

ENERGY & COMMITMENT

OUR BUSINESS AT A GLANCE
DECEMBER 2016



WHAT WE STRIVE FOR

Portlands Energy Centre is a natural gas power generation facility capable of supplying 25 per cent of Toronto's electricity needs.

OUR VISION

Our strategic vision remains clear: to be the leading energy infrastructure company in North America, focusing on pipeline and power generation opportunities in regions where we have, or can develop, a significant competitive advantage.

SUSTAINABLE DEVELOPMENT FOR LONG-TERM SUCCESS

Energy – it is essential to our modern way of life, and the world's appetite for affordable energy supplies continues to grow.

At the same time, there is growing demand to transition to a **lower-carbon future** fueled by cleaner energy alternatives such as natural gas, nuclear and renewable sources.

We are proud to have played an active role in delivering the energy to meet this growing demand for more than 65 years, but we recognize that the energy environment in which we operate is increasingly complex.

We are **well positioned** for continued growth and long-term success because of our commitment to operating sustainably.

It is this commitment that will help us build the new and improved infrastructure required to meet the **growing global need** for affordable energy, delivered safely, responsibly and reliably.

QUICK FACTS



NATURAL GAS PIPELINES

90,300 kilometres
(56,100 MILES)

664 billion cubic feet
OF **GAS STORAGE CAPACITY**,
LARGEST PROVIDER
IN NORTH AMERICA



ENERGY

17
POWER GENERATION FACILITIES
10,700 MEGAWATTS



LIQUIDS PIPELINES

4,300 kilometres
(2,700 MILES)

1.3 billion barrels
KEYSTONE PIPELINE SYSTEM HAS
SAFELY DELIVERED MORE THAN
1.3 BILLION BARRELS OF OIL

PEOPLE AND PLACES

7,165
EMPLOYEES LOCATED ACROSS
NORTH AMERICA

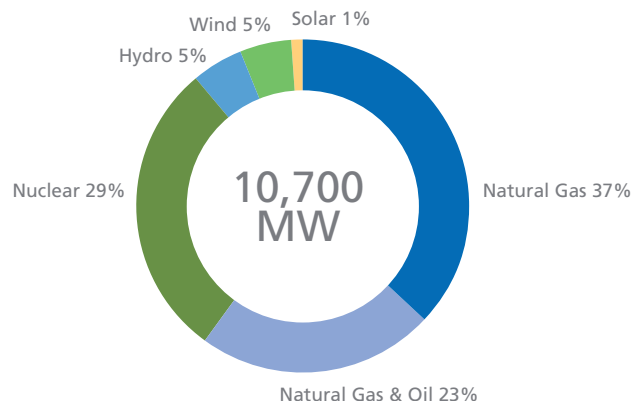


ABOUT TRANSCANADA

For over 65 years, TransCanada has proudly operated the pipelines and power generation facilities that support a high standard of living for North Americans. Our facilities operate quietly, safely and reliably, while our more than 7,100 employees play an active part in the communities where they live in Canada, the U.S. and Mexico.

This publication contains forward-looking information including statements regarding dividend growth and expected in-service dates. For more information on forward-looking information, the assumptions made, and the risks and uncertainties which could cause actual results to differ from the anticipated results refer to TransCanada's 2015 Annual Report and the most recent Quarterly Report to Shareholders filed with Canadian securities regulators and the U.S. Securities and Exchange Commission and available at TransCanada.com.

THREE COMPLEMENTARY ENERGY INFRASTRUCTURE BUSINESSES



Power Generation Mix

OUR BUSINESS AREAS

TransCanada remains a leader in each of our three core businesses. Our businesses give us both investment diversity and important geographic overlap resulting in shared technical, stakeholder and operating expertise.

NATURAL GAS PIPELINES

Our **90,300-kilometre** (56,100 mile) network of natural gas pipelines supplies **27 per cent of the natural gas consumed daily across North America** to heat and cool homes, run industries and generate power. This pipeline network strategically connects growing supply to key markets across our three operating geographies of Canada, the U.S. and Mexico. We also own and operate **664 billion cubic feet** of natural gas storage capacity.

