities regulators and the SEC and available at TransCanada.com.

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## **Natural Gas Pipelines**

#### **Canadian Pipelines**

1	NGTL System	
2	Canadian Mainline	
3	Foothills	
4	Trans Ouéhec & Maritimes (TOM)	

#### **U.S. Pipelines**

5	ANR Pipeline	
5a	ANR Regulated Natural Gas Storage	6
6	Bison	
7	Gas Transmission Northwest (GTN)	
8	Great Lakes	
9	Iroquois	
10	North Baja	
11	Northern Border	
12	Portland	
13	Tuscarora	
14	TC Offshore	

#### **Mexican Pipelines**

15	Guadalajara	
16	Tamazunchale	

#### **Under Construction**

17	Mazatlan Pipeline	
18	Topolobampo Pipeline	

#### In Development

19	Alaska LNG Pipeline	•••••
20	Coastal GasLink	••••
21	Prince Rupert Gas Transmission	••••
22	North Montney Mainline	•••••
23	Merrick Mainline	•••••
24	Eastern Mainline	•••••

<sup>&</sup>lt;sup>1</sup> Located in Arizona, results reported in Canadian - Western Power

## **Liquids Pipelines**

#### Canadian / U.S. Pipelines

25	Keystone Pipeline System	
26	Cushing Marketlink	•

#### **Under Construction**

27	Houston Lateral	
28	Houston Terminal	•
29	Keystone Hardisty Terminal	•
30	Grand Rapids Pipeline	
31	Northern Courier Pipeline	

#### In Development

32	Bakken Marketlink	•
33	Keystone XL	•••••
34	Heartland Pipeline	•••••
35	TC Terminals	•
36	Energy East Pipeline	•••••
37	Upland Pipeline	*****

## **Energy**

#### **Canadian - Western Power**

38	Bear Creek	4
39	Carseland	4
40	Coolidge <sup>1</sup>	4
41	Mackay River	4
42	Redwater	4
43	Sheerness PPA	-
44	Sundance A PPA	*
44	Sundance B PPA	-

#### Canadian - Eastern Power

45	Bécancour	+
46	Cartier Wind	1
47	Grandview	+
48	Halton Hills	+
49	Portlands Energy	+
50	Ontario Solar (8 Facilities)	4

#### **Bruce Power**

51	Bruce A	
51	Bruce B	<u>*</u>

## U.S. Power

52	Kibby Wind	*
53	Ocean State Power	4
54	Ravenswood	4
55	TC Hydro	æ

#### **Unregulated Natural Gas Storage**

56	CrossAlta	6
57	Edson	6

#### **Under Construction**

			_	
58	Napanee			4

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## safety

Strive diligently toward our goal of zero incidents through our pipeline integrity program, while continuing to ensure we're all prepared in the unlikely event of a safety incident.

Please visit
www.csrreport.transcanada.com
to learn more about our
corporate social responsibility
practices or visit
www.transcanada.com
for more details about
our business.



## society

Collaborate with, and listen to, our stakeholders to learn what matters to you and incorporate that into our plans.



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On the cover: As part of our commitment to environmental stewardship and our employee giving and volunteering program, TransCanada team members helped with a reforestation project, designed by the Nature Conservancy of Canada (NCC), to help rebuild wildlife corridors and restore understory plant life on NCC land in Alberta.





100% of the electricity used to manufacture Mohawk Options is matched with Green-e certified wind energy. Mohawk Options is certified by the Rainforest Alliance for FSC® standards. RA-COC-000668. Visit www.mohawkconnects.com/environment for more information.

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# Appendix 10-12

# TransCanada Emergency Services Guide

# **Emergency Services Guide**

A pipeline emergency is an unlikely event – but would you know what to do?

- 1. Notify TransCanada
- 2. Establish a Safety Zone
- 3. Share information







In case of emergency call **1.888.982.7222** 



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# **Emergency:**



Any unforeseen or imminent event that requires prompt co-ordination of resources, special communications and heightened authority for employees to protect the health, safety or welfare of people, or to limit damage to property, the environment or company operations.

## 1. Notify TransCanada

TransCanada's emergency phone number is 1.888.982.7222.

Please be prepared to tell us your name, phone number and location, as well as the location and description of the emergency and if there are any injuries.

# 2. Establish a Safety Zone – at least 750 metres

If it's too hot or too noisy, you're too close.

Control access and evacuate the immediate area.

Move nearby people upwind of the emergency site.

Control any secondary fires, providing it's safe to do so.

Address any medical needs.

#### 3. Share information

TransCanada's employees have the training to address all types of potential TransCanada pipeline emergencies.

If a TransCanada representative is not on site upon your arrival, establish a command post at a safe distance uphill and upwind from the emergency site.

TransCanada representatives will join you at the command post upon their arrival. Please brief them with as much factual information as you have.

TransCanada first responders will need access to the emergency area to evaluate the impact of the emergency, to determine an appropriate course of action for the company and to confirm or conduct isolation of the affected pipeline.

TransCanada will establish the Safety Zone in the absence of the emergency response agencies.

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TransCanada takes the necessary safety measures to ensure our system remains safe. However, external forces such as third party digging and natural disasters may adversely affect the integrity of our system.

### **Pipeline ruptures and fires**

Not all pipeline ruptures ignite. If you are downwind from the emergency site and the rupture has not ignited, do not operate or engage any ignition source (e.g. cell phones, vehicles, heavy equipment, cigarettes) for any reason.

If a pipeline rupture ignites, never attempt to extinguish the natural gas fire. A pipeline fire will extinguish when the fuel source is shut off. If the rupture results in a fire, stand by, assist with crowd control and extinguish any secondary fires.

Block valves on our system will automatically close if a pipeline ruptures, shutting off the flow of the gas. Other valves can be closed from a remote location. Never attempt to close any valves. You may inadvertently open the valves, causing more damage.

#### Our pipeline

TransCanada's pipeline system is one of the largest in North America.

Our pipelines vary in diameter from 100 mm to 1,200 mm (4 to 48 inches) and transport natural gas at pressures up to 9,653 kPa (1440 psi).

## **Natural gas facts**

Natural gas is lighter than air and will dissipate quickly when released.

Our system carries natural gas that is non-toxic ("sweet") and odourless.

Local gas distribution companies add an odourant called mercaptan prior to delivery to a residential location.

Natural gas can displace air in confined spaces, leading to lack of oxygen.

With an ignition source and the correct mixture of air, natural gas is extremely explosive.

April 2016 Page 3 of 4

TransCanada is committed to the safety of the public and our employees.



To ensure we are prepared for emergencies, we train our employees with necessary assessment and emergency skills. In an emergency situation we are committed to working in conjunction with emergency response agencies. For more information, please contact your local TransCanada office or

**e-mail** emergency\_management@transcanada.com

visit www.transcanada.com

See the Social Responsibility section of our website for an electronic version of this brochure.



# Appendix 10-13

# TransCanada Corporate Profile Brochure

## TRANSCANADA



A LEADING NORTH AMERICAN ENERGY INFRASTRUCTURE COMPANY



April 2016 Page 1 of 5

NOVA Gas Transmission Ltd.

Albersun Pipeline Asset Purchase

TransCanada Corporate Profile















Building and operating safe and reliable energy infrastructure — it is what we do and we do it well. Millions of people across North America rely on the energy we deliver every day. We have done this successfully and responsibly for six decades. Our \$49 billion of blue chip assets are essential to North Americans and we are well positioned to continue to meet the continent's growing energy needs for decades to come.

Our strategic focus remains clear. Our vision is to become the leading energy infrastructure company in North America. In pursuing our goal, we strive to deliver strong financial performance, execute on our large portfolio of attractive, low-risk projects and continue to create and cultivate a high-quality portfolio of future growth opportunities.

TransCanada's financial performance continues to build on our track record of delivering strong and sustainable earnings and cash flow. Over the past 10 years TransCanada has made significant investments in high quality energy infrastructure assets, investments that have allowed the company to move forward in achieving its vision. In addition to our C\$49 billion of assets, we are in the midst of an unprecedented C\$22 billion growth program that saw a number of pipeline and power projects placed into service in 2011. These new operating assets are critical North American infrastructure and have become an important part of our growing asset base.

As TransCanada continues to progress its capital program, we are excited about the significant opportunities available in the years ahead. Our approach is to select only the very best opportunities and move those initiatives forward. Over the long term, we plan to continue to cultivate a portfolio that will position TransCanada to capitalize on North America's increased demand for cleaner and more efficient energy. We build and operate the energy infrastructure that North America needs.

In addition, we continue to focus on enhancing the value of existing assets by maximizing revenue and minimizing costs. This means increasing throughput on our pipelines, maximizing the availability and output of our power plants and minimizing the cost of our operations.

These are simple concepts we put into practice every day.

TransCanada plays a vital role in connecting energy supplies to key North American markets. We operate one of the largest natural gas transmission networks in North America – 68,500 kilometres (km) (42,500 miles), tapping into virtually every major gas supply basin in North America. TransCanada is one of the continent's largest providers of natural gas storage and related services with approximately 380 billion cubic feet (Bcf) of storage capacity. Through our Energy business, we own or have interests in approximately 10,900 megawatts (MW) of power generation in Canada and the United States. The 3,467-km (2,154-mile) Keystone oil pipeline along with the proposed Keystone, Gulf Coast and Houston Lateral projects meet the need for long-term North American energy security.

Our success is related directly to the way in which we uphold our responsibilities to our shareholders, our stakeholders and the wider community in which we operate. Ours is a business based on solid principles and sound governance, supported by dedicated employees and respected by our industry peers. TransCanada has always been, and intends to remain, a company that can be relied on.

