

TransCanada PipeLines Limited

2016 Annual information form

March 15, 2017



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Presentation of information

Unless the context indicates otherwise, a reference in this Annual information form (**AIF**) to TransCanada PipeLines Limited (**TCPL**) or the *Company, we, us* and *our* includes TCPL's parent, TransCanada Corporation (**TransCanada**) and the subsidiaries of TCPL through which its various business operations are conducted, and a reference to *TransCanada* includes TransCanada Corporation and the subsidiaries of TransCanada Corporation, including TCPL. Where TCPL is referred to with respect to actions that occurred prior to its 2003 plan of arrangement (the **Arrangement**) with TransCanada, which is described below under the heading *TransCanada PipeLines Limited – Corporate structure*, these actions were taken by TCPL or its subsidiaries. The term *subsidiary*, when referred to in this AIF, with reference to TCPL means direct and indirect wholly owned subsidiaries of, and legal entities controlled by, TransCanada or TCPL, as applicable.

Unless otherwise noted, the information contained in this AIF is given at or for the year ended December 31, 2016 (**Year End**). Amounts are expressed in Canadian dollars unless otherwise indicated. Information in relation to metric conversion can be found at **Schedule A** to this AIF. The **Glossary** found at the end of this AIF contains certain terms defined throughout this AIF and abbreviations and acronyms that may not otherwise be defined in this document.

Certain portions of TCPL's Management's discussion and analysis dated February 15, 2017 (**MD&A**) are incorporated by reference into this AIF as stated below. The MD&A can be found on SEDAR (www.sedar.com) under TCPL's profile.

Financial information is presented in accordance with United States generally accepted accounting principles (**GAAP**). We use certain financial measures that do not have a standardized meaning under GAAP and therefore they may not be comparable to similar measures presented by other entities. Refer to the **About this document – Non-GAAP measures** section of the MD&A for more information about the non-GAAP measures we use and a reconciliation to their GAAP equivalents, which section of the MD&A is incorporated by reference herein.

Forward-looking information

This AIF, including the MD&A disclosure incorporated by reference herein, contains certain information that is forward-looking and is subject to important risks and uncertainties. We disclose forward-looking information to help current and potential investors 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 document include information about the following, among other things:

- planned changes in our business including the divestiture of certain assets
- 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 dividend growth
- expected costs for planned projects, including projects under construction, permitting 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 document.

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

Assumptions

- planned monetization of our U.S. Northeast power business
- inflation rates, commodity prices and capacity prices
- nature and scope of hedging
- regulatory decisions and outcomes
- the Canadian dollar to U.S. dollar exchange rate remains at or near current levels
- 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.

Risks and uncertainties

- our ability to realize the anticipated benefits from the acquisition of Columbia Pipeline Group, Inc. (**Columbia**)
- timing and execution of our planned asset sales
- 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 pipeline businesses
- 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 and credit risk 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, tax and foreign exchange rates
- weather
- cyber security
- 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.

TransCanada PipeLines Limited

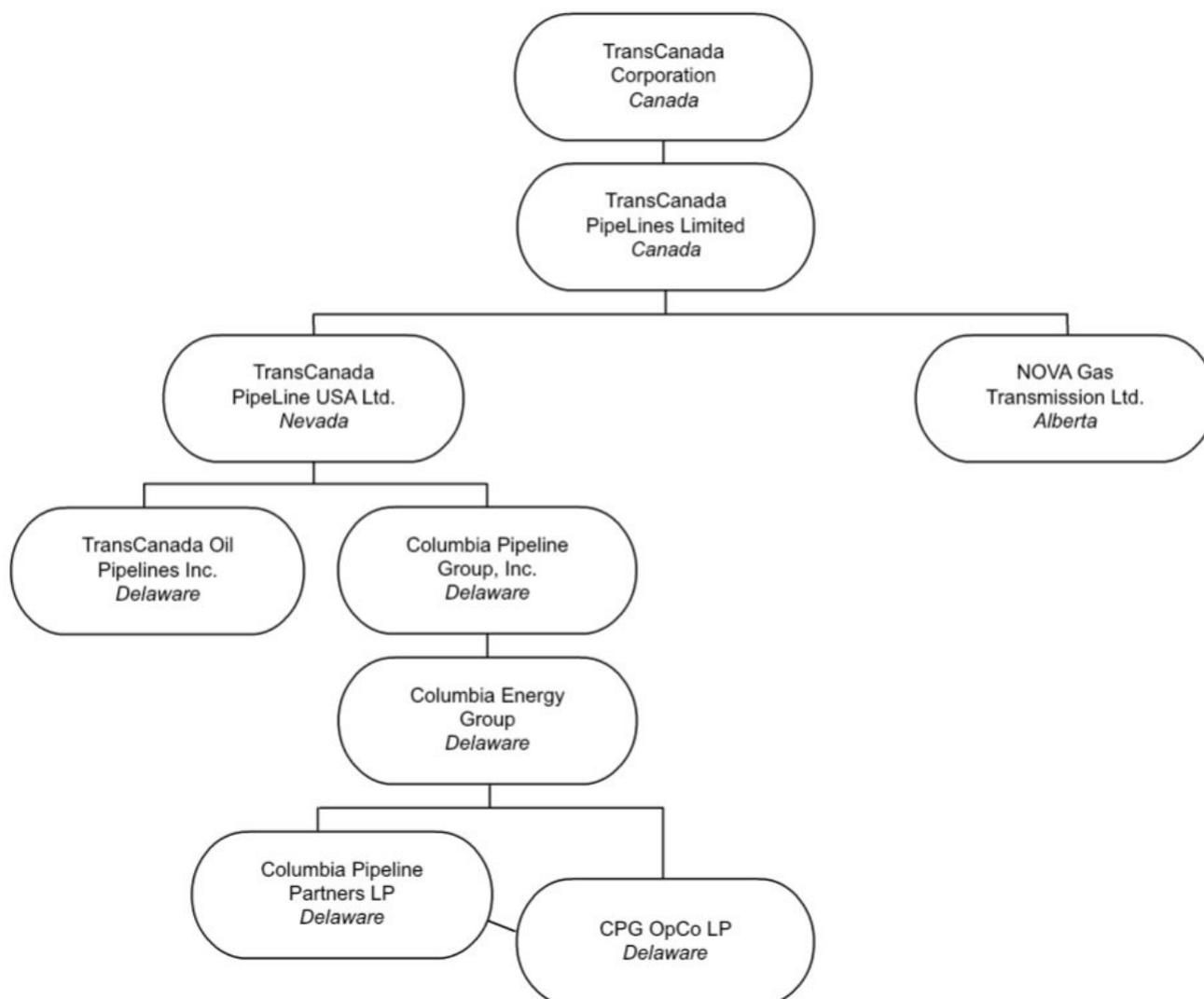
CORPORATE STRUCTURE

TCPL's head office and registered office are located at 450 - 1st Street S.W., Calgary, Alberta, T2P 5H1. TCPL is a reporting issuer in the jurisdictions of Canada. Significant dates and events are set forth below.

Date	Event
March 21, 1951	Incorporated by Special Act of Parliament as Trans-Canada Pipe Lines Limited.
April 19, 1972	Continued under the <i>Canada Corporations Act</i> by Letters Patent, which included the alteration of its capital and change of name to TransCanada PipeLines Limited.
June 1, 1979	Continued under the <i>Canada Business Corporations Act (CBCA)</i> .
July 2, 1998	Certificate of Arrangement issued in connection with the Plan of Arrangement with NOVA Corporation under which the companies merged and then split off the commodity chemicals business carried on by NOVA Corporation into a separate public company.
January 1, 1999	Certificate of Amalgamation issued reflecting TCPL's vertical short form amalgamation with a wholly owned subsidiary, Alberta Natural Gas Company Ltd.
January 1, 2000	Certificate of Amalgamation issued reflecting TCPL's vertical short form amalgamation with a wholly owned subsidiary, NOVA Gas International Ltd.
May 4, 2001	Restated TCPL Articles of Incorporation filed.
June 20, 2002	Restated TCPL Limited By-Laws filed.
May 15, 2003	Certificate of Arrangement issued in connection with the plan of arrangement with TransCanada. TransCanada was incorporated pursuant to the provisions of the CBCA on February 25, 2003. The arrangement was approved by TCPL common shareholders on April 25, 2003 and following court approval, Articles of Arrangement were filed making the arrangement effective May 15, 2003. The common shareholders of TCPL exchanged each of their common shares of TCPL for one common share of TransCanada. The debt securities and preferred shares of TCPL remained obligations and securities of TCPL. TCPL continues to carry on business as the principal operating subsidiary of the TransCanada group of entities.

INTERCORPORATE RELATIONSHIPS

The following diagram presents the name and jurisdiction of incorporation, continuance or formation of TCPL's principal subsidiaries as at Year End. Each of the subsidiaries shown has total assets that exceeded 10 per cent of the total consolidated assets of TCPL as at year end or revenues that exceeded 10 per cent of the total consolidated revenues of TCPL for the year then ended. TCPL beneficially owns, controls or directs, directly or indirectly, 100 per cent of the voting shares or units in each of these subsidiaries.



The above diagram does not include all of the subsidiaries of TCPL. The assets and revenues of excluded subsidiaries in the aggregate did not exceed 20 per cent of the total consolidated assets of TCPL as at Year End or total consolidated revenues of TCPL for the year then ended.

General development of the business

We operate in three core businesses: Natural Gas Pipelines, Liquids Pipelines and Energy. As a result of our acquisition of Columbia on July 1, 2016 and the pending sales of the U.S. Northeast power business, we have determined that a change in our operating segments is appropriate. Accordingly, we consider ourselves to be operating in the following segments: Canadian Natural Gas Pipelines, U.S. Natural Gas Pipelines, Mexico Natural Gas Pipelines, Liquids Pipelines and Energy. This provides information that is aligned with how management decisions about our business are made and how performance of our business is assessed. We also have a non-operational Corporate segment consisting of corporate and administrative functions that provide governance and other support to our operational business segments.

Natural Gas Pipelines and Liquids Pipelines are principally comprised of our respective natural gas and liquids pipelines in Canada, the U.S. and Mexico as well as our regulated natural gas storage operations in the U.S. Energy includes our power operations and the non-regulated natural gas storage business in Canada.

Summarized below are significant developments that have occurred in our Natural Gas Pipelines, Liquids Pipelines and Energy businesses, respectively, and certain acquisitions, dispositions, events or conditions which have had an influence on that development, during the last three financial years and year to date in 2017. Further information about changes in our business that we expect to occur during the current financial year can be found in the *Canadian Natural Gas Pipelines*, *U.S. Natural Gas Pipelines*, *Mexico Natural Gas Pipelines*, *Liquids Pipelines* and *Energy* sections of the MD&A, which sections of the MD&A are incorporated by reference herein.

NATURAL GAS PIPELINES

Developments in the Canadian Natural Gas Pipelines segment

Date	Description of development
Canadian Regulated Pipelines	
NGTL System	
March 2014	We received an NEB Safety Order (the Order) in response to the recent pipeline releases on the NGTL System. The Order required us to reduce the maximum operating pressure on three per cent of NGTL's pipeline segments. We filed a request for a review and variance of the Order that would minimize gas disruptions while still maintaining a high level of safety, which the NEB granted in April 2014 subject to certain conditions. We accelerated components of our integrity management program to address the NEB Order.
March 2014	The NEB approved approximately \$400 million in NGTL facility expansions.
Fourth Quarter 2014	We continued to experience significant growth on the NGTL System as a result of growing natural gas supply in northwestern Alberta and northeastern British Columbia (B.C.) from unconventional gas plays and substantive growth in intra-basin delivery markets. This demand growth was driven primarily by oil sands development, gas-fired electric power generation and expectations regarding B.C. west coast LNG projects.
First Quarter 2015	The NGTL System had approximately \$6.7 billion of new supply and demand facilities under development and we continued to advance several of these capital expansion projects by filing the regulatory applications with the NEB. We also received additional requests for firm receipt service.
Fourth Quarter 2015 / First Quarter 2016	In 2015, we placed approximately \$350 million of facilities in service. In 2016, the NGTL System continued to develop further new supply and demand facilities. We had approximately \$2.3 billion of facilities that received regulatory approval and had approximately \$450 million currently under construction. We filed for approval for a further approximately \$2.0 billion of facilities which are currently under regulatory review. Applications for approval to construct and operate an additional \$3.0 billion of facilities have yet to be filed. Included in our capital program is the recently announced 2018 expansion of a further \$600 million of facilities required on the NGTL System. The 2018 expansion includes multiple projects totaling approximately 88 km (55 miles) of 20-to 48-inch diameter pipeline, one new compressor, approximately 35 new and expanded meter stations and other associated facilities. Subject to regulatory approvals, construction is expected to start in 2017, with all facilities expected to be in service in 2018.
October 2016	On October 6, 2016, the NEB recommended government approval of the \$0.4 billion Towerbirch Project. This project consists of a 55 km (34 miles) 36-inch pipeline loop and a 32 km (20 miles) 30-inch pipeline extension of the NGTL System in northwest Alberta and northeast B.C. The NEB approved the continued use of the existing rolled-in toll methodology for this project. On October 31, 2016, the Government of Canada approved our \$1.3 billion NGTL 2017 Facilities Application, which is a major component of the 2016/2017 program. This NGTL expansion program consists of five pipeline loops ranging in size from 24-inch up to 48-inch pipe of approximately 230 km (143 miles) in length, plus two compressor station unit additions of approximately 46.5 MW (62,360 HP).

Date	Description of development
December 2016	We announced the \$0.6 billion Saddle West expansion of the NGTL System to increase natural gas transportation capacity on the northwest portion of our system. The project will consist of 29 km (18 miles) of 36-inch pipeline looping of existing mainlines, the addition of five compressor units at existing station sites and new metering facilities. The project is underpinned by incremental firm service contracts and is expected to be in-service in 2019. NGTL currently has a \$3.7 billion near-term capital program for completion to 2020, including the Saddle West expansion and excluding the \$1.7 billion North Montney and \$1.9 billion Merrick pipeline projects. In 2016, we have placed in service approximately \$0.5 billion of facilities. We currently have regulatory approval for \$2.0 billion of facilities and plan to place in service \$1.6 billion of new facilities in 2017.

NGTL Revenue Requirement Settlements

October 2014	We reached a revenue requirement settlement with our shippers for 2015 on the NGTL System.
February 2015	We received NEB approval 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 ROE of 10.1 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 administration (OM&A) expense amount that is based on an escalation of 2014 actual costs.
December 2015	We reached a two-year revenue requirement agreement with customers and other interested parties on the annual costs, including return on equity and depreciation required to operate the NGTL System for 2016 and 2017. The agreement fixes the equity return at 10.1 per cent on 40 per cent deemed common equity, establishes depreciation at a forecast composite rate of 3.16 per cent and fixes OM&A costs at \$222.5 million annually. An incentive mechanism for variances will enable NGTL to capture savings from improved performance and provide for the flow-through of all other costs, including pipeline integrity expenses and emissions costs. On December 1, 2015, NGTL filed with the NEB for approval of the agreement.

North Montney

June 2015	The NEB approved the \$1.7 billion North Montney Mainline (NMML) project subject to certain terms and conditions. Under one of these conditions, construction on the NMML project can only begin after a positive final investment decision (FID) has been made on the proposed Pacific North West LNG project (PNW LNG). The NMML will provide substantial new capacity on the NGTL System to meet the transportation requirements associated with rapidly increasing development of natural gas resources in the Montney supply basin in northeastern B.C. The project will connect Montney and other Western Canada Sedimentary Basin (WCSB) supply to both existing and new natural gas markets, including LNG markets. The project will also include an interconnection with our proposed Prince Rupert Gas Transmission Project (PRGT) to provide natural gas supply to the proposed PNW LNG liquefaction and export facility near Prince Rupert, B.C.
September 2016	The Canadian Government approved the sunset clause extension request we filed in March 2016, for the NMML Certificate of Public Convenience and Necessity for one year to June 10, 2017. The extension continues to be subject to the condition that construction shall not begin until a positive FID has been made on PNW LNG. NGTL continues to work with our customers and stakeholders to be ready to initiate construction of the \$1.7 billion North Montney facilities, however, the in-service date will be finalized once a FID has been made.
March 2017	We announced that we filed a variance application with the NEB to proceed with construction of the NMML project in northeast B.C. As discussed above, TransCanada had previously been granted the required primary federal and provincial approvals to construct NMML, subject to conditions that included the requirement for a positive final investment decision on the proposed PNW LNG project. The requested variance would allow TransCanada to move forward with construction of the majority of the NMML Project, at an estimated capital cost of approximately \$1.4 billion, prior to a final investment decision on the PNW LNG project. In support of the variance for the NMML project, TransCanada secured new 20-year commercial contracts with 11 shippers for approximately 1.5 Bcf/d of firm service.