ENERGY

TransCanada owns or has interests in 17 power generation facilities with a capacity of **10,700 megawatts** (MW) – **enough to power more than 10 million homes**. Over one-third of the power we provide is generated from emission-less sources including nuclear, hydro, wind and solar.

LIQUIDS PIPELINES

Our **4,300-kilometre** (2,700 mile) Keystone Pipeline System transports approximately **20 per cent of western Canadian crude oil exports** to key refineries in the U.S. Midwest and Gulf Coast, where it is converted into fuel and other useful petroleum products. Since it began operation in June 2010, Keystone has **safely transported more than 1.3 billion barrels** of crude oil from Canada to U.S. markets.

FINANCIAL HIGHLIGHTS 2015

NET LOSS ATTRIBUTABLE TO COMMON SHARES:

\$1.2 BILLION or **\$1.75 PER SHARE**

COMPARABLE EARNINGS:

\$1.8 BILLION or **\$2.48 PER SHARE**⁽¹⁾

COMPARABLE EARNINGS BEFORE INTEREST, TAXES,
DEPRECIATION AND AMORTIZATION:

\$5.9 BILLION⁽¹⁾

FUNDS GENERATED FROM OPERATIONS:

\$4.5 BILLION⁽¹⁾

COMPARABLE DISTRIBUTABLE CASH FLOW:

\$3.5 BILLION or **\$5.00 PER SHARE**⁽¹⁾

CAPITAL SPENDING, EQUITY INVESTMENTS
AND ACQUISITIONS:

\$5.2 BILLION

(1) Non-GAAP measures which do not have any standardized meanings prescribed by U.S. generally accepted accounting principles (GAAP). For more information, see non-GAAP measures in the Management's Discussion and Analysis of the 2015 Annual Report.



TransCanada's investment in Mexico totals over US\$5 billion, which includes our existing network – such as the Tamazunchale Pipeline – and projects under construction and in development.

OUR GROWTH PLAN HIGHLIGHTS

TransCanada's **asset base** continues to perform well and generate maximum value for shareholders. With our proven financial strength, we expect to grow our common share dividend at an average annual rate of eight to 10 per cent through 2020. We also continue to grow our portfolio of commercially secure investment opportunities, which has the potential to create significant additional shareholder value. Here are a few highlights from our growth plan:

\$26 billion in near-term growth projects, including:

- **US\$7.7 billion** in Columbia Pipeline Group growth initiatives and modernization investments
- **\$5.4 billion** in system improvements and expansions to the NGTL system
- **\$1 billion** natural gas-fired Napanee Generating Station coming into service in late 2018

- Five natural gas pipelines in Mexico totaling **US\$3.8 billion** – Topolobampo, Mazatlan, Tuxpan-Tula, Tula-Villa de Reyes and Sur de Texas-Tuxpan pipeline projects
- **\$900 million** Grand Rapids (phase 1) and **\$1 billion** Northern Courier liquids pipeline systems expected to be in service in 2017

\$45 billion in commercially secured, medium to longer-term projects, including:

- **\$15.7 billion** Energy East Pipeline project to transport crude oil from Western Canada to Eastern Canada, providing access to tidewater
- **\$9.8 billion** investment in Coastal GasLink and Prince Rupert Gas Transmission pipeline projects to serve emerging liquefied natural gas export industry in B.C.
- **\$6.5 billion** refurbishment of Bruce Power reactors to extend operating life of nuclear facility to 2064

WHAT MATTERS TO YOU



At TransCanada, we are committed to working collaboratively with our stakeholders and ensuring they are engaged and respected throughout the lifecycle of all our projects.

CORPORATE SOCIAL RESPONSIBILITY

Corporate Social Responsibility is our commitment to operating in an economically, socially and environmentally sustainable manner, while recognizing the interests of our stakeholders.

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 safety, integrity, responsibility and collaboration.**

DOING THE RIGHT THING

We know that the long-term success of our business depends on our ability to balance safety, profitability and social and environmental responsibility. For over **65 years**, we have considered every business decision in terms of our ability to achieve top performance in all of those areas.

In 2016, we continued to receive recognition of our accomplishments from third-party investment rating agencies, but we haven't stopped examining our own efforts, **setting targets** and **continually striving** for improvement in everything we do.