#### **OUR TEAM**

TransCanada's success is a reflection of our exceptional team of 4,400 committed and motivated employees who bring skill, experience, energy and knowledge to the work that they do. Our employees truly are our competitive advantage.



483 People
1,939 People
224 People
2 People
1 Person
81 People
563 People
404 People
150 People
490 People
9 People

#### **INVESTING IN COMMUNITIES**

At TransCanada, we believe in making a positive difference in the lives of others through investing in our communities, with one goal in mind: creating a brighter future. Through investments in the communities where we live and work, we are forging meaningful partnerships that serve as community assets in empowering individuals and building strong communities.

TransCanada demonstrates our commitment to be a good neighbour, a strategic community partner and an employer of choice. Our commitment to building strong communities and strong relationships with community members also serves as a sound business management practice, helping to maximize our competitive strength and enduring value.

In 2011, we distributed more than C\$9.6 million in financial and in-kind donations in communities across North America. Our community investment program focuses on three key areas: wellness, safety and the environment.

#### **ENVIRONMENT**

At TransCanada, we recognize the importance of stewardship of the environment as we strive to meet the energy needs of North Americans.

As owner and operator of major natural gas and oil transmission systems in North America and as a generator of significant electrical capacity, TransCanada strives to minimize environmental impacts while ensuring we uphold our responsibility to strategically meet the energy demands of the continent. In short, our responsibility toward the natural world is comprehensive and takes account of the potential negative effects that our operations might have on the environment. Ours is a broad, preventative vision of environmental sustainability.

For the tenth year in a row TransCanada was named to the Dow Jones Sustainability Index, a global index that tracks the performance of the leading sustainability-driven companies.

#### SAFETY AND INTEGRITY

TransCanada's public safety and pipeline integrity programs are designed to ensure public safety and to meet or exceed industry best practices and regulatory requirements. The health and safety of the public, our employees and our contractors is paramount. At TransCanada, we seek to anticipate and minimize hazards of every description in the field and in the office. From design and construction to operation and maintenance, safety is an integral part of everything we do.

#### **OUR CUSTOMERS**

TransCanada is an essential and dependable supplier of natural gas, oil and electricity services to producers and refiners in Canada and the U.S., and to energy consumers in market regions in Canada, the U.S. and Mexico. The operating experience and innovative spirit of TransCanada's people are key sources of value for customers. Our pipeline networks are among the largest, most complex transmission systems in the world. Through extensive construction and operating programs, we follow the best practices in the North

American pipeline industry. Our ability to selectively identify and apply advanced technology ensures reliable services at the lowest cost.

#### NATURAL GAS PIPELINE CUSTOMERS

When dealing with producers, gas marketers or local distribution utilities, TransCanada's Natural Gas Pipelines division strives to balance customer desire for increased service flexibility with low-cost, efficient operations. We seek feedback from our customers through regular surveys and work to understand what drives their expectations. Information from surveys is used to target areas for improvement and to track our performance against key performance measures.

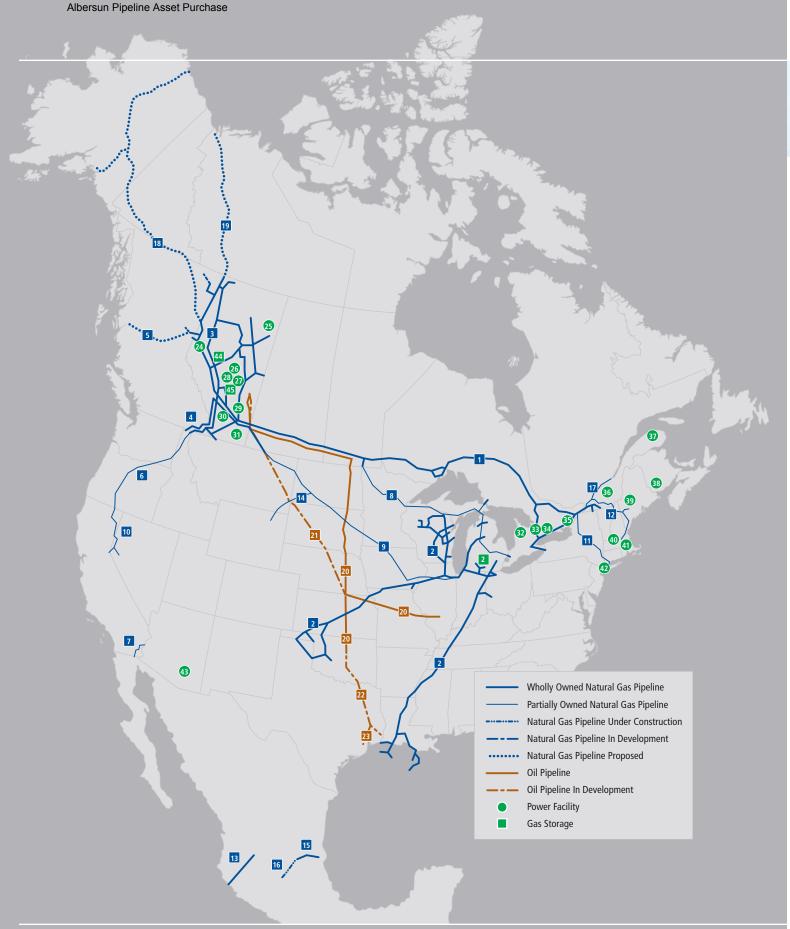
#### OIL PIPELINE CUSTOMERS

TransCanada's Oil Pipelines Division provides safe, reliable and cost effective transportation for producers and refiners. Utilizing applied advanced technology, the Keystone Pipeline delivers value by striving to be the industry leader in the quick delivery of high quality products direct to significant U.S. markets.

#### **ENERGY CUSTOMERS**

Our Energy division's power business is always looking to create flexible products and services that leverage changing markets and create value for customers, which include long and short-term wholesale energy purchasers, commercial, retail and industrial customers. We have extensive knowledge of North American energy markets, underscored by an in-depth understanding of our core markets. Our significant experience in changing environments enables us to seize new opportunities and deliver value to our customers.

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NOVA Gas Transmission Ltd.









#### **OUR PORTFOLIO OF ASSETS**

#### NATURAL GAS PIPELINES

- 1. Canadian Mainline: 14.101 km (8.672 miles)
- 2. ANR: 16,656 km (10,350 miles) plus approximately 250 Bcf of underground natural gas storage
- 3. Alberta System: 24,373 km (15,145 miles)
- 4. Foothills: 1,241 km (771 miles)
- 5. Coastal GasLink Pipeline: conceptual route for proposed pipeline
- GTN: 2,178 km (1,353 miles), TransCanada operates and effectively owns 83.3 per cent of the system
- 7. North Baja: 138 km (86 miles). TransCanada operates North Baja and effectively owns 33.3 per cent of the system
- 8. Great Lakes: 3,404 km (2,115 miles). TransCanada operates Great Lakes and effectively owns 69 per cent of the system
- 9. Northern Border: 2,265 km (1,407 miles). TransCanada operates Northern Border and effectively owns 16.7 per cent of the system
- 10. Tuscarora: 491 km (305 miles). TransCanada operates Tuscarora and effectively owns 33.3 per cent of the system
- 11. Iroquois: 666 km (414 miles). Owned 44.5 per cent by TransCanada
- 12. Portland: 474 km (295 miles). Owned 61.7 per cent by TransCanada
- 13. Guadalajara: 310 km (193 miles)
- 14. Bison: 487 km (303 miles) pipeline, TransCanada operates and effectively owns 83.3 per cent of the system
- 15. Tamazunchale: 130 km (81 miles)
- 16. Tamazunchale Extension: in development
- 17. TQM: 572 km (355 miles). Owned 50 per cent by TransCanada
- 18. Alaska Pipeline Project: proposed natural gas pipeline
- 19. Mackenzie Gas Project: natural gas pipeline proposed by producers

#### OIL PIPELINES

- 20. Keystone Pipeline: a 3,467-km (2,154-mile) pipeline in operation
- 21. Keystone XL: 1,897-km (1,179-mile) pipeline in development
- 22. Gulf Coast Project: 780-km (485-mile) pipeline in development
- 23. Houston Lateral Project: 80-km (48-mile) pipeline in development

#### **ENERGY**

- 24. Bear Creek: 80 MW natural gas-fired cogeneration plant
- 25. Mackay River: 165 MW natural gas-fired cogeneration plant
- 26. Redwater: 40 MW natural gas-fired cogeneration plant

- 27. Sundance A: Power purchase arrangement (PPA) which expires in 2017. TransCanada has the rights to 100 per cent of the generating capacity of the 560 MW facility
- 28. Sundance B: TransCanada has the rights to 50 per cent of the generating capacity of the 706 MW facility under a PPA which expires in 2020
- 29. Sheerness: Two 390 MW coal-fired thermal power generating units. TransCanada has the rights to 756 MW of generating capacity from the PPA which expires in 2020
- 30. Carseland: 80 MW natural gas-fired cogeneration plant
- 31. Cancarb: 27 MW facility fuelled by waste heat
- 32. Bruce Power: Two stations currently generating approximately 4,700 MW of generating capacity, Bruce Power is located in Ontario. TransCanada owns 48.8 per cent of Bruce A, which has four 750 MW generating units, two of which are being refurbished, and 31.6 per cent of Bruce B which also has four generating units with a combined capacity of 3,200 MW
- 33. Halton Hills: 683 MW natural gas-fired power plant
- 34. Portlands Energy: 550 MW, combined-cycle natural gas generation power plant, 50 per cent owned by TransCanada
- 35. Canadian Solar: 86MW, nine solar projects. TransCanada will purchase each project after they begin commercial operation and meet certain milestones
- 36. Bécancour: 550 MW natural gas-fired cogeneration power plant
- 37. Cartier Wind: 590 MW Cartier wind farm project 62 per cent owned by TransCanada. Four wind farms with a total capacity of 479 MW are now in service. The final stage of the project is expected to be operational in December 2012
- 38. Grandview: 90 MW natural gas-fired cogeneration power plant
- 39. Kibby Wind: 132 MW wind farm
- 40. TC Hydro: Total generating capacity of 583 MW, comprises
  13 hydroelectric facilities on the Deerfield and Connecticut Rivers
- 41. Ocean State Power: 560 MW natural gas-fired, combined-cycle facility
- 42. Ravenswood: 2,480 MW gas- and oil-fired facility
- 43. Coolidge: A 575 MW natural gas-fired generating station
- 44. Edson: An underground natural gas storage facility with a working capacity of approximately 50 Bcf
- 45. CrossAlta: An underground natural gas storage facility with a working capacity of 68 Bcf. TransCanada owns 60 per cent of CrossAlta and operates the facility.