Canadian Mainline – Kings North and Station 130 Facilities

Fourth Quarter 2016	We placed in service the approximate \$310 million Kings North Connector and the approximate \$75 million compressor unit addition at Station 130 on the Canadian Mainline system. These two projects are consistent with our current 2015-2020 Mainline Settlement with our shippers and provide optionality to access alternative supply sources while contracting for increased short haul transportation service within the Eastern Triangle area of the Canadian Mainline system.
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Canadian Mainline – Eastern Mainline Project

May 2014	We filed a project description with the NEB for the Eastern Mainline Project.
October 2014	We filed an application with the NEB for the Energy East pipeline project and to transfer a portion of the Canadian Mainline from natural gas service to crude oil service. We also filed an application for the Eastern Mainline Project, consisting of new gas facilities in southeastern Ontario required as a result of the proposed transfer of Mainline assets to crude oil service for the Energy East pipeline project. This \$2 billion project consists of new gas facilities in southeastern Ontario that will be required as a result of the proposed Energy East pipeline project that includes a planned transfer of a portion of Canadian Mainline from natural gas service to crude oil service.
August 2015	TransCanada announced it had reached an agreement with eastern local distribution companies (LDCs) that resolved their issues with Energy East pipeline project and the Eastern Mainline Project.

Date	Description of development
December 2015	Application amendments were filed that reflect the agreement we announced in August 2015 with eastern LDCs resolving their issues with Energy East pipeline project and the Eastern Mainline Project. The agreement provided gas consumers in eastern Canada with sufficient natural gas transmission capacity and provides for reduced natural gas transmission costs.
January 2016	The Canadian federal government announced interim measures for its review of the Energy East pipeline project. The government announced it will undertake additional consultations with aboriginal groups, help facilitate expanded public input into the NEB, and assess upstream GHG emissions associated with the project. The government will seek a six month extension to the NEB's legislative review and a three month extension to the legislative time limit for the government's decision. We are reviewing these changes and will assess the impacts to the Eastern Mainline Project. The Eastern Mainline Project is conditioned on the approval and construction of the Energy East pipeline. Refer to the General development of the business – Liquids pipelines section for an update on Energy East.

Canadian Mainline – Other Expansions

January 2014	Shippers on the Canadian Mainline elected to renew approximately 2.5 Bcf/d of their contracts through November 2016.
November 2014	In addition to the Eastern Mainline Project, we executed new short haul arrangements in the Eastern Triangle portion of the Canadian Mainline that require new facilities, or modifications to existing facilities. These projects are subject to regulatory approval and, once constructed, will provide capacity needed to meet customer requirements in eastern Canada.
First Quarter 2016	In addition to the Eastern Mainline Project, new facilities investments totaling approximately \$700 million over the 2016 to 2017 period in the Eastern Triangle portion of the Canadian Mainline were required to meet contractual commitments from shippers. Also refer to the Canadian Mainline - Kings North and Station 130 Facilities section above.
Third Quarter 2016	We launched an open season for the Canadian Mainline, seeking binding commitments on our new long-term, fixed-price proposal to transport WCSB supply from the Empress receipt point in Alberta to the Dawn hub in Southern Ontario. The open season for the proposed service resulted in bids that fell well short of the volumes required to make the proposal viable. On November 15, 2016 we announced we would not proceed with the service offering at that time.
First Quarter 2017	In addition to the Eastern Mainline Project, new facilities investments in the Eastern Triangle portion of the Canadian Mainline are planned for 2017. Including the Vaughan Loop, with a planned in-service date of November 2017, we have approximately \$300 million of additional investment to meet contractual commitments from shippers.
March 2017	We announced the successful conclusion of a long-term, fixed-price Open Season to transport natural gas on the Canadian Mainline from the Empress receipt point in Alberta to the Dawn hub in Southern Ontario. The recent Open Season resulted in binding, long-term contracts from WCSB gas producers to transport 1.5 PJ/d of natural gas at a simplified toll of \$0.77/GJ.

Canadian Mainline Settlement

March 2014	The Canadian Mainline and the three largest Canadian local distribution companies (LDCs) entered into a settlement (LDC Settlement) which was filed with the NEB for approval in December 2013. In March 2014, the NEB responded to the LDC Settlement application and did not approve the application as a settlement, but allowed us the option to continue with the application as a contested tolls application, amend the application or terminate the processing of the application. The LDC Settlement calculated tolls for 2015 on a base ROE of 10.1 per cent on 40 per cent deemed common equity. It also included an incentive mechanism that required a \$20 million (after tax) annual contribution by us from 2015 to 2020, which could have resulted in a range of ROE outcomes from 8.7 per cent to 11.5 per cent. The LDC Settlement would have enabled the addition of facilities in the Eastern Triangle to serve immediate market demand for supply diversity and market access. The LDC Settlement was intended to provide a market driven, stable, long-term accommodation of future demand in this region in combination with the anticipated lower demand for transportation on the Prairies Line and the Northern Ontario Line while providing a reasonable opportunity to recover our costs. The LDC Settlement also retained pricing flexibility for discretionary services and implemented certain tariff changes and new services as required by the terms of the settlement. We amended the application with additional information.
November 2014	Following a hearing, the NEB approved the Canadian Mainline's 2015 - 2030 Tolls and Tariff Application (the NEB 2014 Decision) which superseded the NEB 2013 Decision. The application reflected components of the LDC Settlement. In 2014, the Canadian Mainline operated under the NEB's decision for the years 2013-2017, which included an approved ROE of 11.5 per cent on deemed common equity of 40 per cent and an incentive mechanism based on total net revenues.
First Quarter 2015	In 2015, the Canadian Mainline began operating under the NEB 2014 Decision.
August 2015	TransCanada announced it had reached an agreement with the eastern LDCs that resolves the LDCs' issues with Energy East and the Eastern Mainline Project.

Date	Description of development
LNG PIPELINE PROJECTS	
Prince Rupert Gas Transmission	
November 2014	We received an Environmental Assessment Certificate (EAC) from the B.C. Environmental Assessment Office (EAO). We submitted our pipeline permit applications to the B.C. Oil and Gas Commission (OGC) for construction of the pipeline. We made significant changes to the project route since first announced, increasing it by 150 km (93 miles) to 900 km (559 miles), taking into account Aboriginal and stakeholder input. We continued to work closely with Aboriginal groups and stakeholders along the proposed route to create and deliver appropriate benefits to all impacted groups. We concluded a benefits agreement with the Nisga'a First Nation to allow 85 km (52 miles) of the proposed natural gas pipeline to run through Nisga'a Lands.
June 2015	PNW LNG announced a positive FID for its proposed liquefaction and export facility, subject to two conditions. The first condition, approval by the Legislative Assembly of B.C. of a Project Development Agreement between PNW LNG and the Province of B.C., was satisfied in July 2015. The second condition is a positive regulatory decision on PNW LNG's environmental assessment by the Government of Canada.
Third Quarter 2015	We received all remaining permits from the B.C. OGC which completed the eleven permits required to build and operate PRGT. Environmental permits for the project were received in November 2014 from the B.C. EAO. With these permits, PRGT has all of the primary regulatory permits required for the project. We remain on target to begin construction following confirmation of a FID by PNW LNG. The in-service date for PRGT will be aligned with PNW LNG's liquefaction facility timeline.
September 2016	PNW LNG received an environmental certificate from the Government of Canada for a proposed LNG plant at Prince Rupert, B.C. PNW LNG has indicated they will conduct a total project review over the coming months prior to announcing next steps for the project. The project has key approvals in place and will advance construction following direction from PNW LNG.
December 2016	PNW LNG received an LNG export license from the NEB which extended the export term from 25 years to 40 years. We continued our engagement with Indigenous groups and have now signed project agreements with 14 First Nation groups along the pipeline route. Project agreements outline financial and other benefits and commitments that will be provided to each First Nation for as long as the project is in service. PRGT is a 900 km (559 miles) natural gas pipeline that will deliver gas from the North Montney producing region at an expected interconnect on the NGTL System near Fort St. John, B.C. to PNW LNG's proposed LNG facility near Prince Rupert, B.C. Should the project not proceed, our project costs (including carrying charges) are fully recoverable. The in-service date for PRGT will be aligned with PNW LNG's liquefaction facility timeline.
Coastal GasLink	
January 2014	We filed the EAC application with the B.C. EAO. We focused on community, landowner, government and Aboriginal engagement as the project advanced through the regulatory process. The pipeline was expected to be placed in service near the end of the decade, subject to a FID to be made by LNG Canada after obtaining final regulatory approvals. Coastal GasLink is a 670 km (416 miles) pipeline that will deliver natural gas from Montney gas producing region at an expected interconnect on NGTL near the Dawson Creek, B.C. area, to LNG Canada's proposed LNG facility near Kitimat, BC. Should the project not proceed, our project costs (including carrying charges) are fully recoverable.
October 2014	The EAO issued an EAC for Coastal GasLink. In 2014, we also submitted applications to the B.C. OGC for the permits required under the <i>Oil and Gas Activities Act</i> to build and operate Coastal GasLink.
First Quarter 2016	We continued to engage with Indigenous groups and have now announced project agreements with 11 First Nation groups along the pipeline route which outline financial and other benefits and commitments that will be provided to each First Nation group for as long as the project is in service. We also continued to engage with stakeholders along the pipeline route and progressed detailed engineering and construction planning work to refine the capital cost estimate. In response to feedback received, we applied for a minor route amendment to the B.C. EAO in order to provide an option in the area of concern.
July 2016	The LNG Canada joint venture participants announced a delay to their FID for the proposed liquefied natural gas facility in Kitimat, B.C. A future FID date has not been disclosed. We worked with LNG Canada to maintain the appropriate pace of the Coastal GasLink development schedule and work activities. We continued our engagement with Indigenous groups along our pipeline route and have now concluded long-term project agreements with 17 First Nation communities. We look to continue discussions with the remaining First Nations who have not signed project agreements.
Merrick Mainline	
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 Merrick Mainline pipeline will deliver natural gas from NGTL's existing Groundbirch Mainline and the proposed PRGT project. Since the Merrick Mainline is dependent upon the construction of the downstream infrastructure, the in-service date of the Merrick Mainline remains uncertain.

Developments in the U.S. Natural Gas Pipelines segment

Date	Description of development
COLUMBIA ACQUISITION	
July 2016	On July 1, 2016, we acquired 100 per cent ownership of Columbia for a purchase price of US\$10.3 billion in cash. The acquisition was financed through the issuance of TCPL common shares to TransCanada and an intercompany loan due to TransCanada in connection with proceeds received from the sale of TransCanada subscription receipts. The sale of TransCanada subscription receipts was completed on April 1, 2016 through a public offering and gross proceeds of approximately \$4.4 billion were transferred to TCPL prior to the closing of the acquisition. In addition, we drew on acquisition bridge facilities in the aggregate amount of US\$6.9 billion. In respect of the acquisition, we filed a business acquisition report on Form 51-102F4 on July 22, 2016, which can be found on the Company's SEDAR profile at www.SEDAR.com. For more information about the acquisition of Columbia, refer to the <i>About our business – Acquisition of Columbia Pipeline Group, Inc.</i> section of the MD&A.
COLUMBIA CAPITAL PROJECTS	
Third Quarter 2016	The July 1, 2016 acquisition of Columbia included a capital expansion program that was underway for new facilities planned to be in service in 2016 through 2018 as well as modernization programs for existing assets to be completed through 2020. The large capital expansion program, less projects completed in 2016, consists of US\$6.8 billion related to our regulated pipeline business and US\$0.3 billion related to our midstream business. The estimated project costs exclude AFUDC. The following summarizes the eight key capital projects for this new set of assets that are now part of our overall U.S. Natural Gas Pipelines footprint. For clarification, when used below, <i>Columbia Gas</i> is our natural gas transportation system for the Appalachian basin, which contains the Marcellus and Utica shale plays. This system also interconnects with other pipelines that provide access to key markets in the U.S. Northeast and south to the Gulf of Mexico and its growing demand for natural gas to serve LNG exports. Access to markets from producers in the region is driving the large capital program for new pipeline facilities on this system. <i>Columbia Gulf</i> is our pipeline system originally designed as a long haul delivery system transporting supply from the Gulf of Mexico to major supply markets in the U.S. Northeast. The pipeline is now transitioning and expanding to accommodate new supply in the Appalachian basin and its interconnect with Columbia Gas and other pipelines to deliver gas to various Gulf Coast markets.
Leach XPress	
June 2015	The FERC 7(C) application for this Columbia Gas project was filed. The project is designed to transport approximately 1.5 Bcf/d of Marcellus and Utica gas supply to delivery points along the pipeline and to the Leach interconnect with Columbia Gulf. The project consists of 219 km (136 miles) of 36-inch greenfield pipe, 39 km (24 miles) of 36-inch loop, three km (two miles) of 30-inch greenfield pipe, 82.8 MW (111,000 hp) of greenfield compression and 24.6 MW (33,000 hp) of brownfield compression.
September 2016	The Final Environmental Impact Statement (FEIS) for the project was received.
January 2017	The FERC Order approving the construction of the facility was issued. Once remaining regulatory approvals are obtained, we plan to begin right-of-way preparation and construction activities in February 2017. We expect the project, with an estimated capital investment of US\$1.4 billion, to be in service in fourth quarter 2017.
Rayne XPress	
July 2015	The FERC 7(C) application for this Columbia Gulf project was filed. The project is designed to transport approximately 1.1 Bcf/d of southwest Marcellus and Utica production associated with the Leach XPress expansion and an interconnect with the Texas Eastern System to various delivery points on Columbia Gulf and the Gulf Coast. The project consists of bi-directional compressor station modifications along Columbia Gulf, 38.8 MW (52,000 hp) of greenfield compression, 20.1 MW (27,000 hp) of replacement compression and six km (four miles) of 30-inch pipe replacement.
September 2016	The FEIS for the project was received.
January 2017	The FERC Order approving the construction of the facility was issued. We expect the project, with an estimated capital investment of US\$0.4 billion, to be in service on November 1, 2017.
Mountaineer XPress	
April 2016	The FERC 7(C) application for this Columbia Gas project was filed. The project is designed to transport approximately 2.7 Bcf/d of Marcellus and Utica gas supply to delivery points along the pipeline and to the Leach interconnect with Columbia Gulf. The project consists of 264 km (164 miles) of 36-inch greenfield pipeline, 10 km (six miles) of 24-inch lateral pipeline, 0.6 km (0.4 miles) of 30-inch replacement pipeline, 114.1 MW (153,000 hp) of greenfield compression and 55.9 MW (75,000 hp) of brownfield compression. We expect this project, with an estimated capital investment of US\$2.0 billion, to be in service in fourth quarter 2018.

Date	Description of development
Gulf XPress	
April 2016	The FERC 7(C) application for this Columbia Gulf project was filed. The project is designed to transport approximately 0.9 Bcf/d associated with the Mountaineer XPress expansion to various delivery points on Columbia Gulf and the Gulf Coast. The project consists of adding seven greenfield midpoint compressor stations along the Columbia Gulf route totaling 182.7 MW (254,000 hp). We expect this project, with an estimated capital investment of US\$0.6 billion, to be placed in service in fourth quarter 2018.
Cameron Access Project	
September 2015	The FERC certificate for this Columbia Gulf project was received. The project is designed to transport approximately 0.8 Bcf/d of gas supply to the Cameron LNG export terminal in Louisiana. The project consists of 44 km (27 miles) of 36-inch greenfield pipeline, 11 km (seven miles) of 30-inch looping and 9.7 MW (13,000 hp) of greenfield compression. We expect this project, with an estimated capital investment of US\$0.3 billion, to be in service in first quarter 2018.
WB XPress	
December 2015	The FERC 7(C) application for both segments of this Columbia Gas project was filed. The project is designed to transport approximately 1.3 Bcf/d of Marcellus gas supply westbound (0.8 Bcf/d) to the Gulf Coast via an interconnect with the Tennessee Gas Pipeline, and eastbound (0.5 Bcf/d) to Mid-Atlantic markets. The project consists of 47 km (29 miles) of various diameter pipeline, 338 km (210 miles) of restoring and uprating maximum operating pressure of existing pipeline, 29.8 MW (40,000 hp) of greenfield compression and 99.9 MW (134,000 hp) of brownfield compression. We expect this project, with an estimated capital investment of US\$0.8 billion, to have a Western build in service in the beginning of second quarter 2018 and an Eastern build in service in fourth quarter 2018.
Modernization I & II	
First Quarter 2017	Columbia Gas and its customers have entered into a settlement arrangement, approved by FERC, which provides recovery and return on investment to modernize its system, improve system integrity and enhance service reliability and flexibility. The modernization program includes, among other things, replacement of aging pipeline and compressor facilities, enhancements to system inspection capabilities and improvements in control systems. Modernization I has been approved for up to US\$0.6 billion of work with approximately US\$0.2 billion remaining to be spent in 2017. Modernization II has been approved for up to US\$1.1 billion of work to be completed through 2020. As per terms of the arrangements, facilities in service by October 31 collect revenues effective February 1 of the following year.
Midstream – Gibraltar Pipeline Project	
December 2016	The first phase of the multi-phase project was completed. We expect to complete the US\$0.3 billion investment to construct an approximate 1,000 TJ/d dry gas header pipeline in southwest Pennsylvania by the end of 2017.
OTHER U.S. NATURAL GAS PIPELINES	
Columbia Pipeline Partners LP (CPPL)	
November 2016	We entered into an agreement and plan of merger through which Columbia agreed to acquire, for cash, all of the outstanding publicly held common units of CPPL at a price of US\$17.00 per common unit for an aggregate transaction value of approximately US\$915 million. The transaction closed on February 17, 2017.
ANR Pipeline	
March 2014	We secured nearly 2.0 Bcf/d of additional firm natural gas transportation commitments for existing and expanded capacity on ANR Pipeline's Southeast Mainline (SEML). The capacity sales and expansion projects include reversing the Lebanon Lateral in western Ohio, additional compression at Sulphur Springs, Indiana, expanding the Rockies Express pipeline interconnect near Shelbyville, Indiana and 600 MMcf/d of capacity as part of a reversal project on ANR's SEML. Capital costs associated with the ANR System expansions required to bring the additional capacity to market were estimated to be US\$150 million. The capacity was subscribed at maximum rates for an average term of 23 years with approximately 1.25 Bcf/d of new contracts beginning service in late 2014. These secured contracts on the SEML will move Utica and Marcellus shale gas to points north and south on the system. ANR also assessed further demand from our customers to transport natural gas from the Utica/Marcellus formation, which was expected to result in incremental opportunities to enhance and expand the system.
January 2016	ANR Pipeline filed a Section 4 Rate Case that requests an increase to ANR's maximum transportation rates. Shifts in ANR's traditional supply sources and markets, necessary operational changes, needed infrastructure updates, and evolving regulatory requirements are driving required investment in facility maintenance, reliability and system integrity as well as an increase in operating costs that resulted in the current tariff rates not providing a reasonable return on our investment. We also pursued a collaborative process to find a mutually beneficial outcome with our customers through settlement negotiations. ANR's last rate case filing was more than 20 years ago.