QUICK FACTS

SAFETY 24/7

\$1.5 billion

INVESTED IN ASSET INTEGRITY AND PREVENTATIVE MAINTENANCE PROGRAMS IN 2015

\$45 million

IN RESEARCH AND DEVELOPMENT IN 2015

ECONOMIC SUCCESS

8-10 per cent

EXPECTED DIVIDEND GROWTH PER ANNUM THROUGH 2020

\$679 million

IN TAXES PAID BENEFITING COMMUNITIES WHERE WE OPERATE IN 2015

PROTECTING THE ENVIRONMENT

\$5 billion

INVESTMENT IN EMISSION-LESS ENERGY SOURCES OVER THE YEARS

900+

SCIENTISTS INVOLVED IN ENERGY EAST'S ENVIRONMENTAL AND SOCIO-ECONOMIC IMPACT ASSESSMENT

SUPPORTING COMMUNITIES

\$14.7 million

INVESTED IN MORE THAN 1,400 NON-PROFIT ORGANIZATIONS IN 2015

NEARLY

\$168 million

IN WORK GENERATED FOR INDIGENOUS BUSINESSES OR THEIR JOINT-VENTURE PARTNERS IN CANADA AND THE U.S. IN 2015



TransCanada's commitment to protecting the environment guides our daily decisions as we design, build and operate energy infrastructure.

WHAT MATTERS

The growing global demand for energy has generated discussion around how we access the important resources we rely upon. As a leading energy infrastructure company, TransCanada is taking a proactive approach to the dialogue, understanding this complex issue requires balanced consideration of safety, economic, environmental and social performance.

GETTING IT
RIGHT

GUIDED BY OUR PRIORITIES

CORE VALUES

SAFETY, INTEGRITY, RESPONSIBILITY
AND COLLABORATION



TransCanada has invested more than \$5 billion in emission-less energy assets, including the Cartier wind facilities in Québec.

SAFETY 24/7

Getting it right is more important than ever when it comes to safety, minimizing environmental impact and taking care of our employees.

So even though we have a **top industry safety record**, we believe every incident is preventable and strive for zero safety incidents. That's why in 2015, we invested **\$1.5 billion in asset integrity and preventative maintenance programs**.

We also invested more than **\$45 million in research and development** and formed joint industry partnerships to conduct research on the latest technologies and improve industry-wide standards.

That being said, ensuring we're all prepared in the unlikely event of an incident is part of our commitment to safety. To achieve this goal, TransCanada worked with local and public agencies to complete more than **125 emergency drills and exercises** across our network of assets in 2015.

ECONOMIC SUCCESS

In 2015, our assets produced **record cash flow of \$4.5 billion**. And looking forward, we expect our common share dividend to continue to grow at an average annual rate of eight to 10 per cent through 2020. Since 2000, the average annual total shareholder return has been an impressive 15 per cent.

We are proud of the successes achieved by our business. And we are also pleased that the communities where we operate benefit from the economic success of our operations.

In 2015, we paid **\$162 million in cash taxes** and **\$517 million in property taxes** to communities across North America. These taxes are used by communities to pay for schools, roads, hospitals and more. We also employ local staff, contributing jobs to the local economy.

TOP INDUSTRY

SAFETY RECORD

See back cover for a listing of some of the ways we were recognized in 2015 and 2016.



Safety is our top priority. TransCanada routinely conducts emergency drills and exercises with local and external agencies across our entire network of assets.

PROTECTING THE ENVIRONMENT

Our ongoing goal is to responsibly manage and **minimize our environmental footprint** in everything that we do. That means we are always working to reduce our land disturbance, carbon intensity, energy consumption and water use throughout the entire life cycle of our assets.

One way we do this is by conducting **environmental and socio-economic impact assessments** for every project.

We also continually **strive to be innovators** by investing time, money and effort into developing new environmentally beneficial technologies through our extensive R&D program – one of the industry's largest programs.

Meanwhile, as leaders in the development of a balanced and sustainable energy future, we have invested more than **\$5 billion in emission-less energy sources – including nuclear, wind, hydro and solar** – accounting for over one-third of the power we produce.

SUPPORTING COMMUNITIES

Collaboration helps us **positively contribute to the communities where we live and operate** in a meaningful way. By seeking valuable input from our stakeholders and Indigenous communities, we are able to create better project plans for us and our communities.