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NOVA Gas Transmission Ltd.

Albersun Pipeline Asset Purchase

TransCanada Corporate Profile















#### **PIPELINES**

#### NATURAL GAS TRANSMISSION

We operate one of North American's largest natural gas pipeline networks – 68,500 kilometres (42,500 miles), transporting the majority of Western Canada's natural gas production to continental markets.

Operating one of the most sophisticated natural gas pipeline systems in the world, we provide storage, transportation and various capacity-related services to a variety of customers across Canada and to markets in the U.S. We're focused on optimizing our pipeline network by connecting new supply, providing better access to markets and introducing competitive and innovative approaches to meeting customers' needs.

We're committed to operational excellence, focused on providing low-cost competitive services and being a reliable and safe operator. Our operational efficiency and cost-effectiveness measures place us in the top quartile of the North American industry.

#### **OIL TRANSMISSION**

TransCanada has identified the opportunity to provide incremental pipeline capacity for oil transmission to link a growing and reliable supply of Canadian and U.S. crude oil with a rising North American demand for energy — a logical fit with our existing business competencies and an efficient way to maximize the use and value of our current pipeline assets.

An innovative and cost-competitive solution to a growing North American demand for energy, the Keystone Pipeline System will play an important role in linking a secure and growing supply of North American crude oil with the largest refining markets in the United States, significantly improving North American energy security. In 2010 TransCanada commenced commercial operation of the Keystone pipeline bringing crude oil from Canada to market hubs in the U.S. Midwest. The completion of the Cushing extension in 2011 extended the pipeline south from Steele City, Nebraska, to Cushing, Oklahoma and increased its capacity to 591,000 barrels per day (bbl/d).

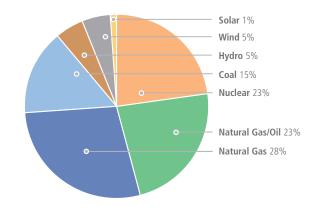
The proposed 1,897-km (1,179-mile) Keystone Expansion Project would begin at Hardisty, Alberta and extend southeast to Steele City, Nebraska. The proposed Gulf Coast Project is a 780-km (485-mile) pipeline from Cushing, Oklahoma extending south to Nederland, Texas. The Houston Lateral Project is an 80-km (48-mile) pipeline proposed to facilitate deliveries into the Houston refining market.

#### **OUR CAPABILITIES**

TransCanada's credentials and track record in the construction and operation of large-diameter pipe in extreme climates and virtually all types of terrain are unequalled in North America. We are the leading operator of large gas turbine compressor stations and expert in remote facility control. Our employees are highly skilled in designing, building and operating complex infrastructure and take pride in delivering major projects on time and on budget. TransCanada has a proven track record in the prudent use of new and leading edge technologies to achieve excellence in pipeline construction and operations.

#### **ENERGY**

TransCanada's Energy division concentrates on power generation and marketing and unregulated natural gas storage. With our industry-leading experience in energy infrastructure development, operations and marketing, combined with excellent project management skills, financial strength and acumen, we are well positioned to be the partner and developer of choice.



#### POWER GENERATION

A significant portion of TransCanada's energy portfolio is power generation. TransCanada is an established and growing player in the North American energy market with ownership or interests in approximately 10,900 MW of electricity. In the U.S., our portfolio includes natural gas-fired combined cycle and simple cycle plants, as well as hydro facilities. Across Canada, we have developed and operate a fuel-efficient and environmentally conscious fleet of cogeneration plants. We also hold an interest in Bruce Power, a nuclear power plant in Ontario and the largest independent power generator in North America. In 2011 TransCanada entered the solar power business with an agreement to purchase nine Ontario solar projects.

#### POWER MARKETING

Our marketing operations are backed by solid assets and the strength of TransCanada. From our offices in Calgary, Alberta; Toronto, Ontario; and Westborough, Massachusetts, TransCanada conducts wholesale and retail electricity marketing in Canada and the U.S. Northeast.

#### FINANCIAL HIGHLIGHTS TSX, NYSE: TRP

YEAR ENDING DECEMBER 31, 2011

(All financial figures are unaudited and in Canadian dollars unless noted otherwise)

- Total assets: \$48.9 billion
- Net income for 2011 of \$1.5 billion (\$2.18 per share)
- Funds generated from operations of \$3.7 billion
- Dividends declared of \$1.68 per common share

#### QUICK FACTS ABOUT TRANSCANADA

#### PIPELINE ASSETS

#### NATURAL GAS PIPELINES

- 57,000 km (35,500 miles) of wholly owned natural gas pipeline
- Interests in an additional 11,500 km (7,000 miles) of natural gas pipeline
- Average daily volume of approximately 14 Bcf/d
- 250 Bcf of natural gas storage capacity

#### **OIL PIPELINES**

- Keystone Oil Pipeline: 3,467 km (2,154 mile), 591,000 bbl/d
- Keystone XL: 1,897-km (1,179-mile) pipeline in development
- Gulf Coast Project: 780-km (485-mile) pipeline in development
- Houston Lateral Project: 80-km (48-mile) pipeline in development

#### **ENERGY ASSETS**

- 20 power plants
- Approximately 10,900 MW owned, controlled or in development
- 130 Bcf of unregulated natural gas storage capacity

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FORWARD LOOKING INFORMATION This publication contains forward-looking information relating to TransCanada's and its subsidiaries' future financial and operational plans and outlook (such statements are usually accompanied by words such as "anticipate", "expect", "would" or similar). All forward-looking statements reflect TransCanada's beliefs and assumptions based on information available at the time the statements were made, are given as of the date of this publication, and are subject to important risks and uncertainties. Readers are cautioned not to place undue reliance on this forward-looking information. TransCanada undertakes no obligation to update or revise any forward-looking information except as required by law. For additional information on the assumptions made, and the risks and uncertainties which could cause actual results to differ from the anticipated results, refer to TransCanada's Management's Discussion and Analysis dated February 13, 2012 under TransCanada's profile on SEDAR at www.sedar.com and other reports filed by TransCanada with Canadian securities regulators and with the U.S. Securities and Exchange Commission.

www.transcanada.com May 2012

April 2016







#### TODAY'S TRANSCANADA

TransCanada is a leader in the responsible development and reliable operation of North American energy infrastructure. Our 68,500-kilometre (42,500-mile) pipeline network transports most of western Canada's natural gas production to key continental markets. We are developing one of North America's largest oil delivery systems. As an independent power producer, we own or have interests in approximately 10,900 megawatts of power generation in Canada and the United States. We are also one of North American's largest providers of natural gas storage capacity.

#### TRANSCANADA'S VISION

TransCanada will be the leading energy infrastructure company in North America, with a strong focus on pipelines and power generation opportunities located in regions where we have or can develop significant competitive advantage.





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# Appendix 10-14

TransCanada Part of Your Community: Important Safety Information for Natural Gas Pipelines Booklet



# Part of Your Community

Important Safety Information – Natural Gas Pipelines





# Why are you receiving this brochure?

This brochure contains important safety information about natural gas pipelines, and you live or work near a TransCanada pipeline. To help you understand the role you play in contributing to pipeline safety, we ask that you review the information provided. If you would like more information or have questions, please contact us at **public\_awareness@transcanada.com** or call **1.855.458.6715**.

Please retain this booklet for your information.

En cas d'urgence liée à un gazoduc, appelez le **1.800.982.7222**. Si vous souhaitez recevoir des informations sur la sécurité des gazoducs en français, veuillez envoyer un courriel à l'adresse **public awareness@transcanada.com** ou appelez **1.855.458.6715**.

# North American Assets



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# **About Us**

TransCanada is a leading North American energy infrastructure company with an industry-leading safety record. For more than 60 years, we have been building, operating, and maintaining pipeline systems in a responsible and reliable way to meet the energy needs of North America.

#### Our Natural Gas Facilities

TransCanada owns and operates pipeline and other associated natural gas facilities including meter stations and compressor stations.

#### **Pipelines**

Pipelines are the safest and most efficient method to transport energy to market. Our pipelines are built using industry best practices, which include using the highest quality materials during the construction and implementing routine quality inspections and 24 hour monitoring programs throughout the life of the pipeline.

#### **Meter Stations**

Meter stations are facilities necessary within a pipeline system that measure the volume of natural gas transported by a pipeline. Natural gas is measured at all locations where it either enters the pipeline (receipt station) or leaves the pipeline (sales station).