Date	Description of development
Second and Third Quarters 2016	ANR reached a settlement with its shippers effective August 1, 2016 and received FERC approval on December 16, 2016. Per the settlement, transmission reservation rates will increase by 34.8 per cent and storage rates will remain the same for contracts one to three years in length, while increasing slightly for contracts of less than one year and decreasing slightly for contracts more than three years in duration. There is a moratorium on any further rate changes until August 1, 2019. ANR may file for new rates after that date if it has spent more than US\$0.8 billion in capital additions, but must file for new rates no later than an effective date of August 1, 2022. In addition to ANR's rate case settlement, FERC approvals were obtained for settlements with shippers for our Iroquois, Tuscarora and Columbia Gulf pipelines.

Great Lakes

February 2016	We reduced forecasted cash flows for the next ten years as compared to those utilized in previous impairment tests. There is a risk that continued reductions in future cash flow forecasts and adverse changes in other key assumptions could result in a future impairment of a portion of the goodwill balance relating to Great Lakes. Our share of the goodwill related to Great Lakes, net of non-controlling interests, was US\$386 million at December 31, 2016 (2015 – US\$386 million).
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Sale of Gas Transmission Northwest LLC (GTN) Pipeline, Iroquois Gas Transmission System, L.P. (Iroquois) and Portland Natural Gas Transmission System (PNGTS) to TC PipeLines, LP (TCLP)

April 2015	We closed the sale of our remaining 30 per cent interest in GTN to TCLP for an aggregate purchase price of US\$457 million. Proceeds were comprised of US\$246 million in cash, the assumption of US\$98 million in proportional GTN debt and US\$95 million of new Class B units of TCLP.
January 2016	We closed the sale of 49.9 per cent of our total 61.7 per cent interest in PNGTS to TCLP for US\$223 million including the assumption of US\$35 million of proportional PNGTS debt.
First/Second Quarter 2016	On March 31, 2016, we acquired an additional 4.87 per cent interest in Iroquois for an aggregate purchase price of US\$54 million, and on May 1, 2016, a further 0.65 per cent was acquired for US\$7 million. As a result, our interest in Iroquois increased to 50 per cent.
February 2017	We offered to sell a 49.3 per cent interest in Iroquois, together with our remaining 11.8 per cent interest in PNGTS, subject to satisfactory negotiation of terms, compliance with any applicable regulatory requirements, and Partnership Board approval, to TCLP. TransCanada's Board of Directors approved the sales of Iroquois and PNGTS.

TC Offshore LLC (TC Offshore)

December 2015	We entered into an agreement to sell TC Offshore to a third party and expected the sale to close in early 2016. As a result, at December 31, 2015, the related assets and liabilities were classified as held for sale and were recorded at their fair values less costs to sell. This resulted in a pre-tax loss provisions of \$125 million recorded in 2015.
March 2016	We completed the sale of TC Offshore to a third party.

LNG PIPELINE PROJECTS

Alaska LNG Project

April 2014	The State of Alaska passed new legislation to provide a framework for us, the three major North Slope producers (the ANS Producers), and the Alaska Gasline Development Corp. (AGDC) to advance the development of an LNG export project.
June 2014	We executed an agreement with the State of Alaska to abandon the previous Alaska to Alberta project governance and framework and executed a new precedent agreement where we will act as the transporter of the State's portion of natural gas under a long-term shipping contract in the Alaska LNG Project. We also entered into a Joint Venture Agreement with the three major ANS Producers and AGDC to commence the pre-front end engineering and design (pre-FEED) phase of Alaska LNG Project. The pre-FEED work was anticipated to take two years to complete with our share of the cost to be approximately US\$100 million. The precedent agreement also provided us with full recovery of development costs in the event the project did not proceed.
November 2015	We sold our interest in the Alaska LNG project to the State of Alaska. The proceeds of US\$65 million from this sale provide a full recovery of costs incurred to advance the project since January 1, 2014 including a carrying charge. With this sale, our involvement in developing a pipeline system for commercializing Alaska North Slope natural gas ceases.

Developments in the Mexico Natural Gas Pipelines segment

Date	Description of development
Mexico Natural Gas Pipelines	
Topolobampo	
First Quarter 2017	The Topolobampo project is a 530 km (329 miles), 30-inch pipeline with a cost of US\$1.0 billion that will receive natural gas from upstream pipelines near El Encino in the state of Chihuahua. The pipeline will deliver natural gas from these interconnecting pipelines to delivery points along the pipeline route including our Mazatlán pipeline at El Oro in the state of Sinaloa. Construction of the pipeline is supported by a 25-year natural gas Transportation Service Agreement (TSA) for 670 MMcf/d with the CFE. Completion of construction is delayed into 2017 due to delays with Indigenous consultations by others. Under the terms of the TSA, this delay is recognized as a force majeure event with provisions allowing for the collection of revenue as per the original TSA service commencement date of July 2016.
Mazatlán	
November 2015	The Mazatlán project is a 413 km (257 miles), 24-inch diameter pipeline running from El Oro to Mazatlán within the state of Sinaloa with an estimated cost of US\$0.4 billion. This pipeline is supported by a 25-year natural gas TSA for 200 MMcf/d with the CFE.
Third Quarter 2016	Physical construction is complete and is awaiting natural gas supply from upstream interconnecting pipelines. We have met our obligations and thus are collecting revenue as per provisions in the contract and per the original TSA service commencement date of December 2016.
Tula	
November 2015	We were awarded the contract to build, own and operate the US\$0.6 billion, 36 inch, 300 km (186 miles) pipeline supported by a 25-year natural gas TSA for 886 MMcf/d with the CFE. The pipeline will transport natural gas from Tuxpan, Veracruz to markets near Tula, Querétaro extending through the states of Puebla and Hidalgo.
Third Quarter 2016	Construction commenced in the region that does not require Indigenous community consultations by others. Completion of construction is revised to 2018 due to delays with Indigenous consultation.
Villa de Reyes Pipeline	
April 2016	We announced that we were awarded the contract to build, own and operate the Villa de Reyes pipeline in Mexico. Construction of the pipeline is supported by a 25-year natural gas transportation service contract for 886 MMcf/d with the CFE. We expect to invest approximately US\$0.6 billion to construct 36- and 24-inch diameter pipelines totaling 420 km (261 miles) with an anticipated in-service date of early 2018. The bi-directional pipeline will transport natural gas between Tula, in the state of Hidalgo, and Villa de Reyes, in the state of San Luis Potosí. The project will interconnect with our Tamazunchale and Tula pipelines as well as with other transporters in the region.
Sur de Texas	
June 2016	We announced that our joint venture with IEnova had been chosen to build, own and operate the US\$2.1 billion Sur de Texas pipeline in Mexico. We will have a 60 per cent interest in this project. Construction of the pipeline is supported by a 25-year natural gas transportation service contract for 2.6 bcf/d with the CFE. We expect to invest approximately US\$1.3 billion in the joint venture to construct the 42-inch diameter, approximately 800 km (497 miles) pipeline with an anticipated in-service date of late 2018. The pipeline will start offshore in the Gulf of Mexico, at the border point near Brownsville, Texas, and end in Tuxpan, Mexico in the state of Veracruz. The project will deliver natural gas to our Tamazunchale and Tula pipelines and to other transporters in the region.
Tamazunchale Pipeline Extension Project	
November 2014	Construction of the US\$600 million extension was completed. Delays from the original service commencement date in March 2014 were attributed primarily to archeological findings along the pipeline route. Under the terms of the transportation service agreement, these delays were recognized as a force majeure with provisions allowing for collection of revenue from the original service commencement date.

Further information about developments in the Natural Gas Pipelines business, including changes that we expect will occur in the current financial year, can be found in the MD&A in the *About our business – Our strategy* and *Natural Gas Pipelines business* sections; *Canadian Natural Gas Pipelines – Financial results, Outlook, Understanding the Canadian Natural Gas Pipelines segment and Significant events* sections; *U.S. Natural Gas Pipelines – Financial results, Outlook, Understanding the U.S. Natural Gas Pipelines segment and Significant events* sections; and *Mexico Natural Gas Pipelines – Financial results, Outlook, Understanding the Mexico Natural Gas Pipelines segment*, and *Significant events* sections, which sections of the MD&A are incorporated by reference herein.

LIQUIDS PIPELINES

Date	Description of development
Keystone Pipeline System	
Second Quarter 2015	We entered into an agreement with CITGO Petroleum (CITGO) to construct a US\$65 million pipeline connection between the Keystone Pipeline and CITGO's Sour Lake, Texas terminal, which supplies their 425,000 Bbl/d Lake Charles, Louisiana refinery. The connection is targeted to be operational in fourth quarter 2016.
Fourth Quarter 2015	We secured additional long term contracts bringing our total contract position up to 545,000 Bbl/d.
January 2016	We entered into an agreement with Magellan Midstream Partners L.P. (Magellan) to connect our Houston Terminal to Magellan's Houston and Texas City, Texas delivery system. We will own 50 per cent of this US\$50 million pipeline project which will enhance connections for our Keystone Pipeline to the Houston market. The pipeline is expected to be operational during the first half of 2017, subject to the receipt of all necessary rights-of-way, permits and regulatory approvals.
Second Quarter 2016	On April 2, 2016, we shut down the Keystone Pipeline after a leak was detected along the pipeline right-of-way in Hutchinson County, South Dakota. We reported the total volume of the release of 400 barrels to the National Response Center and the Pipeline and Hazardous Materials Safety and Administration (PHMSA). Temporary repairs were completed and the Keystone Pipeline was restarted by mid-April 2016. Shortly thereafter in early May 2016, permanent pipeline repairs were completed and restoration work was completed by early July 2016. Corrective measures required by PHMSA were completed in September 2016. This shutdown did not significantly impact our 2016 earnings.
August 2016	The Houston Lateral pipeline and terminal, an extension from the Keystone Pipeline to Houston, Texas, went into service. The terminal has an initial storage capacity for 700,000 barrels of crude oil.
December 2016	The HoustonLink pipeline which connects the Houston Terminal to Magellan's Houston and Texas City, Texas delivery system was completed.
December 2016	The CITGO Sour Lake pipeline connection between the Keystone Pipeline and CITGO's Sour Lake, Texas terminal was placed into service.
Keystone XL	
January 2015	The Nebraska State Supreme Court vacated the lower court's ruling that the law was unconstitutional. As a result, the Governor's January 2013 approval of the alternate route through Nebraska for Keystone XL remains valid. Landowners have filed lawsuits in two Nebraska counties seeking to enjoin Keystone XL from condemning easements on state constitutional grounds.
November 2015	The decision on the Keystone XL Presidential permit application was delayed throughout 2015 by the Department of State (DOS) and was ultimately denied in November 2015. At December 31, 2015, as a result of the denial of the Presidential permit, we evaluated our investment in Keystone XL and related projects, including Keystone Hardisty Terminal, for impairment. As a result of our analysis, we determined that the carrying amount of these assets was no longer recoverable, and recognized a total non-cash impairment charge of \$3.7 billion (\$2.9 billion aftertax). The impairment charge was based on the excess of the carrying value of \$4.3 billion over the fair value of \$621 million, which includes \$93 million fair value for Keystone Hardisty Terminal. The calculation of this impairment is discussed further in the Other information – Critical accounting estimates section of the MD&A. The Keystone Hardisty Terminal remains on hold with an estimated in-service date to be driven by market need. Also in November 2015, we withdrew our application to the Nebraska Public Service Commission for approval of the route for Keystone XL in the state. The application was initially filed in October 2015. The withdrawal was made without prejudice to potentially refile if we elect to pursue the project.
January 2016	On January 5, 2016, the South Dakota PUC accepted Keystone XL's certification that it continues to comply with the conditions in its existing 2010 permit authority in the state. On January 6, 2016, we filed a Notice of Intent to initiate a claim under Chapter 11 of North American Free Trade Agreement (NAFTA) in response to the U.S. Administration's decision to deny a Presidential permit for the Keystone XL Pipeline on the basis that the denial was arbitrary and unjustified. Through the NAFTA claim, we are seeking to recover more than US\$15 billion in costs and damages that we estimated to have suffered as a result of the U.S. Administration's breach of its NAFTA obligations. In June 2016, we filed a Request for Arbitration in a dispute against the U.S. Government pursuant to the Convention on Settlement of Investment Disputes between States and Nationals of Other States, the Rules of Procedure for the Institution of Conciliation and Arbitration Proceedings and Chapter 11 of NAFTA. This arbitration is in a preliminary stage and the likelihood of success and resulting impact on the Company's financial position or results of operations is unknown at this time. On January 5, 2016, we also filed a lawsuit in the U.S. Federal Court in Houston, Texas, asserting that the U.S. President's decision to deny construction of Keystone XL exceeded his power under the U.S. Constitution. The federal court lawsuit does not seek damages, but rather a declaration that the permit denial is without legal merit and that no further Presidential action is required before construction of the pipeline can proceed.
January 2017	On January 24, 2017, the U.S. President signed a Presidential Memorandum inviting TransCanada to refile an application for the U.S. Presidential Permit. On January 26, 2017, we filed a Presidential Permit application with the U.S. Department of State for the project. The pipeline will begin in Hardisty, Alberta, and extend south to Steele City, Nebraska. Given the passage of time since the November 6, 2015 denial of the Presidential Permit, we are updating our shipping contracts and some shippers may increase or decrease their volume commitments. We expect the project to retain sufficient commercial support for us to make a FID.