Another way we respond to our stakeholders' needs is by considering the things we've been told will help their communities the most. In 2015, TransCanada **invested \$14.7 million** in more than **1,400 non-profit organizations**. We also generated nearly **\$168 million in work for Indigenous businesses** or their joint-venture partners in Canada and the U.S. in 2015 for goods, contract services and employment on TransCanada projects and operations.

And despite economically challenging times, in 2015, our employees **donated more than \$2.57 million** and **registered 9,151 volunteer hours** to the causes they care about through our employee giving and volunteering program.

TRANSCANADA TODAY

As at December 1, 2016

Natural Gas Pipelines

Canadian Pipelines

1	NGTL System	—
2	Canadian Mainline	—
3	Foothills	—
4	Trans Québec & Maritimes (TQM)	—

U.S. Pipelines

5	ANR Pipeline	—
5a	ANR Regulated Natural Gas Storage	▲
6	Bison	—
7	Gas Transmission Northwest (GTN)	—
8	Great Lakes	—
9	Iroquois	—
10	North Baja	—
11	Northern Border	—
12	Portland	—
13	Tuscarora	—
14	Columbia Gas Transmission	—
14a	Columbia Regulated Natural Gas Storage	▲
15	Columbia Gulf Transmission	—
16	Crossroads Pipeline	—
17	Millennium Pipeline	—

Mexican Pipelines

18	Guadalajara	—
19	Tamazunchale	—

Under Construction

20	Mazatlan Pipeline	----
21	Topolobampo Pipeline	----
22	Tuxpan-Tula Pipeline	----
23	Tula - Villa de Reyes	----
24	Sur de Texas	----

In Development

25	Coastal GasLink
26	Prince Rupert Gas Transmission
27	North Montney Mainline
28	Merrick Mainline
29	Eastern Mainline

Liquids Pipelines

Canadian / U.S. Pipelines

30	Keystone Pipeline System	—
31	Cushing Marketlink and Terminal	●
32	Houston Lateral	—
33	Houston Terminal	●

Under Construction

34	Grand Rapids Pipeline	----
35	Northern Courier Pipeline	----

In Development

36	Bakken Marketlink	●
37	Keystone Hardisty Terminal	●
38	Keystone XL
39	Heartland Pipeline
40	TC Terminals	●
41	Energy East Pipeline
42	Upland Pipeline

Energy

Canadian - Western Power

43	Bear Creek	⚡
44	Carseland	⚡
45	Coolidge ¹	⚡
46	Mackay River	⚡
47	Redwater	⚡

Canadian - Eastern Power

48	Bécancour	⚡
49	Cartier Wind	⬆️
50	Grandview	⚡
51	Halton Hills	⚡
52	Portlands Energy	⚡
53	Ontario Solar (8 Facilities)	☀️