#### **Compressor Stations**

As natural gas flows along a pipeline, it slows due to friction between it and the pipeline. This results in a loss of pressure along the pipeline. In order to make the gas flow continuously at the desired flow rate, it is re-pressurized at suitable locations along the pipeline. This is done by mechanically compressing the gas at sites connected to the pipeline known as compressor stations. The location and quantity of compressor stations required in a pipeline system is dependent on a number of factors, including the operating pressure of the pipeline, the diameter of the pipe used, elevation changes along the pipeline route and the desired volume of gas to be delivered.

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# Maintaining Pipeline Safety

- TransCanada works to meet all applicable federal and provincial safety standards.
- The pipeline facilities are constantly monitored to ensure safety and integrity of the entire system 24/7.
- The pipelines are equipped with multiple valves that can be closed manually or automatically, often within minutes, reducing the potential amount of product released.
- TransCanada patrols pipeline rights-of-way to identify any unsafe or unauthorized activity within the rights-of-way which could damage the pipeline.
- TransCanada's employees receive all mandated training in Canada.

# Call Before You Dig – It's Free

# Important Contact Information

#### Canadian One-Call Centres:

British Columbia:	1.800.474.6886
Alberta:	1.800.242.3447
Saskatchewan:	1.866.828.4888
Manitoba:	1.800.827.5094
Ontario:	1.800.400.2255
Quebec:	1.800.663.9228

www.clickbeforeyoudig.com

#### **General Inquiries**

(Public Awareness) .......... 1.855.458.6715 public\_awareness@transcanada.com

**Landowner Inquiries** .... 1.866.372.1601

# Crossing or Encroachment Agreements

crossings@transcanada.com

quebec\_crossings@transcanada.com (for crossings in Quebec)

agric\_crossings@transcanada.com (for agricultural crossings)

TransCanada is regulated by the National Energy Board in Canada. For more information on energy regulations, visit www.neb-one.gc.ca.



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# Your Safety

Unauthorized digging and crossing by contractors, farmers, landscapers and homeowners is a leading cause of pipeline incidents.

#### Excavation

Before conducting any excavation, either by hand or with machinery, contact your local One-Call Centre.

The One-Call Centre will notify owners of buried facilities in your area, who will send representatives to mark these facilities with flags, paint or other marks, helping you avoid damaging them.

The service is free and could prevent accidents, injuries or deaths.

Contact information for TransCanada and your local One-Call Centre is available at the back of this booklet.

### Crossing and Encroachment

A crossing or encroachment is a temporary or permanent structure across, on, along or under a facility or pipeline right-of-way. A crossing can also mean equipment or machinery crossing over the pipeline right-of-way or facility site.

Like excavations, crossings and encroachments can pose a threat to the pipeline.

If you think your activity requires a Crossing agreement with TransCanada, please contact us to better serve you and speed up your request, please provide the following information:

- Proposed activity what are you planning to do?
- Location of proposed work (GPS coordinates are preferred)
- Make(s) and model(s) of any of the equipment that will cross/encroach the pipeline facilities
- Proposed activity date
- Axel load (weight)
- Your name and phone number
- Email address

Once you have received approval, the party completing the work must contact the provincial One-Call Centre to request a locate of the pipelines at least three business days before beginning work.

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# Pipeline Location

- Most pipelines are buried underground in an area of cleared land often referred to as the "right-of-way". Markers are used to indicate a pipeline's approximate location as well as the name of the pipeline and the operator's information.
- Only a TransCanada representative can determine the location and depth of the pipeline. Pipelines may not follow a straight course between marker signs.

# Agriculture Safety

TransCanada wants to ensure the safety of anyone living or working near our facilities, and that includes Canada's active farming community.

Normal farming practices can be completed without notice to TransCanada or contacting the One-Call Centre, but ground disturbance and some other activities can pose a risk to underground utilities and may require permission.

These ground disturbance activities always require permission if deeper than 30cm:

- Ground leveling
- Sludge spreading
- Clearing/Brushing/ Grubbing
- Reducing or adding soil cover
- Tiling

- Trenching
- Earth moving
- Plowing
- Disking
- Drainage ditch clean out
- Drain tile installation

- Terracing
- Fencing/Landscaping
- Excavation
- Augering

These activities always require permission:

- Stockpiling/Storage/ Parking
- Blasting activities
- Building construction
- Operating B-Trains
- Controlled burning

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# Dig with C.A.R.E.

Call before you dig

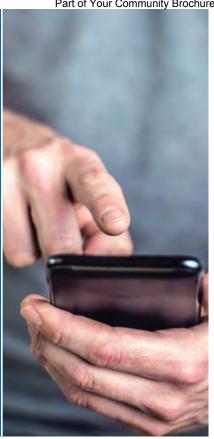
Allow required time for marking

Respect the marks

Lines are marked by flags, paint or other markers (normally yellow for pipelines).

# **E**xcavate carefully

Hand dig to determine exact locations of pipelines. A TransCanada representative must be present. All digging must take place during the time allotted by the TransCanada representative.



# Pipeline Incidents

A pipeline incident could involve an uncontrolled or unplanned release of natural gas from the pipeline system. TransCanada's state-of-the-art leak detection systems, elevated safety features and specially trained staff make us confident leaks would be guickly identified and addressed.

In the unlikely event an incident should occur, TransCanada would immediately respond by shutting down the pipeline and dispatching emergency personnel to the location of the incident. Remote controlled valves spaced at intervals along all TransCanada pipelines allow incidents to be quickly and effectively isolated.

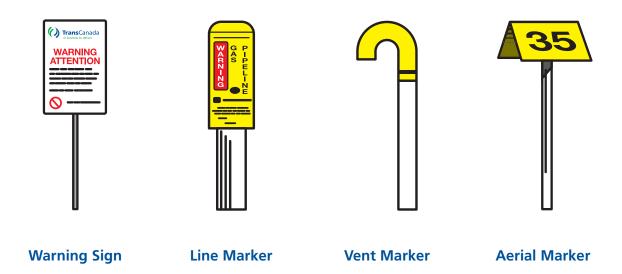
Trained crews dispatched to the site work to further isolate the area and coordinate a response with local emergency services.

TransCanada will not restart the pipeline until the issue has been identified and it is safe to do so.

TransCanada's policies and practices for emergency response planning go above and beyond the standard regulatory requirements for emergency response.

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# Pipeline Markers

- Pipeline marker signs contain important information, including the owner of the pipeline, the product shipped in the pipeline and emergency contact numbers.
- TransCanada uses a variety of markers and signs along rights-of-way to alert people to the general location of its pipelines. Markers are typically placed where the pipeline intersects streets, railroads, rivers, fence rows and in heavily congested areas.
- Do not rely on pipeline markers or signs to show you the pipeline's location, path or depth. Instead call your local One-Call Centre (phone numbers provided). TransCanada and other utilities will send a representative to the proposed excavation site to mark buried utilities at no cost to you.
- It is against the law to willfully and knowingly deface, damage, remove or destroy any pipeline sign. If these signs are missing, damaged or otherwise unreadable, please contact TransCanada to replace them.

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# Safety in the Community

Safety is a core value at TransCanada. We make safety – for ourselves, each other, our contractors and for members of our communities – an integral part of the way we work. TransCanada's operations extend across North America with established offices in key communities. Each region is fully staffed with qualified employees trained in pipeline safety and emergency response to ensure the safe and efficient operation of the facilities in the area.

We view the communities in which we operate as emergency response partners. We work collaboratively with these stakeholders on a continuous basis, inviting them to participate in exercises and training.

We work with emergency response officials to ensure everyone is familiar with local operations and is ready to respond in the event of an incident.

# What to do if you strike a pipeline

A "strike" is any unauthorized contact with a pipeline and can include mechanical equipment like a backhoe or hand tools, such as a shovel. Whether or not the pipe appears to be damaged, if you strike a pipeline, it is important that you follow these steps:

- **1.** Stop all excavation and construction. Shut off all machinery and move away from the area on foot warn others to do the same.
- **2.** Do not attempt to repair the pipe or operate any valves.
- **3.** Call '**911**' as soon as you are in a safe location. Describe the situation and inform the operator of any injuries, leaking product or fire.
- **4.** Call TransCanada's emergency number at **1.888.982.7222** and explain the incident. This number is available on all pipeline marker signs.
- **5.** Do not continue your project until authorized by a TransCanada representative.

The safety of the surrounding population dramatically decreases when a pipeline is damaged. Contact TransCanada as soon as possible so we can make any necessary repairs.

April 2016 Page 9 of 12

# Being a Partner in Pipeline Safety

Although a pipeline leak is rare, it is important to know how to recognize the signs. Use your senses of smelling, seeing and hearing to detect a potential pipeline leak

# What you may smell

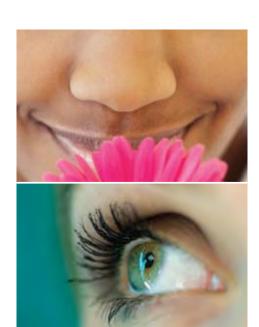
 Natural gas is said to be odourless, but some people detect a slight hydrocarbon smell. If the gas is odourized, it may smell "skunk-like" or similar to rotten eggs.

# What you may see

- Dead or dying vegetation on or near a pipeline in a normally green area
- Water bubbling or blowing into the air at a pond, creek or river
- Dirt being blown or appearing thrown into the air
- Stained or melted snow/ice over pipeline areas.