Date	Description of development
Energy East	
April 2015	We announced that the proposed marine terminal and associated tank terminal in Cacouna, Québec will not be built as a result of the recommended reclassification of the beluga whale, indigenous to the site, as an endangered species.
November 2015	Following consultation with stakeholders and shippers, we announced the intention to amend the Energy East pipeline application to remove a port in Québec and proceed with a single marine terminal in Saint John, New Brunswick.
December 2015	We filed an amendment to the existing project application with the NEB that adjusted the proposed route, scope and capital cost of the project reflecting refinement and scope change including the removal of the port in Québec. The project will continue to serve the three eastern Canadian refineries along the route in Montréal and Québec City, Québec and Saint John, New Brunswick. Changes to the project schedule and scope, as reflected in the amendment, contributed to a revised project capital cost estimate of \$15.7 billion, excluding the transfer of Canadian Mainline natural gas assets.
March 2016	On March 1, 2016, the Province of Québec filed a court action seeking an injunction to compel the Energy East Pipeline to comply with the province's environmental regulations. On March 30, 2016, the Québec Superior Court joined the injunction action led by the Province of Québec with the prior action led by Québec Environmental Law Centre / Centre québécois du droit de l'environnement (CQDE), which sought a declaration to compel the Energy East pipeline to submit to the mandatory provincial environmental review process. As a result of communication with the Ministère du Développement durable, Environnement et la Lutte contre les changements climatiques, on April 22, 2016, we filed a project review engaging an environmental assessment under the <i>Environmental Quality Act (Québec)</i> according to an agreed upon schedule for key steps in that process. This process was in addition to environmental assessment required under the <i>NEB Act</i> and the <i>Canadian Environmental Assessment Act, 2012</i> . The Attorney General for Québec agreed to suspend its litigation against TransCanada and Energy East and to withdraw it once the provincial environmental assessment process has been completed. The CQDE similarly agreed to suspend the action. These suspensions were in effect until early November 2016, but may have to be extended given the delay in the NEB process noted below. The first phase of Energy East public hearings for the voluntary Québec le Bureau d'audiences publiques sur l'environnement (BAPE) process was completed. The voluntary BAPE hearing process is intended to inform the Province of Québec in its participation in the federal process and provides project information to the public. A second phase, consisting of a series of public input sessions, has been suspended as it has been replaced with the environmental assessment as described above.
May 2016	We filed a consolidated application with the NEB for the Energy East pipeline. In June 2016, Energy East achieved a major milestone with the NEB's announcement determining the Energy East pipeline application is sufficiently complete to initiate the formal regulatory review process. However, in August 2016, panel sessions were cancelled as three NEB panelists recused themselves from continuing to sit on the panel to review the project due to allegations of reasonable apprehension of bias. The Chair of the NEB and the Vice Chair, who is also a panel member, have recused themselves of any further duties related to the project. As a result, all hearings for the project were adjourned until further notice.
January 2017	On January 9, 2017, the NEB appointed three new permanent panel members to undertake the review of the Energy East and Eastern Mainline projects. On January 27, 2017, the new NEB panel members voided all decisions made by the previous hearing panel members and all decisions will be removed from the official hearing record. We are not required to refile the application and parties will not be required to reapply for intervener status. However, all other proceedings and associated deadlines are no longer applicable. It is expected the next step will be a determination of the application's completeness and the issuance of a hearing order which triggers the 21-month time limit for the NEB to adjudicate the application.
White Spruce	
December 2016	We finalized a long term transportation agreement to develop and construct the 20-inch diameter White Spruce pipeline, which will transport crude oil from a major oil sands plant in northeast Alberta, into the Grand Rapids pipeline system. The total capital cost for the project is approximately \$200 million and it is expected to be in service in 2018 subject to regulatory approvals.
Northern Courier	
Fourth Quarter 2016	Construction continued on the Northern Courier pipeline to transport bitumen and diluent between the Fort Hills mine site and Suncor Energy's terminal located north of Fort McMurray, Alberta. The project is fully underpinned by long term contracts with the Fort Hills partnership. We expect to begin commercial operation in fourth quarter 2017.
Grand Rapids	
August 2015	We announced a joint venture between Grand Rapids and Keyera Corp. for provision of diluent transportation service on the 20-inch pipeline between Edmonton and Fort Saskatchewan, Alberta. The joint venture will be incorporated into Grand Rapids and it will provide enhanced diluent supply alternatives to our shippers.

Date	Description of development
Fourth Quarter 2016	Construction continued on the Grand Rapids pipeline. We entered into a partnership with Brion Energy to develop Grand Rapids with each party owning 50 per cent of the pipeline project. Our partner has also entered into a long-term transportation service contract in support of the project. We will operate Grand Rapids once it is complete and we expect crude oil transportation to begin in the second half of 2017. Construction is also progressing on the 20-inch diameter diluent joint venture pipeline between Edmonton and Fort Saskatchewan, Alberta. The joint venture between Grand Rapids and Keyera Corp. will be incorporated into Grand Rapids and will provide enhanced diluent supply alternatives to our shippers. We anticipate the pipeline to be in service in late 2017.

Upland Pipeline

April 2015	We filed an application to obtain a U.S. Presidential permit for the Upland Pipeline. The pipeline will 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 2020. The commercial contracts we have executed for Upland Pipeline are conditioned on the Energy East pipeline project proceeding.
January 2016	We are reviewing the Canadian federal government's interim measures for pipeline reviews and to assess their impact to Upland Pipeline.

Liquids Marketing

2015	We established a liquids marketing business to expand into other areas of the liquids business value chain. The liquids marketing business will generate revenue by capitalizing on asset utilization opportunities by entering into short-term or long-term pipeline or storage terminal capacity contracts. Volatility in commodity prices and changing market conditions could impact the value of those capacity contracts. Availability of alternative pipeline systems that can deliver into the same areas can also impact contract value. The liquids marketing business complies with our risk management policies which are described in the <i>Other information - Risks and risk management</i> section of the MD&A.
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Further information about developments in the Liquids Pipelines business, including changes that we can expect will occur in the current financial year, can be found in the MD&A in the *About our business – Our strategy, Liquids Pipelines – Financial results, Liquids Pipelines – Outlook, Liquids Pipelines – Understanding the Liquids Pipelines business* and *Liquids Pipelines – Significant events* sections, which sections of the MD&A are incorporated by reference herein.

ENERGY

Date	Description of development
Canadian Power	
Alberta PPAs	
June 2015	The Alberta government announced a renewal and change to the SGER in Alberta. Since 2007, under the SGER, established industrial facilities with GHG emissions above a certain threshold are required to reduce their emissions by 12 per cent below an average intensity baseline and a carbon levy of \$15 per tonne is placed on emissions above this target. The changed regulations include an increase in the emissions reductions target to 15 per cent in 2016 and 20 per cent in 2017, along with an increase in the carbon levy to \$20 per tonne in 2016 and \$30 per tonne in 2017. Starting in 2018, coal-fired generators will pay \$30 per tonne of CO ₂ on emissions above what Alberta's cleanest natural gas-fired plant would emit to produce an equivalent amount of electricity.
2016	On March 7, 2016, we issued notice to the Balancing Pool to terminate our Alberta PPAs. On July 22, 2016, we, along with the ASTC Power Partnership, issued a notice referring the matter to be resolved by binding arbitration pursuant to the dispute resolution provisions of the PPAs. On July 25, 2016, the Government of Alberta brought an application in the Court of Queen's Bench to prevent the Balancing Pool from allowing termination of a PPA held by another party which contains identically worded termination provisions to our PPAs. The outcome of this court application could have affected resolution of the arbitration of the Sheerness, Sundance A and Sundance B PPAs. In December 2016, management engaged in settlement negotiations with the Government of Alberta and finalized terms of the settlement of all legal disputes related to the PPA terminations. The Government and the Balancing Pool agreed to our termination of the PPAs resulting in the transfer of all our obligations under the PPAs to the Balancing Pool. Upon final settlement of the PPA terminations, we transferred to the Balancing Pool a package of environmental credits held to offset the PPA emissions costs and recorded a non-cash charge of \$92 million before tax (\$68 million after tax) related to the carrying value of our environmental credits. In first quarter 2016, as a result of our decision to terminate the PPAs, we recorded a non-cash impairment charge of \$240 million before tax (\$176 million after tax) comprised of \$211 million before tax (\$155 million after tax) related to the carrying value of our Sundance A and Sheerness PPAs and \$29 million before tax (\$21 million after tax) on our equity investment in the ASTC Power Partnership which previously held the Sundance B PPA.
Ontario Cap and Trade	
May 2016	Legislation enabling Ontario's cap and trade program was signed into law with the new regulation taking effect July 1, 2016. This regulation sets a limit on annual province-wide greenhouse gas emissions beginning in January 2017 and introduces a market to administer the purchase and trading of emissions allowances. The regulation places the compliance obligation for emissions from our natural gas fired power facilities on local gas distributors, with the distributors then flowing the associated costs to the facilities themselves. The IESO has proposed contract amendments for contract holders to address costs and other issues associated with this change in law. We continue to work with the IESO to finalize these amendments. We do not expect a significant overall impact to our Energy business as a result of this new regulation.
Napanee	
January 2015	We began construction activities on a 900 MW natural gas-fired power plant at Ontario Power Generation's Lennox site in eastern Ontario in the town of Greater Napanee. Production from the facility is fully contracted with the IESO.
First Quarter 2016	Construction continues and we expect to invest approximately \$1.1 billion in the Napanee facility during construction and commercial operations are expected to begin in 2018.
Bécancour	
May 2014	We received final approval from the Régie de l'énergie for the December 2013 amendment to the original suspension agreement with Hydro-Québec Distribution (HQ). Under the amendment, HQ continued to have the option (subject to certain conditions) to further extend the suspension of all electricity generation from the Bécancour power plant past 2017. The amendment also includes revised provisions intended to reduce HQ's payments to us for Bécancour's natural gas transportation costs during the suspension period, although we retain our ability to recover our full capacity costs under the Electricity Supply Contract with HQ while the facility is suspended. In addition, HQ exercised its option in the amended suspension agreement to extend suspension of all electricity generation to the end of 2017, and requested further suspension of generation to the end of 2018. In June 2015, HQ had requested further suspension of generation to the end of 2019. In June 2016, HQ requested further suspension of generation to the end of 2020.
August 2015	We executed an agreement with HQ allowing HQ to dispatch up to 570 MW of peak winter capacity from our Bécancour facility for a term of 20 years commencing in December 2016.
November 2016	HQ released a new ten year supply plan indicating additional peak winter capacity from Bécancour is not required at this time. Prior to this development, the regulator in Québec, Régie de l'énergie, reversed its initial decision to approve this agreement. Management does not expect further developments at Bécancour until November 2019 when the next 10 year supply plan is filed.

Date	Description of development
Bruce Power	
March 2014	Cameco Corporation sold its 31.6 per cent limited partnership interest in Bruce B to BPC Generation Infrastructure Trust.
Fourth Quarter 2014	New Canadian federal legislation was passed in 2015 respecting the determination of liability and compensation for a nuclear incident in Canada resulting in personal injuries and damages. In 2016 the act was proclaimed to come into force by cabinet and the provisions are effective as of January 1, 2017. This legislation will replace existing legislation which currently provides that the licensed operator of a nuclear facility has absolute and exclusive liability and limits the liability to a maximum of \$75 million. The new law is fundamentally consistent with the existing regime although the maximum liability will increase to \$650 million and increase in increments over three years to a maximum of \$1 billion. The operator will also be required to maintain financial assurances such as insurance in the amount of the maximum liability. Our indirect subsidiary owns 50 per cent of the common shares of Bruce Power Inc., the licensed operator of Bruce Power, and as such Bruce Power Inc. is subject to this liability in the event of an incident as well as the legislation's other requirements.
December 2015	Bruce Power entered into an agreement with the IESO to extend the operating life of the facility to the end of 2064. This new agreement represents an extension and material amendment to the earlier agreement that led to the refurbishment of Units 1 and 2 at the site. The amended agreement is effective January 1, 2016 and allows Bruce Power to immediately invest in life extension activities for Units 3 through 8. Our estimated share of investment in the Asset Management program to be completed over the life of the agreement is approximately \$2.5 billion (2014 dollars). Our estimated share of investment in the Major Component Replacement work that is expected to begin in 2020 is approximately \$4 billion (2014 dollars). Under certain conditions, Bruce Power and the IESO can elect to not proceed with the remaining Major Component Replacement investments should the cost exceed certain thresholds or prove to not provide sufficient economic benefits. The agreement has been structured to account for changing cost inputs over time, including ongoing operating costs and additional capital investments. Beginning in January 2016, Bruce Power receives a uniform price of \$65.73 per MWh for all units, which includes certain flow-through items such as fuel and lease expense recovery. Over time, the uniform price will be subject to adjustments for the return of and on capital invested at Bruce Power under the Asset Management and Major Component Replacement capital programs, along with various other pricing adjustments that allow for a better matching of revenues and costs over the long term. In connection with this opportunity, we exercised our option to acquire an additional 14.89 per cent ownership interest in Bruce B for \$236 million from the Ontario Municipal Employees Retirement System. Subsequent to this acquisition, Bruce A and Bruce B were merged to form a single partnership structure. In 2015, we recognized a \$36 million charge, representing our proportionate share, on the retirement of Bruce Power debt in conjunction with this merger. We now hold a 48.5 per cent interest in this newly merged partnership structure.
Second Quarter 2016	Bruce Power issued bonds and borrowed under its bank credit facility as part of a financing program to fund its capital program and make distributions to its partners. Distributions received by us from Bruce Power in second quarter 2016 included \$725 million from this financing program.
February 2017	Bruce Power issued additional bonds under its financing program and distributed \$362 million to TransCanada.
Cancarb Limited and Cancarb Waste Heat Facility	
January 2014	We announced we had reached an agreement for the sale of Cancarb Limited, our thermal carbon black facility, and its related power generation facility.
April 2014	The sale of Cancarb Limited and its related power generation facility closed for gross proceeds of \$190 million. We recognized a gain of \$99 million, net of tax, in second quarter 2014.
Ontario Solar	
September 2014	We completed the acquisition of three solar facilities for \$181 million as per our December 2011 agreement, pursuant to which we agreed to buy Ontario solar generation facilities with combined capacity of 86 MW from Canadian Solar Solutions Inc. for approximately \$500 million.
December 2014	We acquired an additional solar facility for \$60 million. Our total investment in the eight solar facilities we have purchased is \$457 million. All power produced by the solar facilities is sold under 20-year feed-in tariff contracts with the IESO.

Date	Description of development
U.S. Power	
Monetization of U.S. Northeast power business	
November 2016	We announced the sale of Ravenswood, Ironwood, Ocean State Power and Kibby Wind to Helix Generation, LLC, an affiliate of LS Power Equity Advisors for US\$2.2 billion and the sale of TC Hydro to Great River Hydro, LLC, an affiliate of ArCLight Capital Partners, LLC for US\$1.065 billion. These two sale transactions are expected to close in the first half of 2017 subject to certain regulatory and other approvals and will include closing adjustments. These sales are expected to result in an approximate net loss of \$1.2 billion before tax (\$1.1 billion after tax) which is comprised of a \$1,085 million goodwill impairment charge (\$656 million after tax), a net loss of \$829 million (\$863 million after tax) on the sale of the thermal and wind package and an approximate gain of \$710 million (\$440 million after tax) on sale of the hydro assets to be recorded upon the close of that transaction. A process to monetize our marketing business, TCPM, is underway.
Ravenswood	
May 2015	The Ravenswood Generating Station returned to service after the September 2014 unplanned outage which resulted from a problem with the generator associated with the high pressure turbine. Insurance recoveries, net of deductibles, for this event have been received and are being recognized in capacity revenues to offset amounts lost during the periods impacted by the lower forced outage rate. As a result of these insurance recoveries, the Unit 30 unplanned outage has not had a significant impact on our earnings, although the recording of earnings has not coincided exactly with lost revenues due to timing of the insurance proceeds. In addition, insurance recoveries related to an unplanned outage at the Ravenswood facility that occurred in 2008 were received in June 2016 and a portion of the proceeds were recognized in power revenue. Refer to the <i>Monetization of U.S. Northeast power business</i> section above.
Ironwood	
February 2016	We acquired the 778 MW Ironwood natural gas fired, combined cycle power plant located in Lebanon, Pennsylvania for US\$653 million in cash after post-acquisition adjustments. The Ironwood power plant delivers energy into the PJM Interconnection area power market. Refer to the <i>Monetization of U.S. Northeast power business</i> section above.

Further information about developments in the Energy business, including changes that we expect will occur in the current financial year, can be found in the MD&A in the *About our business – Our strategy, Energy – Financial results, Energy – Outlook, Energy – Understanding the Energy business* and *Energy – Significant events* sections, which sections of the MD&A are incorporated by reference herein.

Business of TCPL

We are a leading North American energy infrastructure company focused on Natural Gas Pipelines, Liquids Pipelines and Energy. Refer to the *About our business – Three core businesses – Total revenues* section of the MD&A for our revenues from operations by segment, for the years ended December 31, 2016 and 2015, which section of the MD&A is incorporated by reference herein.

The following is a description of each of TransCanada's three core businesses.

NATURAL GAS PIPELINES

Our natural gas pipeline network transports natural gas from supply basins to local distribution companies, power generation facilities, interconnecting pipelines and other businesses across Canada, the U.S. and Mexico. Our Natural Gas Pipelines business is split into three operating segments representing its geographic diversity: Canadian Natural Gas Pipelines, U.S. Natural Gas Pipelines and Mexico Natural Gas Pipelines.

A description of the natural gas pipelines and regulated natural gas storage assets we operate in addition to further information about our pipeline holdings, developments and opportunities, significant regulatory developments and competitive position which relate to our Natural Gas Pipelines business can be found in the *Natural Gas Pipelines business, Canadian Natural Gas Pipelines, U.S. Natural Gas Pipelines* and *Mexico Natural Gas Pipelines* sections of the MD&A, which sections of the MD&A are incorporated by reference herein.

LIQUIDS PIPELINES

Our existing liquids pipeline infrastructure connects Alberta crude oil supplies to U.S. refining markets in Illinois, Oklahoma and Texas, as well as connecting U.S. crude oil supplies from the Cushing, Oklahoma hub to refining markets in the U.S. Gulf Coast. Our proposed future pipeline infrastructure would also connect Canadian and U.S. crude oil supplies to refining markets in eastern Canada and overseas export markets, and expand capacity for Canadian and U.S. crude oil access to U.S. markets.