Bruce Power

54	Bruce	⚡
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U.S. Power

55	Kibby Wind	⬆️
56	Ocean State Power	⚡
57	Ravenswood	⚡
58	TC Hydro	🌊
59	Ironwood	⚡

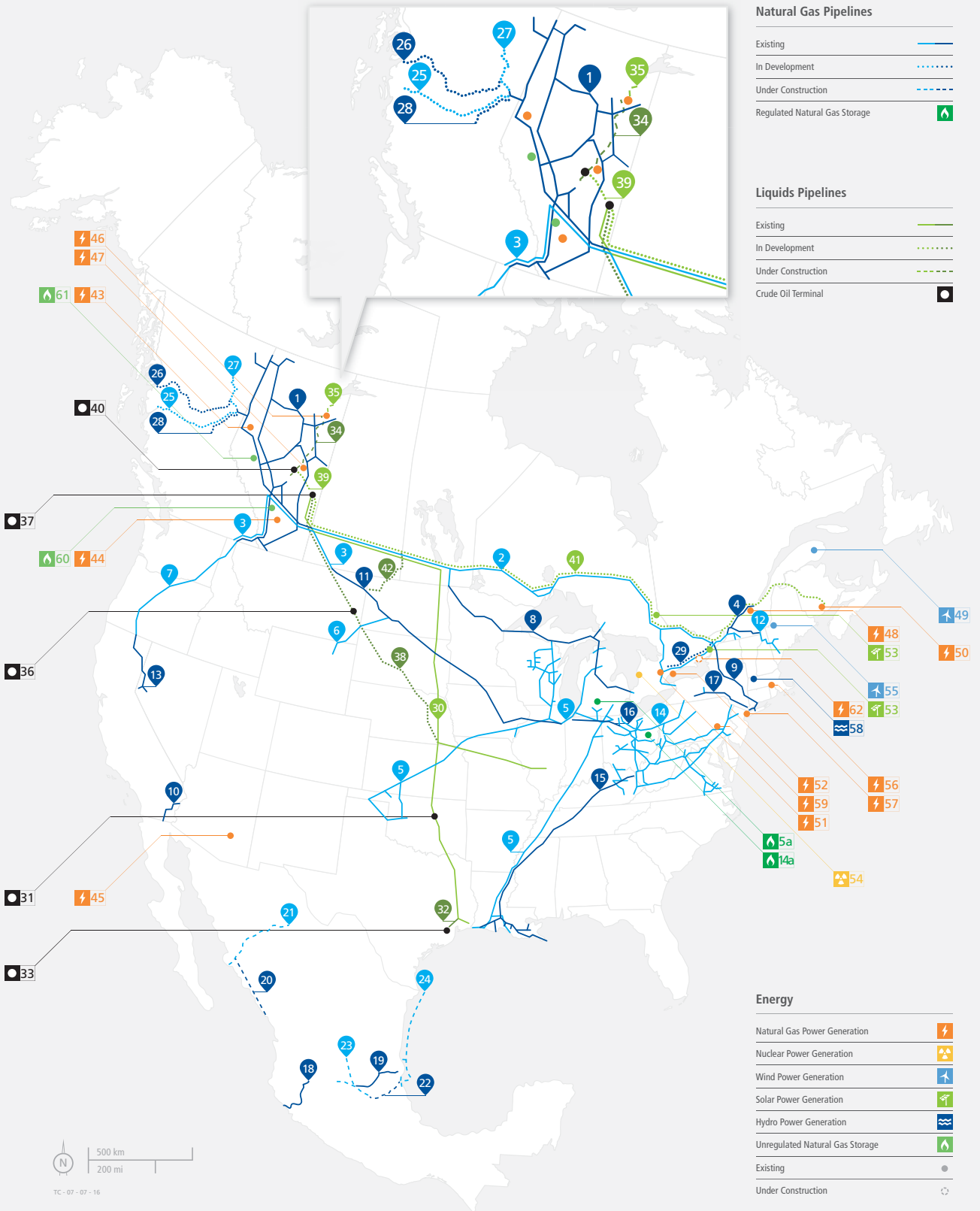
Unregulated Natural Gas Storage

60	CrossAlta	▲
61	Edson	▲

Under Construction

62	Napanee	⚡
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¹ Located in Arizona, results reported in Canadian – Western Power



A RECOGNIZED LEADER

Here are some of the ways we were **recognized by third-party investment rating agencies** in 2015 and 2016 for excellence in balancing safety, profitability and social and environmental responsibility:

Achieved **gold class distinction** in RobecoSAM's Sustainability Yearbook 2016.

Earned rankings on **DJSI North America** and **World Indices**.

Received **B score** from CDP in 2016 for actions to disclose carbon emissions and strategy to mitigate business risks of climate change.

Named to Corporate Knights' list of **Best 50 Corporate Citizens** in Canada.

Received American Petroleum Institute's 2015 **Pipeline Environmental Performance Award** for large operators.

Named to **Canada's Top 100** Corporate R&D Spenders List by Research Infosource.

Recognized by **Institute of Asset Management** with award for building robust operational risk management framework.

Received Gold Safety Days Away Restricted Absence Award from **Liberty Mutual**.

Honoured by office of **U.S. Department of Defense** with award for strong military support.

MEMBER OF
Dow Jones
Sustainability Indices
In Collaboration with RobecoSAM

ROBECOSAM
Sustainability Award
Gold Class 2016

BEST 50
CORPORATE CITIZENS



On the cover: ANR Pipeline's Blue Lake compressor station in Michigan is part of TransCanada's natural gas storage and pipelines network, which supplies 27 per cent of the natural gas consumed daily across North America.

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



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