# What you may hear

• A hissing or roaring sound





# If You Suspect a Leak

If you witness any of the typical signs listed, or any other unusual sights, sounds or smells near a pipeline location, it is important that you follow these steps:

- **1. Leave** the area immediately on foot do not use motor vehicles or any equipment that could be a potential ignition source.
- **2. Move** to a safe location, call '**911**'.
- **3. Call** TransCanada's emergency number: **1.888.982.7222**. This number can be found on all pipeline marker signs.
- **4. Warn** others to stay away.

April 2016 Page 10 of 12

Uniform Colour Code

# Please tear out and carry with you

# When you request a locate, coloured flags and/ or paint are used to mark the location and type of underground utility

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Potable Water

Sewers and Drain Lines

Petroleum or Gaseous Materials

Gas, Oil, Steam,

Electric Power Lines, Cables, Conduit and Lighting Cables

Temporary Survey Markings

yes no

Proposed Excavation

nents:	
Comments:	

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Contact Info.:

If you have questions or concerns and would like to speak with someone from TransCanada, please provide your name and email address or phone number.





www.neb-one.gc.ca

# Call Before You Dig – It's Free

# Canadian One-Call Centres: Important Contact Information

Quebec:1.800.663.9228	Ontario: 1.800.400.2255	Manitoba:1.800.827.5094	Saskatchewan:1.866.828.4888	Alberta: 1.800.242.3447	British Columbia:1.800.474.6886
1.800.663.9228	1.800.400.2255	1.800.827.5094	1.866.828.4888	1.800.242.3447	1.800.474.6886

Emergency ..... www.clickbeforeyoudig.com ...... 1.888.982.7222

Public Awareness ..... **General Inquiries** 1.855.458.6715

Landowner Inquiries

public\_awareness@transcanada.com

.....1.866.372.1601

Crossing or Encroachment Agreements

crossings@transcanada.com

quebec\_crossings@transcanada.com (for crossings in Quebec)

agric\_crossings@transcanada.com
(for agricultural crossings)

on energy regulations, visit TransCanada is regulated by the National Energy Board in Canada. For more information



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# Appendix 10-15

Letter to Stakeholders and Project Fact Sheet (February 23, 2016)



February 23, 2016

TransCanada PipeLines Limited
450 - 1st Street S.W.
Calgary, Alberta, Canada T2P 5H1
tel 1-855-895-8754
email Community Relations@Transcanada.com
web www.transcanada.com

#### [Addressee]

#### Project Update: Albersun Pipeline Asset Purchase

NOVA Gas Transmission Ltd. (NGTL), a wholly owned subsidiary of TransCanada PipeLines Limited (TransCanada), would like to take this opportunity to update you on the Albersun Pipeline Asset Purchase Project (the Project). TransCanada initially mailed out information about the Project in May of 2015 regarding TransCanada's intent to purchase and assume operation of sections of the existing Albersun Pipeline System, currently owned by Suncor Energy Logistics Corporation (Suncor), which provides natural gas delivery services within the Regional Municipality of Wood Buffalo.

This acquisition will require the approval of both the National Energy Board (NEB) and the Alberta Energy Regulator (AER). Separate applications will be filed by Suncor and NGTL with the AER and NEB, respectively, to acquire the necessary approvals. Originally, NGTL expected to file an application to the NEB in the second quarter of 2015. However, due to discussions regarding the purchase of Suncor's assets, the timeline has been revised and NGTL now plans to file the application in the first or second quarter of 2016.

The NGTL System is regulated by the NEB and if approved, the facilities in the acquisition, which are currently regulated by the AER, would become part of the NGTL System and subject to NEB jurisdiction following the acquisition. NGTL's application to the NEB will include a request for approval to acquire the facilities from Suncor pursuant to section 74 of the NEB Act and for a Certificate of Public Convenience and Necessity to operate the facilities acquired from Suncor pursuant to section 52 of the NEB Act, once acquired. Subject to regulatory approval, it is anticipated that the transfer will be completed in 2017.

There will be no anticipated impacts to natural gas delivery service as a result of the change in ownership of the pipeline assets. Should you encounter a service disruption during the progress of the asset transfer, please contact:

# Suncor Toll-Free Emergency Number (24-Hour) 1-800-378-6267

The NEB publishes a *Guide For Landowners and the Public* on their website at www.neb-one.gc.ca. If you would like a printed copy of the guide, please contact NGTL at the information provided below or as mentioned in the attached Project Fact Booklet and we will mail one to you directly. If you have any questions regarding the NEB application process or regulations, the NEB may be contacted through the following means:

#### **National Energy Board**

Attention: Sheri Young, Secretary of the Board 517 Tenth Avenue SW Calgary, Alberta TR2 0A8

Email: info@neb-one.gc.ca Telephone: 403.292.4800 Toll-free: 1.800.899.1265

Fax: 403.292.5503

April 2016 Page 1 of 10

Toll-free fax: 1.877.288.8803 TTY (teletype): 1.800.632.1663

If you have any questions regarding the current regulatory status of the pipeline or AER regulations, the AER can be contacted through the following means:

#### **Alberta Energy Regulator**

Suite 1000, 250 - 5th Street SW Calgary, Alberta T2P 0R4

Telephone: 403.297.8311 Toll-free: 1.855.297.8311 Fax: 403.297.7336 Email: inquiries@aer.ca

#### **Alberta Energy Regulator**

Suite 950, Bell Tower 10104 - 103 Ave Edmonton, Alberta T5J 0H8

Telephone: 780.638.5658

Fax: 780.628.0260

NGTL and TransCanada are committed to open and transparent communication with stakeholders and Aboriginal communities as we move forward with the application to acquire the above-mentioned assets. Should you have any questions about the acquisition process, or require more information about NGTL or TransCanada, you can contact us through the following means:

#### **NOVA Gas Transmission Ltd.**

Attention: Cole Thomson **Community Relations** 450 – 1<sup>st</sup> Street S.W. Calgary, Alberta T2P 5H1

Telephone: 1.855.895.8754

Email: community\_relations@transcanada.com

Sincerely,

**Tyler Cook** 

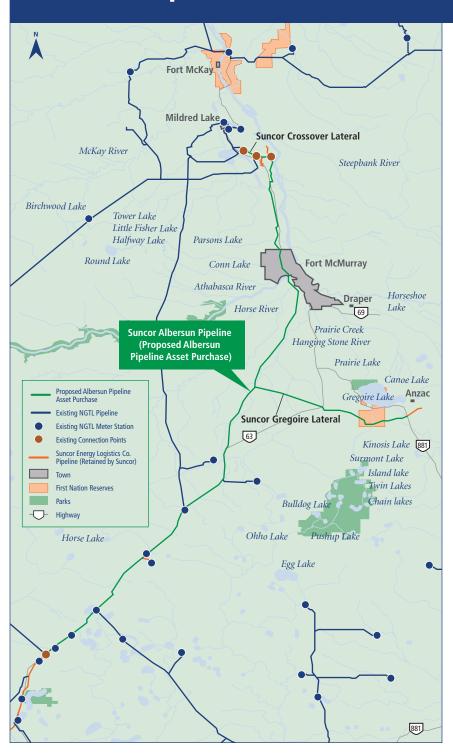
Project Manager, Pipe Development

April 2016 Page 2 of 10

# TransCanada and Suncor **Proposed Project:**

# **Albersun Pipeline Asset Purchase**





#### **Project Details**

NOVA Gas Transmission Ltd. (NGTL), a wholly owned subsidiary of TransCanada PipeLines Limited (TransCanada), is proposing to purchase and assume operation of sections of the existing Albersun Pipeline System, currently owned by Suncor Energy Logistics Corporation (Suncor). This existing Albersun Pipeline System provides natural gas delivery services within the Regional Municipality of Wood Buffalo.

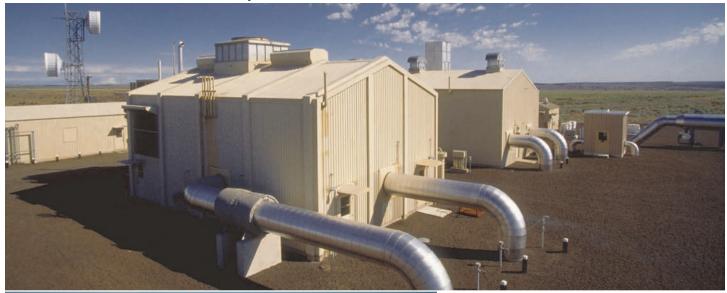
The assets NGTL intends to acquire from Suncor and incorporate into the NGTL System include:

- 141 km of NPS 10 pipeline extending from a point at or near 06-13-92-10 W4 to the Crow Lake Sales interconnect at or near 8-33-79-14 W4
- 20.9 km of NPS 6 pipeline extending from 16-21-86-10 W4 to 7-27-85-8 W4
- 8.7 km of NPS 3 pipeline extending from 7-27-85-8 W4 to a point at or near 10-33-85-7 W4
- 6.2 km of NPS 8 pipeline extending from 12-21-92-10 W4 to a point at or near 6-13-92-10 W4 and;
- Less than 100 metres of NPS 6 pipeline located in 8-15-92-10 W4 connecting Suncor's NPS 24 Mildred Lake pipeline to the Suncor Crossover Lateral
- All facilities attached to, and forming part of, the aforementioned pipelines



April 2016 Page 3 of 10

#### TransCanada and Suncor: Albersun Pipeline Asset Purchase







This acquisition will require the approval of both the National Energy Board (NEB) and the Alberta Energy Regulator (AER). Separate applications will be filed by Suncor and NGTL with the AER and NEB to acquire the necessary approvals. Suncor and NGTL expect to file their respective applications in the third or fourth quarter of 2016 and the first or second quarter of 2016.