A description of pipelines and properties we operate, in addition to further information about our pipeline holdings, developments and opportunities, significant regulatory developments and competitive position which relate to our Liquids Pipelines business can be found in the MD&A in the *Liquids Pipelines* section, which section of the MD&A is incorporated by reference herein.

REGULATION OF NATURAL GAS PIPELINES AND LIQUIDS PIPELINES

Canada

Natural Gas Pipelines

The Canadian Mainline, NGTL System and Foothills System (collectively, the **Systems**) are regulated by the NEB under the *National Energy Board Act* (Canada). The NEB regulates the construction and operation of facilities, and the terms and conditions of services, including rates, for these Canadian regulated natural gas transmission systems.

The NEB generally sets tolls that provide TransCanada the opportunity to recover costs of transporting natural gas, including the return of capital (depreciation) and return on the average investment base for each of the Systems. Generally, Canadian natural gas pipelines request the NEB to approve the pipeline's cost of service and tolls once a year, and recover or refund the variance between actual and expected revenues and costs in future years. The Canadian Mainline, however, operates under a fixed toll arrangement for its longer term firm transportation service and has the flexibility to price its shorter term and discretionary services in order to maximize its revenue. Further information relating to the decision from the NEB regarding the Canadian Restructuring Proposal as well as the LDC Settlement can be found in the *General developments of the business - Natural Gas Pipelines - Developments in the Canadian Natural Gas Pipelines segment - Canadian Mainline Settlement* above. In addition, the NEB approved the NGTL revenue requirement settlement application that was filed in December 2015, subject to certain reporting requirements that were subsequently met and approved by the NEB.

New facilities on or associated with the Systems are approved by the NEB before construction begins and the NEB regulates the operations of each of the Systems. Net earnings of the Systems may be affected by changes in investment base, the allowed ROE, and any incentive earnings.

West Coast LNG – Natural Gas Pipeline Projects

The Coastal GasLink and PRGT natural gas pipeline projects are being proposed and developed primarily under the regulatory regime administered by the OGC and the EAO. The OGC is responsible for overseeing oil and gas operations in B.C., including exploration, development, pipeline transportation and reclamation. The EAO is an agency that manages the review of proposed major projects in B.C., as required by the B.C. *Environmental Assessment Act*.

Liquids Pipelines

The NEB regulates the terms and conditions of service, including rates, construction and operation of the Canadian portion of the Keystone Pipeline System. The rates for transportation service on the Keystone Pipeline System are calculated in accordance with a methodology agreed to in transportation service agreements between Keystone and its shippers, and approved by the NEB.

Liquids Pipelines Projects

The Northern Courier Pipeline and Grand Rapids Pipeline projects are currently under construction and the White Spruce pipeline is under development, all of which are primarily under the regulatory regime administered by the AER. The AER administers approvals required to construct and operate the pipelines and associated facilities in accordance with *Directive 56*, approvals to obtain land access under the *Public Land Act*, and environmental approvals under the *Environmental and Protection Enhancement Act*.

Energy East Pipeline is being developed under the regulatory regime administered by the NEB.

United States

Natural Gas Pipelines

TransCanada is subject to regulation by various federal, state and local governmental agencies, including those specifically described below.

The Company's wholly owned and partially owned U.S. pipelines are considered *natural gas companies* operating under the provisions of the *Natural Gas Act of 1938* and the *Natural Gas Policy Act of 1978*, and are subject to the jurisdiction of the FERC. *The Natural Gas Act of 1938* grants the FERC authority over the construction, acquisition and operation of pipelines and related facilities utilized in the transportation and sale of natural gas in interstate commerce, including the extension, enlargement or abandonment of service using such facilities. The FERC also has authority to regulate rates and charges for transportation and storage of natural gas in interstate commerce.

TransCanada holds certificates of public convenience and necessity issued by FERC, authorizing them to operate the pipelines, facilities and properties now in operation and to transport and store natural gas in interstate commerce. Our regulated natural gas storage business also has facilities that are regulated by FERC. The Company is also subject to the *Natural Gas Pipeline Safety Act of 1968* and the *Pipeline Safety Improvement Act of 2002*, which regulate the safety of natural gas pipelines.

Liquids Pipelines

The FERC regulates the terms and conditions of service, including transportation rates, of interstate liquids pipelines, including the U.S. portion of the Keystone Pipeline System and Marketlink. The siting and construction of pipeline facilities are regulated by the specific state regulator in which the pipeline facilities are located. Pipeline safety is regulated by the U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration. Liquids pipelines that cross the international border between Canada and the United States, such as the proposed Upland pipeline, will require a Presidential Permit from the U.S. DOS.

Mexico

Natural Gas Pipelines

TransCanada's pipelines in Mexico are regulated by the Comisión Reguladora de Energía or Energy Regulatory Commission who approve construction of new pipeline facilities and ongoing operations of the infrastructure. Our Mexican pipelines have approved tariffs, services and related rates, however, the contracts underpinning the construction and operation of the facilities are long-term negotiated fixed rate contracts. These rates are only subject to change under specific circumstances such as certain types of force majeure events or changes in law.

ENERGY

Our Energy business is made up of three groups:

- Canadian Power
- Natural Gas Storage (Canadian, non-regulated)
- U.S. Power (monetization expected to close in the first half of 2017).

Further information about Energy assets we operate, power supply that we own or have the rights to, power generation capacity we own or are developing and Energy assets currently under construction, along with our Energy holdings and significant developments, and opportunities in relation to our Energy business, can be found in the MD&A in the **Energy** section, which section of the MD&A is incorporated by reference herein.

General

EMPLOYEES

At Year End, TCPL had 7,165 employees, substantially all of whom were employed in Canada and the U.S., as set forth in the following table.

Calgary (includes U.S. employees working in Canada)	2,570
Western Canada (excluding Calgary)	581
Eastern Canada	300
Houston (includes Canadian employees working in the U.S.)	712
U.S. Midwest	747
U.S. Northeast	653
U.S. Southeast/Gulf Coast (excluding Houston)	1,313
U.S. West Coast	79
Mexico and South America	210
Total	7,165

CORPORATE RESTRUCTURING AND BUSINESS TRANSFORMATION

In mid-2015, we commenced a business restructuring and transformation initiative. While there is no change to our corporate strategy, we had undertaken this initiative to reduce overall costs and maximize the effectiveness and efficiency of our existing operations. For more information about our corporate restructuring and business transformation, refer to the *Corporate – Corporate restructuring and business transformation* section of the MD&A, which section of the MD&A is incorporated by reference herein.

ACQUISITION OF COLUMBIA PIPELINE GROUP, INC.

On July 1, 2016, we acquired 100 per cent ownership of Columbia for a purchase price of US\$10.3 billion in cash. The acquisition was financed through the issuance of TCPL common shares to TransCanada and an intercompany loan due to TransCanada in connection with proceeds received from the sale of TransCanada subscription receipts. The sale of TransCanada subscription receipts was completed on April 1, 2016 through a public offering and gross proceeds of approximately \$4.4 billion were transferred to TCPL prior to the closing of the acquisition. In addition, we drew on acquisition bridge facilities in the aggregate amount of US\$6.9 billion. For more information about the acquisition of Columbia, refer to the *About our business – Acquisition of Columbia Pipeline Group, Inc.* section of the MD&A, which section of the MD&A is incorporated by reference herein.

HEALTH, SAFETY AND ENVIRONMENTAL PROTECTION AND SOCIAL POLICIES

The Health, Safety and Environment (**HSE**) committee of TCPL's Board of Directors (the **Board**) oversees operational risk, people and process safety, security of personnel and environmental risks, and monitors compliance with our HSE corporate policy through regular reporting from management. We have a management system that establishes a framework for managing HSE issues that is used to capture, organize, document, monitor and improve our related policies, programs and procedures.

Our management system for HSE is modeled after international standards, conforms to external industry consensus standards and voluntary programs, and complies with applicable legislative and regulatory 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, and
- **Action:** ongoing audit and review of HSE performance.

The committee reviews HSE performance and operational risk management. 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, and
- 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. Information about the financial and operational effects of environmental protection requirements on the capital expenditures, profit or loss and competitive position of TCPL can be found in the MD&A in the ***Other information – Risks and risk management – Health, safety and environment*** section, which section of the MD&A is incorporated by reference herein. Generally, each year the committee or the committee Chair tours one of our existing assets or projects under development as part of its responsibility to monitor and review our HSE practices. Additionally, the Board and the committee have a joint site visit annually. In 2016, the committee held a special session devoted to operational safety.

Environmental policies

TCPL's facilities are subject to federal, state, provincial, and local environmental statutes and regulations governing environmental protection, including, but not limited to, air emissions and GHG emissions, water quality, wastewater discharges and waste management. Such laws and regulations generally require facilities to obtain or comply with a wide variety of environmental registrations, licences, permits and other approvals and requirements. Failure to comply with these laws and regulations may result in the assessment of administrative, civil or criminal penalties, the imposition of remedial requirements and/or the issuance of orders respecting future operations. We have implemented audit and inspection programs designed to ensure our facilities remain in compliance with environmental requirements.

Safety and asset integrity

As one of TCPL's corporate values, safety is an integral part of the way our employees work. Each year we develop goals predicated on achieving year over year sustainable improvement in our safety performance, and meeting or exceeding industry benchmarks.

The safety and integrity of our existing and newly developed infrastructure is a top priority. All new assets are designed, constructed and commissioned with full consideration given to safety and integrity, and are brought in service only after all necessary requirements have been satisfied.

TCPL annually conducts emergency response exercises to practice effective coordination between the Company, local emergency responders, regulatory agencies and government officials in the event of an emergency. TCPL uses the Incident Command System which supports a unified approach to emergency response with these community members. TCPL also provides annual training to all field staff in the form of table top exercises, online and vendor lead training.

Social policies

TCPL has a number of policies, guiding principles and practices in place to help manage Indigenous and stakeholder relations. We have adopted a Code of Business Ethics (**Code**) which applies to all employees, officers and directors as well as contract workers of TCPL 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.

Our approach to Indigenous and stakeholder engagement is based on building relationships, mutual respect and trust while recognizing the unique values, needs and interests of each community. Our Stakeholder Engagement Commitment Statement provides the structure to guide our teams' behavior and actions, so they understand their responsibility and extend respect, courtesy and the opportunity to respond to every stakeholder.

TCPL's Aboriginal Relations and Native American Relations Policies are guided by principles of trust, respect and responsibility. We work together with Indigenous communities to find mutually acceptable solutions and benefits. These Policies recognize the diversity and uniqueness of each Indigenous community, the importance of the land, and the imperative of building relationships based on mutual respect and trust.

TCPL also has an Avoiding Bribery and Corruption Program which includes an Avoiding Bribery and Corruption Policy, annual online training provided to all personnel, face to face training provided to personnel in higher risk areas of our business, a supplier and contractor due diligence review process, and auditing of certain types of transactions.

We strive for continuous improvement in how we navigate the interconnections and complexity of environmental, social and economic issues related to our business. These issues are of great importance to our stakeholders and Indigenous communities, and have an impact on our ability to build and operate energy infrastructure.

Risk factors

A discussion of our risk factors can be found in the MD&A in the *Natural Gas Pipelines business – Natural Gas Pipelines – Business risks, Liquids Pipelines – Business risks, Energy – Business risks* and *Other information – Risks and risk management* sections, which sections of the MD&A are incorporated by reference into this AIF.

Dividends

All of TCPL's common shares are held by TransCanada and as a result, any dividends declared by TCPL on its common shares are paid to TransCanada. Our Board has not adopted a formal dividend policy. The Board reviews the financial performance of TCPL quarterly and makes a determination of the appropriate level of dividends to be declared in the following quarter. Currently, TransCanada's payment of dividends is primarily funded from dividends it receives as the sole common shareholder of TCPL. Provisions of various trust indentures and credit arrangements to which TCPL is a party restrict TCPL's ability to declare and pay dividends to TransCanada under certain circumstances and, if such restrictions apply, they may, in turn, have an impact on TransCanada's ability to declare and pay dividends. Pursuant to the terms of the unsecured, subordinate trust notes (**Trust Notes**) issued by TransCanada Trust (the **Trust**) (a financing trust subsidiary wholly owned by TCPL) and related agreements, in certain circumstances including where holders of the Trust Notes receive deferral preferred shares of TCPL in lieu of cash interest payments and where exchange preferred shares are issued to holders of the trust notes as a result of certain bankruptcy related events, TCPL would be prohibited from declaring or paying dividends on or redeeming their outstanding preferred shares (or, if none are outstanding, their respective common shares) until all such exchange or deferral preferred shares are redeemed by TCPL. Further information about such Trust Notes can be found in the *Financial condition – Junior subordinated notes issued* section of the MD&A. In the opinion of TCPL management, such provisions do not currently restrict or alter TCPL's ability to declare or pay dividends.

The dividends declared per share on our common and preferred shares during the past three completed financial years are set out in the MD&A under the heading *About our business – Quarterly dividend on our common shares* and *Corporate – Preferred share dividends*, which section of the MD&A is incorporated by reference herein.

Description of capital structure

SHARE CAPITAL

TCPL's authorized share capital consists of an unlimited number of common shares, of which 859,261,781 were issued and outstanding at Year End, and an unlimited number of first preferred shares and second preferred shares, issuable in series. The following is a description of the material characteristics of each of these classes of shares.

Common shares

As the holder of all of TCPL's common shares, TransCanada holds all the voting and dividend rights on those common shares.

Preferred shares

Subject to certain limitations, the Board may, from time to time, issue first preferred shares in one or more series and determine for any such series, its designation, number of shares and respective rights, privileges, restrictions and conditions. The first preferred shares as a class have, among others, the provisions described below.

The first preferred shares of each series rank on a parity with the first preferred shares of every other series, and are entitled to preference over the common shares and any other shares ranking junior to the first preferred shares with respect to the payment of dividends, the repayment of capital and the distribution of assets of TCPL in the event of a liquidation, dissolution or winding up of TCPL.

Except as provided by the CBCA or as referred to below, the holders of the first preferred shares will not have any voting rights nor will they be entitled to receive notice of or to attend shareholders' meetings unless and until TCPL fails to pay, in the aggregate, six quarterly dividends on the preferred shares.

The provisions attaching to the first preferred shares as a class may be modified, amended or varied only with the approval of the holders of the first preferred shares as a class. Any such approval to be given by the holders of the first preferred shares may be given by the affirmative vote of the holders of not less than sixty-six and two-thirds per cent of the first preferred shares represented and voted at a meeting or adjourned meeting of such holders.

Exchange preferred shares

In connection with the issuance by the Trust of consecutive series of Trust Notes, TCPL created corresponding consecutive series of first preferred shares, designated as Exchange Preferred Shares. The Board may issue Exchange Preferred Shares, consisting of such number of shares sufficient to satisfy the rights of former holders of Trust Notes to receive Exchange Preferred Shares following a bankruptcy or insolvency event of TCPL or TransCanada Corporation. The holders of Exchange Preferred Shares will be entitled to receive quarterly fixed rate cumulative preferential cash dividends, as and when declared by the Board, at an annualized rate equal to the rate of interest payable by the Trust on the Trust Notes at the time of issuance of the Exchange Preferred Shares. The Exchange Preferred Shares are not redeemable by TransCanada in whole or in part on or prior to the date that is 10 years after the issuance corresponding series of Trust Notes (**Redemption Date**). The Exchange Preferred Shares are redeemable by TCPL in whole or in part at any time after each series' applicable Redemption Date, by the payment of an amount in cash for each share to be redeemed equal to \$1,000.00 plus all accrued and unpaid dividends thereon.

In the event of liquidation, dissolution or winding up of TransCanada, the holders of Exchange Preferred Shares shall be entitled to receive \$1,000.00 per share plus all accrued and unpaid dividends thereon in preference over the common shares or any other shares ranking junior to the Exchange Preferred Shares. Except as provided by the CBCA, the respective holders of the Exchange Preferred Shares are not entitled to receive notice of, attend at, or vote at any meeting of shareholders unless and until TCPL shall have failed to pay six quarterly dividends on such series of preferred shares, whether or not consecutive, in which case the holders of the Exchange Preferred Shares shall have the right to receive notice of and to attend each meeting of shareholders at which directors are to be elected and which take place more than 60 days after the date on which the failure first occurs, and to one vote with respect to resolutions to elect directors for each exchange preferred share, until all arrears of dividends have been paid.

So long as the Exchange Preferred Shares are outstanding, TCPL shall not declare dividends on or redeem any common shares or shares ranking junior to the Exchange Preferred Shares, unless all dividends payable on the Exchange Preferred Shares or any other shares ranking prior to or on parity with the Exchange Preferred Shares have been paid.

Debt

The *Financial condition – Long-term debt issued* section of the MD&A includes a list of issuances by TCPL of U.S. dollar denominated senior unsecured notes and Canadian dollar denominated medium term unsecured note debentures with terms to maturity in excess of one year, during the 12 months ended December 31, 2016, which section of the MD&A is incorporated by reference herein. There are no provisions associated with this debt that entitle debt holders to voting rights. From time to time, TCPL issues commercial paper for terms not exceeding nine months.

Credit ratings

The following table sets out the current credit ratings assigned to those outstanding classes of securities of TransCanada Corporation, TCPL, the Trust and various group entities which have been rated by DBRS Limited (**DBRS**), Moody's Investors Service, Inc. (**Moody's**) and Standard & Poors (**S&P**):

	DBRS	Moody's	S&P
TCPL - Senior unsecured debt			
Debentures	A (low)	A3	A-
Medium-term notes	A (low)	A3	A-
TCPL - Junior subordinated notes	BBB	Baa1	BBB
TransCanada Trust - Subordinated trust notes	Not rated	Baa2	BBB
TransCanada Corporation - Preferred shares	Pfd-2 (low)	Baa2	P-2
Commercial paper (TCPL and TCPL guaranteed)	R-1 (low)	P-2	A-2
Trend/rating outlook	Under review with developing implications	Stable	Negative

Credit ratings are intended to provide investors with an independent measure of credit quality of an issue of securities. Credit ratings are not recommendations to purchase, hold or sell securities and do not address the market price or suitability of a specific security for a particular investor. There is no assurance that any rating will remain in effect for any given period of time or that any rating will not be revised or withdrawn entirely by a rating agency in the future if, in its judgment, circumstances so warrant.

Each of TransCanada Corporation, TCPL, the Trust and various group entities paid fees to each of DBRS, Moody's and S&P for the credit ratings rendered in respect of their outstanding classes of securities noted above. In addition to annual monitoring fees for TransCanada Corporation and TCPL and their rated securities, additional payments were made to DBRS, Moody's and S&P in respect of other services provided in connection with the acquisition of Columbia.

The information concerning our credit ratings relates to our financing costs, liquidity and operations. The availability of our funding options may be affected by certain factors, including the global capital market environment and outlook as well as our financial performance. Our access to capital markets at competitive rates is dependent on our credit rating and rating outlook, as determined by credit rating agencies such as DBRS, Moody's and S&P, and if our ratings were downgraded our financing costs and future debt issuances could be unfavorably impacted. A description of the rating agencies' credit ratings listed in the table above is set out below.

DBRS

DBRS has different rating scales for short- and long-term debt and preferred shares. **High** or **low** grades are used to indicate the relative standing within all rating categories other than AAA and D and other than in respect of DBRS' ratings of commercial paper and short-term debt, which utilize **high**, **middle** and **low** subcategories for its R-1 and R-2 rating categories. In respect of long-term debt and preferred share ratings, the absence of either a **high** or **low** designation indicates the rating is in the middle of the category. The R-1 (low) rating assigned to TCPL's and TCPL guaranteed short-term debt is in the third highest of 10 rating categories and indicates good credit quality. The capacity for payment of short-term financial obligations as they fall due is substantial. The overall strength is not as favourable as higher rating categories. Short-term debt rated R-1 (low) may be vulnerable to future events, but qualifying negative factors are considered manageable. The A (low) rating assigned to TCPL's senior unsecured debt is in the third highest of 10 categories for long-term debt. Long-term debt rated A is good credit quality. The capacity for the payment of financial obligations is substantial, but of lesser credit quality than that of AA rated securities. Long-term debt rated A may be vulnerable to future events but qualifying negative factors are considered manageable. The BBB rating assigned to junior subordinated notes is in the fourth highest of the 10 categories for long-term debt. Long-term debt rated BBB is of adequate credit quality. The capacity for the payment of financial obligations is considered acceptable, but long-term debt rated BBB may be vulnerable to future events. The Pfd-2 (low) rating assigned to TransCanada's preferred shares is in the second highest of six rating categories for preferred shares. Preferred shares rated Pfd-2 are of satisfactory credit quality. Protection of dividends and principal is still substantial; however, earnings, the balance sheet and coverage ratios are not as strong as Pfd-1 rated companies. In general, Pfd-2 ratings correspond with companies whose long-term debt is rated in the A category.

MOODY'S

Moody's has different rating scales for short- and long-term obligations. Numerical modifiers 1, 2 and 3 are appended to each rating classification from Aa through Caa. The modifier 1 indicates that the obligation ranks in the higher end of its generic rating category; the modifier 2 indicates a mid-range ranking; and a modifier 3 indicates a ranking in the lower end of that generic rating category. The A3 rating assigned to TCPL's senior unsecured debt is in the third highest of nine rating categories for long-term obligations. Obligations rated A are judged to be upper medium-grade and are subject to low credit risk. The P-2 rating assigned to TCPL's and TCPL guaranteed U.S. commercial paper programs is the second highest of four rating categories for short-term debt issuers. Issuers rated P-2 have a strong ability to repay short-term debt obligations. The Baa1 and Baa2 ratings assigned to TCPL's junior subordinated

notes and to both TransCanada's preferred shares and the TransCanada Trust subordinated trust notes, respectively, are in the fourth highest of nine rating categories for long-term obligations, with the junior subordinated notes ranking higher within the Baa rating category with a modifier of 1 as opposed to the modifier of 2 on the subordinated trust notes and preferred shares. Obligations rated Baa are judged to be medium-grade and are subject to moderate credit risk and, as such, may possess certain speculative characteristics.

S&P

S&P has different rating scales for short- and long-term obligations. Ratings from AA through CCC may be modified by the addition of a plus (+) or minus (-) sign to show the relative standing within a particular rating category. The A- rating assigned to TCPL's senior unsecured debt is in the third highest of 10 rating categories for long-term obligations. An A rating indicates the obligor's capacity to meet its financial commitment is strong; however, the obligation is somewhat more susceptible to the adverse effects of changes in circumstances and economic conditions than obligations in higher rated categories. TCPL's and TCPL guaranteed U.S. commercial paper programs are each rated A-2 which is the second highest of eight rating categories for short-term debt issuers. Short-term debt issuers rated A-2 have satisfactory capacity to meet their financial commitments, however they are somewhat more susceptible to adverse effects of changes in circumstances and economic conditions than obligors in the highest rating category. The BBB rating assigned to TCPL's junior subordinated notes and to the TransCanada Trust subordinated trust notes is in the fourth highest of 10 rating categories for long-term debt obligations and the P-2 rating assigned to TransCanada's preferred shares is the second highest of eight rating categories for Canadian preferred shares. The BBB and P-2 ratings assigned to TCPL's junior subordinated notes, the TransCanada Trust subordinated trust notes and TransCanada's preferred shares exhibit adequate protection parameters. However, adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity of the obligor to meet its financial commitment on the obligation.

Market for securities

TransCanada holds all of the common shares of TCPL and these are not listed on a public market. TCPL's Formosa Bonds are listed on the Taipei Exchange. Since the date of issuance no Formosa Bonds have been traded on the Taipei Exchange.

During 2016 (to date), 79,655,911 common shares of TCPL were issued to TransCanada as set out in the following table:

Date	Number of TCPL common shares	Price per TCPL common share	Aggregate issuance price
June 28, 2016	43,134,601	\$57.28	\$2,470,750,000
November 16, 2016	17,058,823	\$59.50	\$1,015,000,000
November 21, 2016	16,561,775	\$60.38	\$1,000,000,000
December 1, 2016	2,900,712	\$60.33	\$175,000,000
January 31, 2017	3,032,268	\$61.67	\$187,000,000

TCPL has not sold or issued any securities that are not listed or quoted on a market place during the year ended December 31, 2016, other than the common shares listed in the table above and the (i) US\$400 million principal amount of 3.125% senior note due 2026 on January 27, 2016, (ii) US\$850 million principal amount of 4.875% senior note due 2026 on January 27, 2016, (iii) \$300 million principal amount of 3.69% medium term note debentures due 2023 on June 6, 2016, (iv) \$700 million principal amount of 4.35% medium term note debentures due 2046 on June 6, 2016, and (v) US\$1.2 billion principal amount of 6.125% junior subordinated notes due 2076 on August 11, 2016.

Directors and officers

As of March 15, 2017, the directors and officers of TCPL as a group beneficially owned, or exercised control or direction over, directly or indirectly, an aggregate of 642,719 common shares of TransCanada. This constitutes less than one per cent of TransCanada's common shares. The Company collects this information from our directors and officers but otherwise we have no direct knowledge of individual holdings of TransCanada's securities.

DIRECTORS

The following table sets forth the names of the directors who serve on the Board, as of March 15, 2017 (unless otherwise indicated), together with their jurisdictions of residence, all positions and offices held by them with TCPL, their principal occupations or employment during the past five years and the year from which each director has continually served as a director of TransCanada and, prior to the Arrangement, with TCPL. Positions and offices held with TCPL are also held by such person at TransCanada. Each director holds office until the next annual meeting or until his or her successor is earlier elected or appointed.

Name and place of residence	Principal occupation during the five preceding years	Director since
Kevin E. Benson Calgary, Alberta Canada	Corporate director. Director, Winter Sport Institute (non-profit) since February 2015. Director, Calgary Airport Authority from January 2010 to December 2013.	2005
Derek H. Burney, O.C. Ottawa, Ontario Canada	Senior strategic advisor, Norton Rose Fulbright (law firm). Chairman, GardaWorld International Advisory Board (risk management and security services) since April 2008. Advisory Board member, Paradigm Capital Inc. (investment dealer) since May 2011.	2005
Stéphan Crétier ¹	Corporate director. Chairman, President and Chief Executive Officer of Garda World Security Corporation (Garda World) (private security services) and director of a number of Garda World's direct and indirect subsidiaries, since 1999. Director, ORTHOsoft Inc. (formerly ORTHOsoft Holdings Inc.) (medical software technology) from August 2004 to November 2004. Director, BioEnvelop Technologies Corp. (manufacturing) from 2001 to 2003. Director, President and Chief Executive Officer, Rafale Capital Corp. (manufacturing) from 1999 to 2001.	2017
Russell K. Girling ² Calgary, Alberta Canada	President and Chief Executive Officer, TransCanada since July 2010. Chief Operating Officer from July 2009 to June 2010, and President, Pipelines from June 2006 to June 2010. Director, American Petroleum Institute since January 2015. Director, Agrium Inc. (agricultural) since May 2006.	2010
S. Barry Jackson Calgary, Alberta Canada	Corporate director. Chair of the Board, TransCanada since April 2005. Director, WestJet Airlines Ltd. (airline) since February 2009. Director, Laricina Energy Ltd. (oil and gas, exploration and production) since December 2005. Director, Nexen Inc. (Nexen) (oil and gas, exploration and production) from 2001 to June 2013, and Chair of the board, Nexen from 2012 to June 2013.	2002
John E. Lowe Houston, Texas U.S.A.	Non-executive Chairman of the Board of Directors, Apache Corporation (Apache) (oil and gas) since May 2015. Director, Apache from July 2013 to May 2015. Senior Executive Adviser at Tudor Pickering, Holt & Co. LLC (energy investment and merchant banking) since September 2012. Director, Phillips 66 Company (energy infrastructure) since May 2012. Director, Agrium Inc. (agriculture) from May 2010 to August 2015. Director, DCP Midstream LLC and DCP Midstream GP, LLC (energy infrastructure) from October 2008 to April 2012. Assistant to the Chief Executive Officer, ConocoPhillips (oil and gas, exploration and production) from October 2008 to April 2012. Director, Chevron Phillips Chemical Co. LLC (global petrochemicals) from October 2008 to January 2011.	2015
Paula Rospot Reynolds Seattle, Washington U.S.A.	President and Chief Executive Officer, PreferWest, LLC (business advisory group) since October 2009. Director, CBRE Group, Inc. (commercial real estate) since March 2016. Director, BP p.l.c. (oil and gas) since May 2015. Director, Siluria Technologies Inc. (natural gas) since February 2015. Director, BAE Systems plc. (aerospace, defence, information security) since April 2011. Director, Delta Air Lines, Inc. (airline) from August 2004 to June 2015. Director, Anadarko Petroleum Corporation (oil and gas, exploration and production) from August 2007 to May 2014.	2011
John Richels Nichols Hills, Oklahoma U.S.A.	Corporate director. Chairman, Devon Energy Corporation (oil and gas, exploration and production, energy infrastructure) since June 2016, and Director since June 2007 (Vice Chair from December 2014 to June 2016). Director, Independent Petroleum Association of America (oil and gas) since November 2007. Chairman of EnLink Midstream, LLC and EnLink Midstream Partner, LP (energy infrastructure) from March 2014 to June 2016. Director, BOK Financial Corporation (financial services) from January 2013 to April 2016. Chairman, American Exploration and Production Council from May 2012 to June 2015. Former Vice-Chairman of the board of governors, Canadian Association of Petroleum Producers.	2013
Mary Pat Salomone Naples, Florida U.S.A.	Corporate director. Director, Herc Rentals (equipment rental) since July 2016. Director, Intertape Polymer Group (manufacturing) since November 2015. Senior Vice-President and Chief Operating Officer, The Babcock & Wilcox Company (energy infrastructure) from January 2010 to June 2013. Director, United States Enrichment Corporation (basic materials, nuclear) from December 2011 to October 2012.	2013
Indira Samarasekera Vancouver, British Columbia Canada	Senior Advisor, Bennett Jones LLP (law firm) since September 2015. Director, Magna International (automotive manufacturing) since May 2014 and the Bank of Nova Scotia (Scotiabank) (chartered bank) since May 2008. Member, The TriLateral Commission since August 2016. Federal member, Independent Advisory Board for Senate Appointments since January 2016.	2016
D. Michael G. Stewart Calgary, Alberta Canada	Corporate director. Director, Pengrowth Energy Corporation (oil and gas, exploration and production) since December 2010. Director, Canadian Energy Services & Technology Corp. (chemical, oilfield services) since January 2010. Director, Northpoint Resources Ltd. (oil and gas, exploration and production) from July 2013 to February 2015. Director, C&C Energia Ltd. (oil and gas) from May 2010 to December 2012.	2006
Siim A. Vanaselja Westmount, Québec Canada	Corporate director. Director, Great-West Lifeco Inc. (financial services) since May 2014. Director, Maple Leaf Sports and Entertainment Ltd. (sports, property management) since August 2012. Executive Vice-President and Chief Financial Officer, BCE Inc. and Bell Canada (telecommunications and media) from January 2001 to June 2015.	2014

Name and place of residence	Principal occupation during the five preceding years	Director since
Richard E. Waugh Calgary, Alberta Canada	Corporate director. Advisor, Acasta Enterprises Inc. (asset management/investment) since June 23, 2015. Deputy Chairman, Scotiabank from November 2013 to January 2014. President and Chief Executive Officer, Scotiabank from March 2003 to November 2013, and Deputy Chairman until January 2014. Director, Catalyst Inc. (non-profit) from February 2007 to November 2013, and Chair, Catalyst Canada Inc. Advisory Board from February 2007 to October 2013.	2012

¹ Effective February 17, 2017.

² As President and CEO of TransCanada, Mr. Girling is not a member of any Board Committees, but is invited to attend committee meetings as required.

Cease Trade Orders, Bankruptcies, Penalties or Sanctions

Except as indicated below, no other director or executive officer of the Corporation is or was a director, chief executive officer or chief financial officer of another company in the past 10 years that:

- was the subject of a cease trade or similar order, or an order denying that company any exemption under securities legislation, that was in effect for a period of more than 30 consecutive days
- was involved in an event that resulted in the company being subject to one of the above orders after the director or executive officer no longer held that role with the company, which resulted from an event that occurred while that person was acting in the capacity as director, chief executive officer or chief financial officer
- while acting in that capacity, or within a year of acting in that capacity, became bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or was subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold the assets of that company.

Canwest Global Communications Corp. voluntarily entered into the Companies' Creditors Arrangement Act (**CCAA**) and obtained an order from the Ontario Superior Court of Justice to start proceedings on October 6, 2009. Although no cease trade orders were issued, Canwest shares were de-listed by the TSX after the filing and started trading on the TSX Venture Exchange. Canwest emerged from CCAA protection and Postmedia Network acquired its newspaper business on July 13, 2010 while Shaw Communications Inc. acquired its broadcast media business on October 27, 2010. Mr. Burney was a director of Canwest from April 2005 to October 2010.

Laricina Energy (**Laricina**) voluntarily entered into the CCAA and obtained an order from the Court of Queen's Bench of Alberta, Judicial Centre of Calgary for creditor protection and stay of proceedings effective March 26, 2015. A final court order was granted on January 28, 2016, allowing Laricina to exit from protection under the CCAA and concluding the stay of proceedings against Laricina and its subsidiaries. Mr. Jackson has been a director of Laricina since December 2005.

On May 6, 2009, Crucible Materials Corp. (**Crucible**) and one of its affiliates filed voluntary petitions for relief under Chapter 11 of the United States Bankruptcy Code in the U.S. Bankruptcy Court for the District of Delaware (the **Bankruptcy Court**). On August 26, 2010, the Bankruptcy Court entered an order confirming Crucible's Second Amended Chapter 11 Plan of Liquidation. Ms. Salomone was a director of Crucible from May 2008 to May 1, 2009.