The NGTL System is regulated by the NEB and if approved, the facilities in the acquisition, which are currently regulated by the AER, would become part of the NGTL System and subject to NEB jurisdiction following the acquisition. NGTL's application to the NEB will include a request for approval to acquire the facilities from Suncor pursuant to section 74 of the NEB Act and for a Certificate of Public Convenience and Necessity to operate the facilities acquired from Suncor pursuant to section 52 of the NEB Act once acquired. Subject to regulatory approval, it is anticipated that the transfer will be completed in 2017.

#### **Project Schedule**

Q1 2015	Began environmental and technical
	analysis of project
Q2 2015	Begin Aboriginal and stakeholder

engagement

---9--9-----

Q1 or Q2 2016  $\,$  NGTL anticipates filing applications

with the NEB

Q3 or Q4 2016 Suncor anticipates filing application

with the AER

2017 Anticipate transfer to be complete

April 2016 Page 4 of 10

#### What you need to know: How NEB and AER Regulations Vary

The information in the following table is intended for general information purposes and should be used as a guide only. Please consult the applicable statutes, regulations, rules and directives (collectively Statutes) for the exact wording of these requirements. In case of any discrepancy between this table and any applicable Statutes, the Statutes prevail.

Regulation	Under the NEB	Under the AER
NEB – 30 m Safety Zone AER – 30 m Controlled Area	Safety Zone — The safety zone extends 30 m on either side of a pipeline right-of-way.  Cultivation can occur to a depth of 30 cm within the safety zone without permission of the pipeline company.  Excavating, drilling, blasting or digging deeper than 30 cm requires permission of the pipeline company to prevent accidental damage to the pipe.  National Energy Board Act - Section 112(1) re the 30 m safety zone, and section 3(a) of Pipeline Crossing Regulations, Part I and I regarding the 30 cm ground disturbance	Controlled Area — A pipeline's controlled area is the land bordering it for 30 m out from each side, measured from the centre of the pipeline, for an aggregate width of 60 m.  Normal cultivation can occur to a depth of 45 cm within a controlled area.  Excavating, drilling, blasting or digging deeper than 30 cm requires permission of the pipeline company to prevent accidental damage to the pipe.  Pipeline Act (Alberta) - Sections 1(1)(e) "controlled area", section 1(1)(j)(i) ground disturbance up to 30 cm deep and not resulting in a loss of cover, 1(1)(j)(ii) re cultivation to a depth up to 45 cm, and section 32 re the requirement to obtain permission from the pipeline company before undertaking ground disturbance.  Section 60 of Pipeline Regulation, Alta Reg 91/2005 (the Pipeline Rules) re the 30 m safety zone.
Obtaining permission from a pipeline company to cross a pipeline right-of-way	Landowners have the right to use and enjoy the surface of the right-of-way without having to notify the pipeline company so long as the operation or integrity of the pipeline is not compromised.  Pipeline crossings by agricultural vehicles or mobile equipment can occur without the need to obtain approval from the pipeline company when the following conditions exist:  The agricultural activity does not disturb more than 30 cm of soil cover;  The vehicle or mobile equipment is not removing or adding soil cover;  Soil conditions are such that minimal rutting will occur when agricultural vehicles or mobile equipment are driven over the pipeline; and  Loaded axle weight and tire pressures are within the manufacturer's approved limits and operating guidelines EXCEPT for equipment such as large harvesters, large grain transporters (e.g. Super B-trains) and other overloaded vehicles.	Normal farming practices over the entire pipeline right-of-way are permitted.  Part 5 of the Pipeline Rules.  For crossings other than for normal farming equipment (e.g. moving a drilling rig), permission is required and the pipeline company must respond in writing to the applicant within twenty-one (21) working days.  Part 5 of the Pipeline Rules.  Approval for ground disturbance within 5 m of the centerline of a pipeline can be obtained directly from the AER if:  • approval from the pipeline company cannot be reasonably obtained.  Part 5 of the Pipeline Rules.

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# TransCanada and Suncor: Albersun Pipeline Asset Purchase

Regulation	Under the NEB	Under the AER
	NEB Exemption Order MO-21-2010 Guidance for Safe Crossings of NEB-Regulated Pipelines Using Agricultural Vehicles and Mobile Equipment For crossings other than for normal farming equipment (e.g. moving a drilling rig), permission is required and the pipeline company must respond to the applicant within ten (10) working days.  Section 6(1) of the NEB Pipeline Crossing Regulations, Part II. Approved applications are valid for a period of two years unless the parties agree otherwise.  Section 6(2) of the NEB Pipeline Crossing Regulations, Part II. Approval to cross can be obtained directly from the NEB if an individual is unable to obtain permission from a pipeline company.  Permission from the NEB and/or the pipeline company is not required to install overhead lines or to excavate to maintain an existing facility as long as certain conditions are met.  Section 5 & 7 of the NEB Pipeline Crossing Regulations, Part I.	
Excavation Activity within a Safety or Control Zone	Requires three (3) working days' notice prior to commencing work to allow time to locate and mark the pipe.  Section 4(f) of the NEB Pipeline Crossing  Regulations, Part I.  If the pipe is within 3 m of the excavation/ground disturbance it must be hand exposed prior to excavation with mechanical equipment.  Section 6(j) of the NEB Pipeline Crossing  Regulations, Part I.	Requires a minimum of two (2) working days' notice prior to commencing work to allow time to locate and mark the pipe.  Part 5 of the Pipeline Rules (section 60).  If the pipe is within 5 m of the excavation/ground disturbance it must be hand exposed prior to excavation with mechanical equipment.  Part 5 of the Pipeline Rules (section 65(3)).  No use of machinery to dig within 60 cm of pipeline, unless supervised by pipeline owner.  Part 5 of the Pipeline Rules (section 65(5)).  Notification to the pipeline owner must be given at least 24 hours prior to backfilling the pipeline.  Part 5 of the Pipeline Rules (section 63(3)).

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Regulation	Under the NEB	Under the AER
Geophysical Activities	The NEB must approve any exploration or geophysical activity within 40 m of the pipeline right-of-way. After the Board gives its approval, the applicant must also obtain the permission of the pipeline owner.  Sections 81(1) and 112 of the NEB Act.  Excavation and Construction Near Pipelines (2014).	Exploration or geophysical activity is not permitted within 32 m to 100 m of a pipeline, depending upon the size of the explosive charge, unless the applicant obtains the permission of the pipeline owner.  Sections 44 of the Exploration Regulation (Alta Reg 284/2006) to the Alberta Mines and Minerals Act, RSA 2000, c M-17.  Exploration Directive 2006-15.
pipeline that is the subject of a regulatory hearing may have their direct costs of participating in the hearing reimbursed by order of the Board. Cost recovery is administered through the Board's Participant Funding Program.		If you participate as an intervener in an AER hearing, you may be eligible to have the costs you incurred with respect to your intervention paid for by the applicant. You make the request to the AER to have costs paid. The AER then determines whether you are eligible to have your costs paid and what costs are eligible.  Directive 031, REDA Energy Cost Claims
Fines & Penalties	A person who contravenes Section 112(1), (2), (4) or (5) is guilty of an offence and liable to a fine or imprisonment.  Section 112(8)  A penalty is prescribed for failing to comply with an order of an NEB Inspections Officer. Those who continue to contravene NEB crossing provisions after being specifically ordered to stop could face penalties set out in the NEB Act. The penalty is determined by the Court based on seriousness of the offence.  Section 51.4 of the NEB Act.	The penalty for an offence of the Pipeline Act by an individual, including unauthorized excavations, is a maximum of \$50,000.  Section 54(1) of the Pipeline Act.

April 2016 Page 7 of 10

#### TransCanada and Suncor: Albersun Pipeline Asset Purchase



# Call Before You Dig 1.800.242.3447 www.clickbeforeyoudig.com

In all cases, TransCanada and Suncor must approve construction and excavation activities on or near our rights-of-way in accordance with legislation. We post signs at road crossings, fence lines, railways and river crossings to identify our facilities. Generally, our natural gas pipelines are buried approximately 0.6 m to 1.2 m underground. This is to ensure the pipeline is well below normal tillage depths. Occasionally, in non-cultivated areas (such as pasture land), soil erosion may decrease the amount of coverage over a pipeline.

Before you dig, whether it is for fence posts, a water well, deep tillage or any other purpose, call at least three days in advance to find out the exact location of pipelines and other utility installations. The call and the work required to locate our underground facilities are free.

#### Alberta One-Call www.albertaonecall.com

Toll-Free Phone: 1.800.242.3447 Toll-Free Fax: 1.800.940.3447

#### If you suspect a leak

The procedures for emergencies at TransCanada and Suncor will not change as a result of this asset acquisition. Please remember to take the following steps if you suspect a leak from our natural gas pipeline system.

- Leave the area immediately on foot move at least 750 m away. Do not use your car or any equipment that could be a potential ignition source – not even your cell phone.
- Extinguish all smoking materials, fires or other open sources of ignition.
- As soon as you're out of the area and in a safe location, call the emergency number which can be found on pipeline marker signs. Please note that until further notice all emergency calls for the Albersun Pipeline should be directed to Suncor's emergency number.
  - Suncor: 1.800.378.6267
- Call 911 or your local emergency number.
- Warn others to stay away.
- Crews will respond immediately.