No director or executive officer of the Corporation has within the past 10 years:

- become bankrupt
- made a proposal under any legislation relating to bankruptcy or insolvency
- become subject to or launched any proceedings, arrangement or compromise with any creditors, or
- had a receiver, receiver manager or trustee appointed to hold any of their assets.

No director or executive officer of the Corporation has been subject to:

- any penalties or sanctions imposed by a court relating to securities legislation or by a securities regulatory authority or has entered into a settlement agreement with a securities regulatory authority, or
- any other penalties or sanctions imposed by a court or regulatory body that would likely be considered important to a reasonable investor in making an investment decision.

BOARD COMMITTEES

TCPL has four committees of the Board, which are the same committees and are comprised of the same membership as TransCanada: the Audit committee, the Governance committee, the Health, Safety & Environment committee and the Human Resources committee. The voting members of each of these committees, as of March 15, 2017, are identified below. Information about the Audit committee can be found in this AIF under the heading *Audit committee*.

Director	Audit committee	Governance committee	Health, Safety & Environment committee	Human Resources committee
Kevin E. Benson	✓	✓		
Derek H. Burney	✓	Chair		
Stéphan Crétier ¹	✓		✓	
S. Barry Jackson (Chair)		✓		✓
John E. Lowe	✓		✓	
Paula Rospot Reynolds			✓	Chair
John Richels			✓	✓
Mary Pat Salomone			✓	✓
Indira Samarasekera	✓	✓		
D. Michael G. Stewart	✓		Chair	
Siim A. Vanaselja	Chair	✓		
Richard E. Waugh		✓		✓

¹Effective February 17, 2017.

OFFICERS

All of the executive officers and corporate officers of TCPL reside in Calgary, Alberta, Canada. Unless otherwise indicated, references to positions and offices held with TCPL are also held by such person at TransCanada. As of the date hereof, the officers of TCPL, their present positions within TCPL and their principal occupations during the five preceding years are as follows:

Executive officers

Name	Present position held	Principal occupation during the five preceding years
Russell K. Girling	President and Chief Executive Officer	President and Chief Executive Officer.
Kristine L. Delkus	Executive Vice-President, Stakeholder Relations and General Counsel	Prior to October 2015, Executive Vice-President, General Counsel and Chief Compliance Officer. Prior to March 2014, Senior Vice-President, Pipelines Law and Regulatory Affairs. Prior to June 2012, Deputy General Counsel, Pipelines and Regulatory Affairs (TCPL).
Wendy L. Hanrahan	Executive Vice-President, Corporate Services	Executive Vice-President, Corporate Services.
Karl R. Johannson	Executive Vice-President and President, Natural Gas Pipelines	Prior to November 2012, Senior Vice-President, Canadian and Eastern U.S. Pipelines.
Donald R. Marchand	Executive Vice-President and Chief Financial Officer	Prior to February 1, 2017, Executive Vice-President, Corporate Development and Chief Financial Officer. Prior to October 2015, Executive Vice-President and Chief Financial Officer.
Paul E. Miller	Executive Vice-President and President, Liquids Pipelines	Prior to March 2014, Senior Vice-President, Oil Pipelines.
Francois L. Poirier	Executive Vice President, Strategy and Corporate Development	Prior to February 1, 2017, Senior Vice-President, Strategy and Corporate Development (Corporate Services Division) since October 2015. President, Energy East Pipeline (Development Division) from April 1, 2014 to September 30, 2015. President, Wells Fargo Securities Canada, Ltd., from January 1, 2012 to March 31, 2014.
Alexander J. Pourbaix	Chief Operating Officer	Prior to October 2015, Executive Vice-President and President, Development. Prior to March 2014, President, Energy and Oil Pipelines.
William C. Taylor	Executive Vice-President and President, Energy	Prior to March 2014, Senior Vice-President, U.S. and Canadian Power. Prior to May 2013, Senior Vice-President, Eastern Power.

Corporate officers

Name	Present position held	Principal occupation during the five preceding years
Sean M. Brett	Vice-President, Risk Management	Prior to August 2015, Vice-President and Treasurer.
Ronald L. Cook	Vice-President, Taxation	Vice-President, Taxation (TCC) and Vice-President, Taxation (TCPL).
Joel E. Hunter	Vice-President, Finance and Treasurer	Prior to August 2015, Vice-President, Finance.
Christine R. Johnston	Vice-President, Law and Corporate Secretary	Prior to June 2014, Vice-President and Corporate Secretary. Prior to March 2012, Vice-President, Finance Law.
G. Glenn Menuz	Vice-President and Controller	Vice-President and Controller.

CONFLICTS OF INTEREST

Directors and officers of TransCanada and its subsidiaries are required to disclose any existing or potential conflicts in accordance with TransCanada policies governing directors and officers and in accordance with the CBCA. Further information regarding our policies related to conflicts of interest can be found at *Schedule B* to this AIF under the headings *Board characteristics – Independence - Serving on other boards* and *Governance philosophy – Conflicts of interest*.

Corporate governance

Information about TCPL's corporate governance, including the Company's Board committees and their charters, can be found at *Schedule B* to this AIF, which is excerpted from TransCanada's Management information circular dated February 28, 2017 (*TransCanada's Circular*).

Audit committee

The Audit committee is responsible for assisting the Board in overseeing the integrity of our financial statements and our compliance with legal and regulatory requirements. It is also responsible for overseeing and monitoring the internal accounting and reporting process and the process, performance and independence of our internal and external auditors. The charter of the Audit committee can be found in *Schedule C* of this AIF.

RELEVANT EDUCATION AND EXPERIENCE OF MEMBERS

The members of the Audit committee as of February 15, 2017 are Siim A. Vanaselja (Chair), Kevin E. Benson, Derek H. Burney, John E. Lowe, Indira Samarasekera, and D. Michael G. Stewart. Mary Pat Salomone was a voting member of the committee from April 26, 2013 until April 29, 2016. Ms. Samarasekera joined the Committee effective April 29, 2016 and Stéphan Crétier will join the committee effective February 17, 2017.

The Board believes that the composition of the Audit committee reflects a high level of financial literacy and expertise. Each member of the Audit committee has been determined by the Board to be *independent* and *financially literate* within the meaning of the definitions under Canadian and U.S. securities laws and the NYSE rules. In addition, the Board has determined that Mr. Vanaselja, Mr. Benson and Mr. Lowe are *Audit Committee Financial Experts* as that term is defined under U.S. securities laws. The Board has made these determinations based on the education and breadth and depth of experience of each member of the Audit committee. The following is a description of the education and experience, apart from their respective roles as directors of TransCanada, of each member of the Audit committee that is relevant to the performance of his responsibilities as a member of the Audit committee.

Siim A. Vanaselja

Mr. Vanaselja is a member of the Chartered Professional Accountants of Ontario and holds an Honours Bachelor of Business degree from the Schulich School of Business. He was the Executive Vice-President and Chief Financial Officer of BCE Inc. and Bell Canada from January 2001 until June 2015, having previously served as Executive Vice-President and Chief Financial Officer of Bell Canada International from 1996 to 2001. Prior to that, he was a partner at the accounting firm KPMG Canada in Toronto. Mr. Vanaselja serves as director for Great-West Lifeco Inc. and Maple Leaf Sports and Entertainment Ltd. He has served as a member of the Conference Board of Canada's National Council of Financial Executives, the Corporate Executive Board's Working Council for Chief Financial Officers and Moody's Council of Chief Financial Officers.

Kevin E. Benson

Mr. Benson is a Chartered Accountant (South Africa) and was a member of the South African Society of Chartered Accountants. He serves as a director of the Winter Sport Institute, and was the President and Chief Executive Officer of Laidlaw International, Inc. from June 2003 until October 2007. In prior years, he has held several executive positions including as President and Chief Executive Officer of The Insurance Corporation of British Columbia and has served on other public company boards and on the audit committees of all of those boards.

Derek H. Burney

Mr. Burney earned a Bachelor of Arts (Honours) and Master of Arts from Queen's University. He is currently a senior strategic advisor at Norton Rose Fulbright. He previously served as President and Chief Executive Officer of CAE Inc. and as Chair and Chief Executive Officer of Bell Canada International Inc. Mr. Burney was the lead director at Shell Canada Limited from April 2001 until May 2007 and was the Chair of Canwest Global Communications Corp. from August 2006 until October 2010. He has served on one other organization's audit committee and has participated in Financial Reporting Standards Training offered by KPMG.

Stéphan Crétier

Mr. Crétier earned a Masters of Business Administration from the University of California (Pacific). He is the Chairman, President and CEO of a multinational corporation, Garda World with over 20 years of experience in providing company-wide operational and financial oversight. Mr. Crétier also serves as director of a number of Garda World's direct and indirect subsidiaries. He previously served as a director of three public companies, ORTHOsoft Inc. (formerly ORTHOsoft Holdings Inc.), BioEnvelop Technologies Corp. and Rafale Capital Corp.

John E. Lowe

Mr. Lowe holds a Bachelor of Science degree in Finance and Accounting from Pittsburg State University and is a Certified Public Accountant (inactive). He has been the non-executive Chairman of Apache's board of directors since May 2015. He also currently serves on the board of directors for Phillips 66 Company and has been the Senior Executive Adviser at Tudor, Pickering, Holt & Co. LLC since September 2012. Mr. Lowe has previously served on the audit committees for Agrium Inc. and DCP Midstream LLC. He has also held various executive and management positions with ConocoPhillips for more than 25 years.

Indira Samarasekera

Dr. Samarasekera earned an MSc from the University of California and was granted a PhD in metallurgical engineering from the University of British Columbia. She also holds honorary degrees from the Universities of Alberta, British Columbia, Toronto, Waterloo, Montreal and Western in Canada and Queen's University in Belfast, Ireland. Dr. Samarasekera is currently a senior advisor for Bennett Jones LLP and serves on the board of directors of the Bank of Nova Scotia, Magna International, Asia-Pacific Foundation, the Rideau Hall Foundation and the Perimeter Institute of Theoretical Physics. She is also a member of the TriLateral Commission, a federal member of the Independent Advisory Board for Senate Appointments and sits on the selection panel for Canada's outstanding chief executive officer of the year.

D. Michael G. Stewart

Mr. Stewart earned a Bachelor of Science in Geological Sciences with First Class Honours from Queen's University. He currently serves on the board of directors of Pengrowth Energy Corporation (governance committee Chair) and Canadian Energy Services and Technology Corp. (corporate governance and nominating committee Chair). He has also previously served on the board of directors of several other public companies and organizations and was on the audit committee of certain of those boards. Mr. Stewart held a number of senior executive positions with Westcoast Energy Inc. including Executive Vice-President, Business Development. He has been active in the Canadian energy industry for over 40 years.

PRE-APPROVAL POLICIES AND PROCEDURES

TCPL's Audit committee has adopted a pre-approval policy with respect to permitted non-audit services. Under the policy, the Audit committee has granted pre-approval for specified non-audit services. For engagements of up to \$250,000, approval of the Audit committee Chair is required, and the Audit committee is to be informed of the engagement at the next scheduled Audit committee meeting. For all engagements of \$250,000 or more, pre-approval of the Audit committee is required. In all cases, regardless of the dollar amount involved, where there is a potential for conflict of interest involving the external auditor to arise on an engagement, the Audit committee must pre-approve the assignment.

To date, all non-audit services have been pre-approved by the Audit committee in accordance with the pre-approval policy described above.

EXTERNAL AUDITOR SERVICE FEES

The table below shows the services KPMG provided during the last two fiscal years and the fees we paid them:

(\$ millions)	2016	2015
Audit fees	\$8.2	\$7.8
<ul style="list-style-type: none">• audit of the annual consolidated financial statements• services related to statutory and regulatory filings or engagements• review of interim consolidated financial statements and information contained in various prospectuses and other securities offering documents		
Audit-related fees	\$0.1	\$0.2
<ul style="list-style-type: none">• services related to the audit of the financial statements of certain TransCanada post-retirement and post-employment plans, and pipeline abandonment trusts		
Tax fees	\$0.6	\$0.5
<ul style="list-style-type: none">• Canadian and international tax planning and tax compliance matters, including the review of income tax returns and other tax filings		
All other fees	—	—
Total fees	\$8.9	\$8.5

Note: The tax fees principally related to fees incurred on account of compliance matters.

Loans to directors and executives

As of the date of this AIF, none of our directors or executives had any loans from TCPL or any of our subsidiaries. This is also true for:

- former executives or directors of TCPL or any of our subsidiaries
- this year's nominated directors, and
- any associate of a director, executive officer or nominated director.

None of the above owe money to another entity that is the subject of a guarantee, support agreement, letter of credit or other similar arrangement or understanding provided by TCPL or any of our subsidiaries.

Securities owned by directors

The table below shows the total value of each director's common shares of TransCanada as of March 15, 2017 in addition to the total value of deferred share units (**DSUs**) of TransCanada or shares of our affiliates outstanding at the end of 2016, including the DSUs credited as dividend equivalents until January 31, 2017.

None of the nominated directors (or all of our directors and executives as a group) own more than one per cent of TransCanada shares, or any class of shares of its subsidiaries and affiliates.

Director	TransCanada common shares	TransCanada deferred share units
K. Benson	13,000	68,403
D. Burney	12,910	62,782
Stéphan Crétier	—	—
R. Girling ^{1,2}	246,390	—
S.B. Jackson	39,000	146,772
John E. Lowe	15,000	7,952
P. Rosput Reynolds	6,000	21,613
J. Richels ³	10,000	19,998
M.P. Salomone	3,000	11,407
Indira Samarasekera	—	2,652
D.M.G. Stewart ⁴	16,651	30,928
S.A. Vanaselja	12,000	12,719
R.E. Waugh ⁵	29,730	23,533

Refer to the *Compensation of directors* section below for further information regarding the compensation of TransCanada's directors.

¹ Mr. Girling is an employee of TCPL and participates in the Company's executive share unit program. He does not participate in the DSU program. Securities owned, controlled or directed include common shares that Mr. Girling has a right to acquire through exercise of stock options that are vested under the stock option plan, which is described in Schedule D to this AIF under the heading Compensation - Executive compensation. Directors as such do not participate in the stock option plan. Mr. Girling, as an employee of TCPL, has the right to acquire 1,756,310 TransCanada common shares under vested stock options.

² Mr. Girling's holdings include 4,000 shares held by his wife.

³ Mr. Richels' holdings represent 10,000 shares held in a family partnership controlled by Mr. Richels and his wife.

⁴ Mr. Stewart's holdings include 2,129 shares held by his wife.

⁵ Mr. Waugh's holdings include 4,220 shares held by his wife.

Compensation of directors

Information relating to the compensation of directors, including information regarding compensation paid by TCPL to directors in 2016, the Company's minimum share ownership guidelines and TransCanada's share unit plan for non-employee directors, is provided in *Schedule D* to this AIF under the heading *Compensation – Director compensation*, which is excerpted from TransCanada's Circular.

Executive compensation

Information relating to TCPL's compensation governance is provided in *Schedule D* to this AIF under the heading *Compensation – Compensation governance*, which is excerpted from TransCanada's Circular. Information relating to TCPL's executive compensation is provided in *Schedule D* to this AIF under the heading *Compensation – Executive compensation*, which is excerpted from TransCanada's Circular.

Board and committee meetings of TransCanada and TCPL run concurrently. TCPL is the principal operating subsidiary of TransCanada. Executive officers of TCPL also serve as executive officers of TransCanada. An aggregate remuneration is paid for serving as an executive of TCPL and for service as an executive officer of TransCanada. Since TransCanada does not hold any material assets directly other than the common shares of TCPL and receivables from certain of TransCanada's subsidiaries, all executive employee costs are assumed by TCPL according to a management services agreement between the two companies.

Legal proceedings and regulatory actions

Legal proceedings, arbitrations and actions are part of doing business. While we cannot predict the final outcomes of proceedings and actions with certainty, management does not expect any current proceeding or action to have a material impact on our consolidated financial position or results of operations. Other than the Keystone XL legal proceedings described in this AIF under the heading **General development of the business – Liquids Pipelines – Keystone XL**, we are not aware of any potential legal proceeding or action that would have a material impact on our consolidated financial position or results of operations.

Transfer agent and registrar

TCPL's transfer agent and registrar is Computershare Trust Company of Canada with its Canadian transfer facilities in the cities of Vancouver, Calgary, Toronto, Halifax and Montréal.

Material contracts

Except as described below, TransCanada did not enter into any material contracts outside the ordinary course of business during the year ended December 31, 2016, nor has it entered into any material contracts outside the ordinary course of business prior to the year ended December 31, 2016 which are still in effect as at the date of this AIF.