6

April 2016 Page 8 of 10



#### **Questions**

We invite you to contact TransCanada with any questions or comments you may have about the Albersun Pipeline Asset Purchase Project:

#### **Attention: Cole Thomson, Senior Community Relations Advisor**

450 - 1st Street S.W. Calgary, Alberta T2P 5H1

Telephone: 1.855.895.8754

Email: community\_relations@transcanada.com

Website: www.transcanada.com

If you have any questions regarding the NEB application process or regulations, the NEB may be contacted at:

#### **National Energy Board**

#### Attention: Sheri Young, Secretary of the Board

517 Tenth Avenue S.W. Calgary, Alberta T2R 0A8

Telephone: 403.292.4800 Toll-free: 1.800.899.1265 Email: info@neb-one.gc.ca Fax: 403.292.5503

Toll-free fax: 1.877.288.8803 TTY (teletype): 1.800.632.1663 Website: www.neb-one.gc.ca If you have any questions regarding the AER application process or regulations, the AER may be contacted at:

#### **Alberta Energy Regulator**

Suite 1000, 250 – 5th Street SW Calgary, Alberta T2P 0R4

Telephone: 403.297.8311 Toll-free: 1.855.297.8311 Email: inquiries@aer.ca Fax: 403.297.7336 Website: www.aer.ca

or

#### **Alberta Energy Regulator**

Suite 950, Bell Tower 10104-103 Ave Edmonton, Alberta

T5J 0H8

Telephone: 780.638.5658 Email: inquiries@aer.ca

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# **Appendix 11-1**

**Update Letter to Aboriginal Communities and Fact Sheet** 



TransCanada PipeLines Limited February 25, 2016 450 - 1st Street S.W. Calgary, Alberta, Canada T2P 5H1

tel 1-855-895-8754

email shannon mcneill@Transcanada.com web www.transcanada.com

Sent via email to: [email]

[name] [community] [address] [city, province, postal]

Dear [name],

#### **Project Update: Albersun Pipeline Asset Purchase**

NOVA Gas Transmission Ltd. (NGTL), a wholly owned subsidiary of TransCanada PipeLines Limited (TransCanada), would like to take this opportunity to update you on the Albersun Pipeline Asset Purchase Project (the Project). TransCanada initially mailed out information about the Project in May of 2015 regarding TransCanada's intent to purchase and assume operation of sections of the existing Albersun Pipeline System, currently owned by Suncor Energy Logistics Corporation (Suncor), which provides natural gas delivery services within the Regional Municipality of Wood Buffalo.

This acquisition will require the approval of both the National Energy Board (NEB) and the Alberta Energy Regulator (AER). Separate applications will be filed by Suncor and NGTL with the AER and NEB, respectively, to acquire the necessary approvals. Originally, NGTL expected to file an application to the NEB in the second quarter of 2015. However, due to discussions regarding the purchase of Suncor's assets, the timeline has been revised and NGTL now plans to file the application in the first or second quarter of 2016. After NGTL takes ownership, it will physically isolate the purchased assets from the remainder of the Albersun System by cutting and capping the pipeline immediately south of the existing NGTL owned Crow Lake Sales lateral.

The NGTL System is regulated by the NEB and if approved, the facilities in the acquisition, which are currently regulated by the AER, would become part of the NGTL System and subject to NEB jurisdiction following the acquisition. NGTL's application to the NEB will include a request for approval to acquire the facilities from Suncor pursuant to section 74 of the NEB Act and for a Certificate of Public Convenience and Necessity to operate the facilities acquired from Suncor pursuant to section 52 of the NEB Act, once acquired. Subject to regulatory approval, it is anticipated that the transfer will be completed in 2017.

There will be no anticipated impacts to natural gas delivery service as a result of the change in ownership of the pipeline assets. Should you encounter a service disruption during the progress of the asset transfer, please contact:

#### **Suncor Toll-Free Emergency Number (24-Hour)** 1-800-378-6267

The NEB publishes a Guide For Landowners and the Public on their website at www.neb-one.gc.ca. If you would like a printed copy of the guide, please contact NGTL at the information provided below or as mentioned in the attached Project Fact Booklet and we will mail one to you directly. If you have any questions regarding the NEB application process or regulations, the NEB may be contacted through the following means:

April 2016 Page 1 of 10

#### **National Energy Board**

Attention: Sheri Young, Secretary of the Board 517 Tenth Avenue SW Calgary, Alberta TR2 0A8

Email: info@neb-one.gc.ca Telephone: 403.292.4800 Toll-free: 1.800.899.1265

Fax: 403.292.5503

Toll-free fax: 1.877.288.8803 TTY (teletype): 1.800.632.1663

If you have any questions regarding the current regulatory status of the pipeline or AER regulations, the AER can be contacted through the following means:

#### **Alberta Energy Regulator**

Suite 1000, 250 - 5th Street SW Calgary, Alberta T2P 0R4

Telephone: 403.297.8311 Toll-free: 1.855.297.8311 Fax: 403.297.7336 Email: inquiries@aer.ca

or

#### **Alberta Energy Regulator**

Suite 950, Bell Tower 10104 – 103 Ave Edmonton, Alberta T5J 0H8

Telephone: 780.638.5658 Fax: 780.628.0260

NGTL and TransCanada are committed to open and transparent communication with stakeholders and Aboriginal communities as we move forward with the application to acquire the above-mentioned assets. Should you have any questions about the acquisition process, or require more information about NGTL or TransCanada, you can contact us through the following means:

#### **NOVA Gas Transmission Ltd.**

Attention: Shannon McNeill Indigenous Relations 450 – 1<sup>st</sup> Street S.W. Calgary, Alberta T2P 5H1 Telephone: 1.855.895.8754

 $Email: shannon\_mcneill@transcanada.com\\$ 

Sincerely,

**Tyler Cook** 

Project Manager, Gas Projects - Operations Planning

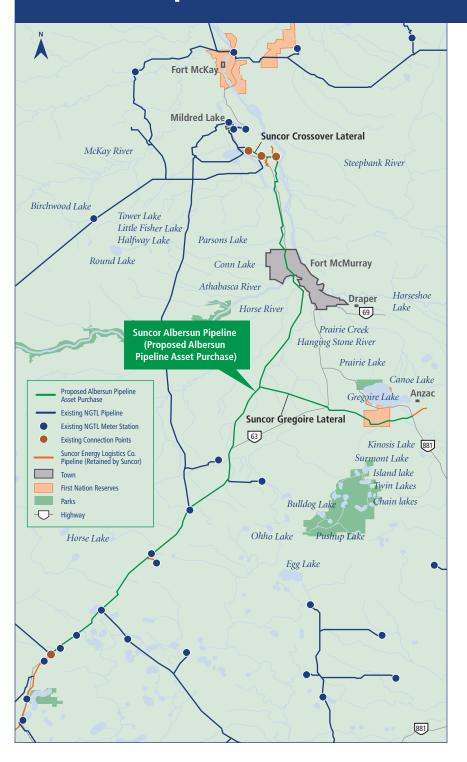
cc: [name]

April 2016 Page 2 of 10

# TransCanada and Suncor

# **Proposed Project: Albersun Pipeline Asset Purchase**





#### **Project Details**

NOVA Gas Transmission Ltd. (NGTL), a wholly owned subsidiary of TransCanada PipeLines Limited (TransCanada), is proposing to purchase and assume operation of sections of the existing Albersun Pipeline System, currently owned by Suncor Energy Logistics Corporation (Suncor). This existing Albersun Pipeline System provides natural gas delivery services within the Regional Municipality of Wood Buffalo.

The assets NGTL intends to acquire from Suncor and incorporate into the NGTL System include:

- 141 km of NPS 10 pipeline extending from a point at or near 06-13-92-10 W4 to the Crow Lake Sales interconnect at or near 8-33-79-14 W4
- 20.9 km of NPS 6 pipeline extending from 16-21-86-10 W4 to 7-27-85-8 W4
- 8.7 km of NPS 3 pipeline extending from 7-27-85-8 W4 to a point at or near 10-33-85-7 W4
- 6.2 km of NPS 8 pipeline extending from 12-21-92-10 W4 to a point at or near 6-13-92-10 W4 and;
- Less than 100 metres of NPS 6 pipeline located in 8-15-92-10 W4 connecting Suncor's NPS 24 Mildred Lake pipeline to the Suncor Crossover Lateral
- All facilities attached to, and forming part of, the aforementioned pipelines



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#### TransCanada and Suncor: Albersun Pipeline Asset Purchase







This acquisition will require the approval of both the National Energy Board (NEB) and the Alberta Energy Regulator (AER). Separate applications will be filed by Suncor and NGTL with the AER and NEB to acquire the necessary approvals. Suncor and NGTL expect to file their respective applications in the third or fourth quarter of 2016 and the first or second quarter of 2016.

The NGTL System is regulated by the NEB and if approved, the facilities in the acquisition, which are currently regulated by the AER, would become part of the NGTL System and subject to NEB jurisdiction following the acquisition. NGTL's application to the NEB will include a request for approval to acquire the facilities from Suncor pursuant to section 74 of the NEB Act and for a Certificate of Public Convenience and Necessity to operate the facilities acquired from Suncor pursuant to section 52 of the NEB Act once acquired. Subject to regulatory approval, it is anticipated that the transfer will be completed in 2017.

#### **Project Schedule**

Q1 2015	Began environmental and technical analysis of project
Q2 2015	Begin Aboriginal and stakeholder engagement
Q1 or Q2 2016	NGTL anticipates filing applications

Q3 or Q4 2016 Suncor anticipates filing application

with the AER

2017 Anticipate transfer to be complete

with the NEB

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#### What you need to know: How NEB and AER Regulations Vary

The information in the following table is intended for general information purposes and should be used as a guide only. Please consult the applicable statutes, regulations, rules and directives (collectively Statutes) for the exact wording of these requirements. In case of any discrepancy between this table and any applicable Statutes, the Statutes prevail.

Regulation	Under the NEB	Under the AER
NEB — 30 m Safety Zone AER — 30 m Controlled Area	Safety Zone — The safety zone extends 30 m on either side of a pipeline right-of-way.  Cultivation can occur to a depth of 30 cm within the safety zone without permission of the pipeline company.  Excavating, drilling, blasting or digging deeper than 30 cm requires permission of the pipeline company to prevent accidental damage to the pipe.  National Energy Board Act - Section 112(1) re the 30 m safety zone, and section 3(a) of Pipeline Crossing Regulations, Part I and I regarding the 30 cm ground disturbance	Controlled Area — A pipeline's controlled area is the land bordering it for 30 m out from each side, measured from the centre of the pipeline, for an aggregate width of 60 m.  Normal cultivation can occur to a depth of 45 cm within a controlled area.  Excavating, drilling, blasting or digging deeper than 30 cm requires permission of the pipeline company to prevent accidental damage to the pipe.  Pipeline Act (Alberta) - Sections 1(1)(e) "controlled area", section 1(1)(j)(i) ground disturbance up to 30 cm deep and not resulting in a loss of cover, 1(1)(j)(ii) re cultivation to a depth up to 45 cm, and section 32 re the requirement to obtain permission from the pipeline company before undertaking ground disturbance.  Section 60 of Pipeline Regulation, Alta Reg 91/2005 (the Pipeline Rules) re the 30 m safety zone.
Obtaining permission from a pipeline company to cross a pipeline right-of-way	Landowners have the right to use and enjoy the surface of the right-of-way without having to notify the pipeline company so long as the operation or integrity of the pipeline is not compromised.  Pipeline crossings by agricultural vehicles or mobile equipment can occur without the need to obtain approval from the pipeline company when the following conditions exist:  The agricultural activity does not disturb more than 30 cm of soil cover;  The vehicle or mobile equipment is not removing or adding soil cover;  Soil conditions are such that minimal rutting will occur when agricultural vehicles or mobile equipment are driven over the pipeline; and  Loaded axle weight and tire pressures are within the manufacturer's approved limits and operating guidelines EXCEPT for equipment such as large harvesters, large grain transporters (e.g. Super B-trains) and other overloaded vehicles.	Normal farming practices over the entire pipeline right-of-way are permitted.  Part 5 of the Pipeline Rules.  For crossings other than for normal farming equipment (e.g. moving a drilling rig), permission is required and the pipeline company must respond in writing to the applicant within twenty-one (21) working days.  Part 5 of the Pipeline Rules.  Approval for ground disturbance within 5 m of the centerline of a pipeline can be obtained directly from the AER if:  • approval from the pipeline company cannot be reasonably obtained.  Part 5 of the Pipeline Rules.

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Regulation	Under the NEB	Under the AER
	NEB Exemption Order MO-21-2010 Guidance for Safe Crossings of NEB-Regulated Pipelines Using Agricultural Vehicles and Mobile Equipment For crossings other than for normal farming equipment (e.g. moving a drilling rig), permission is required and the pipeline company must respond to the applicant within ten (10) working days.  Section 6(1) of the NEB Pipeline Crossing Regulations, Part II. Approved applications are valid for a period of two years unless the parties agree otherwise.  Section 6(2) of the NEB Pipeline Crossing Regulations, Part II. Approval to cross can be obtained directly from the NEB if an individual is unable to obtain permission from a pipeline company.  Permission from the NEB and/or the pipeline company is not required to install overhead lines or to excavate to maintain an existing facility as long as certain conditions are met.  Section 5 & 7 of the NEB Pipeline Crossing Regulations, Part I.	
Excavation Activity within a Safety or Control Zone	Requires three (3) working days' notice prior to commencing work to allow time to locate and mark the pipe.  Section 4(f) of the NEB Pipeline Crossing  Regulations, Part I.  If the pipe is within 3 m of the excavation/ground disturbance it must be hand exposed prior to excavation with mechanical equipment.  Section 6(j) of the NEB Pipeline Crossing  Regulations, Part I.	Requires a minimum of two (2) working days' notice prior to commencing work to allow time to locate and mark the pipe.  Part 5 of the Pipeline Rules (section 60).  If the pipe is within 5 m of the excavation/ground disturbance it must be hand exposed prior to excavation with mechanical equipment.  Part 5 of the Pipeline Rules (section 65(3)).  No use of machinery to dig within 60 cm of pipeline, unless supervised by pipeline owner.  Part 5 of the Pipeline Rules (section 65(5)).  Notification to the pipeline owner must be given at least 24 hours prior to backfilling the pipeline.  Part 5 of the Pipeline Rules (section 63(3)).

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Regulation	Under the NEB	Under the AER
Geophysical Activities	The NEB must approve any exploration or geophysical activity within 40 m of the pipeline right-of-way. After the Board gives its approval, the applicant must also obtain the permission of the pipeline owner.  Sections 81(1) and 112 of the NEB Act.  Excavation and Construction Near Pipelines (2014).	Exploration or geophysical activity is not permitted within 32 m to 100 m of a pipeline, depending upon the size of the explosive charge, unless the applicant obtains the permission of the pipeline owner.  Sections 44 of the Exploration Regulation (Alta Reg 284/2006) to the Alberta Mines and Minerals Act, RSA 2000, c M-17.  Exploration Directive 2006-15.
Intervener Funding	Persons who believe they may be adversely affected by a pipeline that is the subject of a regulatory hearing may have their direct costs of participating in the hearing reimbursed by order of the Board. Cost recovery is administered through the Board's Participant Funding Program.	If you participate as an intervener in an AER hearing, you may be eligible to have the costs you incurred with respect to your intervention paid for by the applicant. You make the request to the AER to have costs paid. The AER then determines whether you are eligible to have your costs paid and what costs are eligible.  Directive 031, REDA Energy Cost Claims
Fines & Penalties	A person who contravenes Section 112(1), (2), (4) or (5) is guilty of an offence and liable to a fine or imprisonment.  Section 112(8)  A penalty is prescribed for failing to comply with an order of an NEB Inspections Officer. Those who continue to contravene NEB crossing provisions after being specifically ordered to stop could face penalties set out in the NEB Act. The penalty is determined by the Court based on seriousness of the offence.  Section 51.4 of the NEB Act.	The penalty for an offence of the Pipeline Act by an individual, including unauthorized excavations, is a maximum of \$50,000.  Section 54(1) of the Pipeline Act.

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#### TransCanada and Suncor: Albersun Pipeline Asset Purchase



# Call Before You Dig 1.800.242.3447 www.clickbeforeyoudig.com

In all cases, TransCanada and Suncor must approve construction and excavation activities on or near our rights-of-way in accordance with legislation. We post signs at road crossings, fence lines, railways and river crossings to identify our facilities. Generally, our natural gas pipelines are buried approximately 0.6 m to 1.2 m underground. This is to ensure the pipeline is well below normal tillage depths. Occasionally, in non-cultivated areas (such as pasture land), soil erosion may decrease the amount of coverage over a pipeline.

Before you dig, whether it is for fence posts, a water well, deep tillage or any other purpose, call at least three days in advance to find out the exact location of pipelines and other utility installations. The call and the work required to locate our underground facilities are free.

# Alberta One-Call www.albertaonecall.com

Toll-Free Phone: 1.800.242.3447 Toll-Free Fax: 1.800.940.3447

#### If you suspect a leak

The procedures for emergencies at TransCanada and Suncor will not change as a result of this asset acquisition. Please remember to take the following steps if you suspect a leak from our natural gas pipeline system.

- Leave the area immediately on foot move at least 750 m away. Do not use your car or any equipment that could be a potential ignition source — not even your cell phone.
- Extinguish all smoking materials, fires or other open sources of ignition.
- As soon as you're out of the area and in a safe location, call the emergency number which can be found on pipeline marker signs. Please note that until further notice all emergency calls for the Albersun Pipeline should be directed to Suncor's emergency number.
  - Suncor: 1.800.378.6267
- Call 911 or your local emergency number.
- Warn others to stay away.
- Crews will respond immediately.

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#### **Questions**

We invite you to contact TransCanada with any questions or comments you may have about the Albersun Pipeline Asset Purchase Project:

#### Attention: Cole Thomson, Senior Community Relations Advisor

450 - 1st Street S.W. Calgary, Alberta T2P 5H1

Telephone: 1.855.895.8754

Email: community\_relations@transcanada.com

Website: www.transcanada.com

If you have any questions regarding the NEB application process or regulations, the NEB may be contacted at:

#### **National Energy Board**

#### Attention: Sheri Young, Secretary of the Board

517 Tenth Avenue S.W. Calgary, Alberta T2R 0A8

Telephone: 403.292.4800 Toll-free: 1.800.899.1265 Email: info@neb-one.gc.ca Fax: 403.292.5503

Toll-free fax: 1.877.288.8803 TTY (teletype): 1.800.632.1663 Website: www.neb-one.gc.ca If you have any questions regarding the AER application process or regulations, the AER may be contacted at:

#### **Alberta Energy Regulator**

Suite 1000, 250 – 5th Street SW Calgary, Alberta T2P 0R4

Telephone: 403.297.8311 Toll-free: 1.855.297.8311 Email: inquiries@aer.ca Fax: 403.297.7336 Website: www.aer.ca

or

#### **Alberta Energy Regulator**

Suite 950, Bell Tower 10104-103 Ave Edmonton, Alberta

T5J 0H8

Telephone: 780.638.5658 Email: inquiries@aer.ca

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