In connection with the acquisition of Columbia, the Company filed the following material contract on its SEDAR profile at www.sedar.com: Agreement and Plan of Merger among TCPL, TransCanada Pipeline USA LTD., Taurus Merger Sub Inc., Columbia, and, solely for purposes of Section 3.02, Section 5.02, Section 5.09 and Article VIII, TransCanada Corporation dated as of March 17, 2016. Further information about the Columbia acquisition can be found under the **General – Acquisition of Columbia Pipeline Group, Inc.** and **General development of the business – Natural Gas Pipelines – Developments in the U.S. Natural Gas Pipelines segment** headings in this AIF.

Interest of experts

KPMG LLP are the auditors of TransCanada and have confirmed with respect to TransCanada, that they are independent within the meaning of the relevant rules and related interpretations prescribed by the relevant professional bodies in Canada and any applicable legislation or regulations and also that they are independent accountants with respect to all relevant U.S. professional and regulatory standards.

The consolidated and combined financial statements of Columbia as of December 31, 2015 and 2014, and for each of the three years ended December 31, 2015, included in Schedule B to the business acquisition report dated July 22, 2016 were audited by Deloitte & Touche LLP (which report expresses an unqualified opinion and includes an explanatory paragraph relating to Columbia's initial public offering of limited partner interests of CPPL which was completed on February 11, 2015 and Columbia's spin-off from NiSource Inc. on July 1, 2015).

Additional information

1. Additional information in relation to TCPL may be found under TCPL's profile on SEDAR (www.sedar.com).
2. Additional financial information is provided in TCPL's audited consolidated financial statements and MD&A for its most recently completed financial year.

Glossary

Units of measure

Bbl/d	Barrel(s) per day
Bcf	Billion cubic feet
Bcf/d	Billion cubic feet per day
GWh	Gigawatt hours
km	Kilometres
KW-M	Kilowatt month
MMcf/d	Million cubic feet per day
MW	Megawatt(s)
MWh	Megawatt hours
TJ/d	Terajoule per day

General terms and terms related to our operations

bitumen	A thick, heavy oil that must be diluted to flow (also see: diluent). One of the components of the oil sands, along with sand, water and clay
diluent	A thinning agent made up of organic compounds. Used to dilute bitumen so it can be transported through pipelines
FID	Final investment decision
force majeure	Unforeseeable circumstances that prevent a party to a contract from fulfilling it
GHG	Greenhouse gas
HSE	Health, safety and environment
investment base	Includes rate base as well as assets under construction
LNG	Liquefied natural gas
NEB 2014 Decision	In response to the RH-01-2014 Decision on the Canadian Mainline's 2015-2030 Tolls Application
OM&A	Operating, maintenance and administration
PJM Interconnection area (PJM)	A regional transmission organization that coordinates the movement of wholesale electricity in all or parts of 13 states and the District of Columbia
PPA	Power purchase arrangement
rate base	Our annual average investment used
TSA	Transportation Service Agreements
WCSB	Western Canada Sedimentary Basin

Accounting terms

AFUDC	Allowance for funds used during construction
GAAP	U.S. generally accepted accounting principles
ROE	Rate of return on common equity

Government and regulatory bodies terms

CFE	Comisión Federal de Electricidad (Mexico)
FERC	Federal Energy Regulatory Commission (U.S.)
IESO	Independent Electricity System Operator
NAFTA	North American Free Trade Agreement
NEB	National Energy Board (Canada)
SEC	U.S. Securities and Exchange Commission
SGER	Specified Gas Emitters Regulations

Schedule A

Metric conversion table

The conversion factors set out below are approximate factors. To convert from Metric to Imperial multiply by the factor indicated. To convert from Imperial to Metric divide by the factor indicated.

Metric	Imperial	Factor
Kilometres (km)	Miles	0.62
Millimetres	Inches	0.04
Gigajoules	Million British thermal units	0.95
Cubic metres*	Cubic feet	35.3
Kilopascals	Pounds per square inch	0.15
Degrees Celsius	Degrees Fahrenheit	to convert to Fahrenheit multiply by 1.8, then add 32 degrees; to convert to Celsius subtract 32 degrees, then divide by 1.8

* The conversion is based on natural gas at a base pressure of 101.325 kilopascals and at a base temperature of 15 degrees Celsius.

Schedule B

Governance

We believe that strong governance improves corporate performance and benefits all stakeholders.

This section discusses our approach to governance and describes our Board and how it works.

About our governance practices

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

TransCanada is a public company listed on the TSX and the NYSE, and we recognize and respect rules and regulations in both Canada and the U.S.

Our corporate governance practices comply with the Canadian governance guidelines, which include the governance rules of the TSX and Canadian Securities Administrators (CSA):

- National Instrument 52-110, **Audit Committees**,
- National Policy 58-201, **Corporate Governance Guidelines**, and
- National Instrument 58-101, **Disclosure of Corporate Governance Practice** (NI 58-101).

We also comply with the governance listing standards of the NYSE and the governance rules of the U.S. Securities and Exchange Commission (SEC) that apply, in each case, to foreign private issuers.

Our governance practices comply with the NYSE standards for U.S. companies in all significant respects, except as summarized on our website (www.transcanada.com). As a non-U.S. company, we are not required to comply with most of the governance listing standards of the NYSE. As a foreign private issuer, however, we must disclose how our governance practices differ from those followed by U.S. companies that are subject to the NYSE standards.

We benchmark our policies and procedures against major North American companies to assess our standards and we adopt best practices as appropriate. Some of our best practices are derived from the NYSE rules and comply with applicable rules adopted by the SEC to meet the requirements of the **Sarbanes-Oxley Act of 2002** and the **Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank)**.

BOARD CHARACTERISTICS

Our Board and its members exemplify strong principles of corporate governance:

- an independent, non-executive Chair
- an effective board size
- all directors except our CEO are independent
- knowledgeable and experienced directors who ensure that we promote ethical behaviour throughout TransCanada
- qualified directors who can make a meaningful contribution to the Board and the development of our strategy and business and oversight of our risk management processes
- significant share ownership requirements to align the directors' interests with those of our shareholders, and
- annual assessments of Board, Chair, committee and director effectiveness.

Size and composition

TransCanada's articles state that the Board must have between eight and 15 directors. The Board has determined that 12 directors will be elected this year at the annual meeting. The Board believes this size is appropriate based on the scope of our business, the skills and experience of the nominated directors and the four standing committees, and to achieve effective decision making. It believes that all of the nominated directors are well qualified to serve on the Board.

We believe our Board must consist of qualified and knowledgeable directors, and include directors with direct experience in the oil and gas, pipelines and power sectors.

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Board diversity

We have 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, the committee 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 committee focuses on the process surrounding director nomination. Each year, the committee reviews the general and specific criteria applicable to candidates to be considered for nomination to the Board. These guidelines outline the criteria that the committee considers when evaluating potential director nominees. 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.

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. The committee regularly considers the current number of women on the Board when selecting director candidates by considering gender, in addition to other characteristics, as one of the factors.

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, as discussed in *Director tenure*, on page 42.

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.

We believe that this process is effective as 23 per cent of the Board is currently composed of women directors. After the annual meeting, if the nominated directors are all elected, 25 per cent of the Board will be comprised of women directors.

Board composition - gender



Independence

An independent board is a fundamental principle of governance. We believe that the majority of our directors must be *independent* in accordance with applicable Canadian legal requirements and guidelines, and consistent with the independence criteria of the regulations of the 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. The Governance Committee also reviews family relationships and associations with companies that have relationships with TransCanada when it reviews director independence.

The Board has determined that all of the nominated directors are independent, except for Mr. Girling because of his role as President and CEO. Other than Mr. 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 his or her 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. Mr. Jackson has served as the independent non-executive Chair since April 30, 2005.

In late 2016, we announced that Mr. Siim A. Vanaselja will be the next independent non-executive Chair of the Board, subject to his re-election at the 2017 annual meeting of shareholders. Mr. Vanaselja will succeed Mr. Jackson, who will retire as Chair of the Board at the close of the 2017 annual meeting of common shareholders. Mr. Jackson will continue to serve as a Board member, subject to his re-election at the 2017 annual meeting of shareholders.

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

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 have the following policy:

- outside directors may not serve on more than four public company boards in total,
- the CEO may not serve on more than two public company boards in total, and
- Audit committee members may not serve on more than three audit committees in total.

Currently, none of our directors serves on more than four public company boards, the CEO serves on two public company boards (including TransCanada's), and none of our Audit committee members serves on more than two audit committees in total.

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 generally cannot deny transportation services to a creditworthy shipper. As discussed in **Conflicts of interest**, the Governance committee monitors relationships among directors to ensure that business associations do not affect the Board's performance.

See the director profiles starting on page 13 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 2016, 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.

GOVERNANCE PHILOSOPHY

We believe that effective corporate governance improves corporate performance and benefits all shareholders and that honesty and integrity are vital to ensuring good corporate governance.

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.

Ethical business conduct

Our Code of business ethics (the Code) 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.

Any unusual behaviour or suspected violations of the Code must be reported immediately. Employees can report a concern to their supervisor, Corporate compliance, Internal audit, their Compliance coordinator, or to our Ethics help-line. The help-line allows anyone – employees, contractors, consultants, other stakeholders and the general public – to report a concern, confidentially and anonymously, about any perceived accounting irregularities, legal or ethical violations or other suspected breaches of the Code. The telephone number is published on our website and employee intranet, in other employee communications and in our Annual report. Our policy strictly prohibits reprisals or retaliation against anyone who files an ethics concern or complaint in good faith.

Internal audit handles most investigations, including any concerns about directors and senior management. Human resources professionals handle any concerns relating to human resource matters such as harassment.

The Audit committee monitors compliance with the Code and reports any significant violations to the Board. The committee follows formal procedures for receiving and reviewing complaints, determining a course of action and retaining the information on file. It also oversees the operation of the Ethics help-line as part of its responsibilities.

Any waiver of the Code for our executives and directors must be approved by the Board, or the appropriate committee. There were no material departures from the Code in 2016.

Effective July 1, 2016, TransCanada acquired Columbia Pipeline Group, Inc. (Columbia). Columbia's code of business ethics and compliance program was assessed and determined to be essentially equivalent to TransCanada's Code. Columbia employees will transition to compliance with TransCanada's Code during 2017.

The Code is posted on our website (www.transcanada.com).

Conflicts of interest

The Code covers potential conflicts of interest.

Serving on other boards

The Board considers whether directors serving on the boards of, or acting as officers or in another similar capacity for, other entities including public and private companies, Crown corporations and other state-owned entities, and non-profit organizations pose any potential conflict. The Board reviews these relationships annually to determine that they do not interfere with any of our director's ability to act in our best interests. If a director declares a material interest in any material contract or material transaction being considered at a meeting, the director is not present during the discussion and does not vote on the matter.

Our Code 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. All other employees must receive the consent of the Corporate Secretary or her delegate.

Affiliates

The Board oversees relationships between TransCanada and any affiliates to avoid any potential conflicts of interest. This includes our relationship with TC PipeLines, LP, a master limited partnership listed on the NYSE.

Auditor independence

Pursuant to the Audit committee charter, the Audit committee reviews, approves and monitors adherence to our hiring policies for partners, employees and former partners and employees of our current and former external auditors to ensure auditor independence is maintained. The committee also has a pre-approval policy with respect to permitted non-audit services

Our Annual information form (AIF) includes more information about the Audit committee, including the committee charter. The 2016 AIF is available on our website (www.transcanada.com) and on SEDAR (www.sedar.com).

Majority voting

Our majority voting policy applies to electing a new Board when the number of nominated directors is the same as the number of director positions available. If, prior to a meeting, a nominated director receives more "withheld" proxy votes than five per cent of the total votes cast by proxy, we will hold a vote by ballot for all directors. If a director does not receive a majority of "for" votes cast by ballot, the director must resign from the Board. The Board will accept the resignation if there are no exceptional circumstances. We expect the Board to announce its decision to either accept or reject the director's resignation in a press release within 90 days after the annual meeting, and include its reasons for rejecting the resignation, if applicable.

This policy does not apply if there is a proxy contest over the election of directors.

Share ownership

We have share ownership requirements for our directors and executives to align their interests with those of our shareholders. Ownership levels are significant, and directors and executives must meet the requirements within five years of assuming their position.

As of February 28, 2017, all of our directors who have served for at least five years meet the share ownership requirements, as do most of our directors who have served for fewer than five years. Mr. Crétier, Ms. Salomone and Dr. Samarasekera, each have five years from the date of their appointment to meet the requirements:

Director	Date appointed	Share ownership date
Mr. Crétier	February 17, 2017	February 17, 2022
Ms. Salomone	February 12, 2013	February 12, 2018
Dr. Samarasekera	April 29, 2016	April 29, 2021

Ms. Salomone met the share ownership requirements at December 31, 2016. Director compensation was transitioned to a flat fee retainer, in lieu of meeting fees on January 1, 2017, and as a result the share ownership requirement increased from \$720,000 to \$940,000.

See *Aligning the interests of directors and shareholders* on page 58 and *Aligning the interests of executives and shareholders* on page 77 for more information.

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.

The Board has key duties and responsibilities, delegates some duties to its four standing committees, and discharges others to management for managing the day-to-day affairs of the business.

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 coordinating the affairs of the Board, working with management (primarily the CEO), and ensuring effective relations with Board members, shareholders, other stakeholders and the public.

Charters and position descriptions

The Board and each committee have adopted a charter that outlines its principal responsibilities.

The charters are reviewed every year to ensure that they reflect current developments in corporate governance and corporate best practices, and the Board approves any necessary changes.

The Board charter describes the:

- composition and organization of the Board
- duties and responsibilities for managing our affairs, and
- oversight responsibilities for:
 - management and human resources
 - strategy and planning
 - financial and corporate issues
 - business and risk management, including compensation risk
 - policies and procedures
 - compliance reporting and corporate communications, and
 - general legal obligations, including its ability to use independent advisors as necessary.

The Board has also developed position descriptions for the Chair of the Board, each committee Chair and the CEO. The position descriptions for the Chair of the Board and the CEO are part of their terms of reference. The position descriptions for the Chair of each committee are contained in the committee charters.

See **Appendix A** for a copy of the Board charter. The Board charter, committee charters and position descriptions for the Chair of the Board and the CEO are posted on our website (www.transcanada.com).

Strategic planning

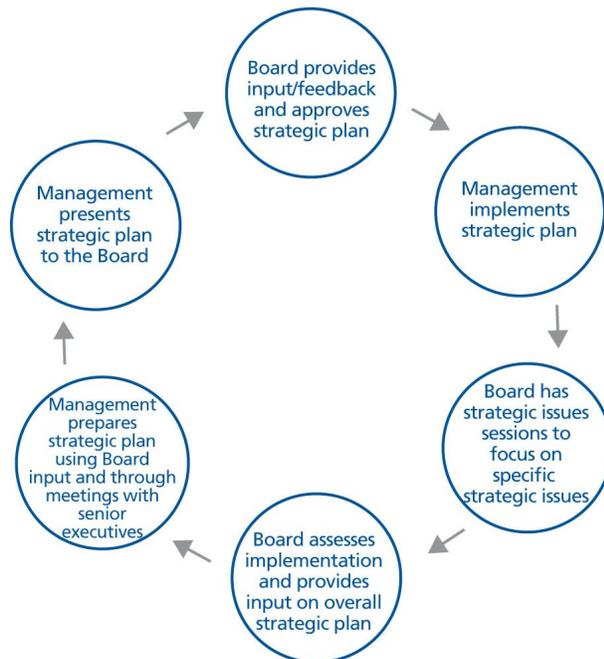
We have a multi-year strategic plan that balances risk and reward.

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.

The Board monitors management's progress toward achieving strategic goals, and discusses a broad range of matters related to our strategy, business interests and the dynamic environment in which we operate at each regularly scheduled meeting. Management also reports regularly on our operational and financial performance.

The Board generally holds a formal annual strategic planning session over two days and several sessions on strategic issues throughout the year. At strategic planning sessions, management and the Board review and discuss management's strategic plan, with the strategic plan put forward to the Board for approval. The strategic issues sessions provide the Board with the opportunity to consider specific strategic issues in detail. The frequency of these strategic sessions provides the Board with the time they need to discuss and address strategic issues.

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



See **Meeting attendance** on page 25 for more information about the meetings held in 2016 and **Orientation and education** on pages 37 and 38 for more information about the strategic issues and planning sessions attended by Board members in 2016.

Risk oversight

Process

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. 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 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, committees and executives responsible for specific oversight of each risk.

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).

The Governance committee oversees our risk management process. The committee reviews '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.

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 AIF and Annual report include more information about the risks applicable to TransCanada. The 2016 AIF and the 2016 Annual report are available on our website (www.transcanada.com) and on SEDAR (www.sedar.com).

Committee responsibilities

The various Board committees are also involved in risk oversight in their respective areas to ensure a robust risk management process with appropriate expertise, attention and diligence given to each key business risk. The chart below includes the risk focus area of each committee, and information on each risk focus area. The committees receive updates regularly from management on their risk focus areas, and update the Board on their risk oversight activities regularly. In addition to its specific focus area, each committee maintains an overall awareness of risk management for TransCanada, and includes other issues in its reports to the Board as appropriate.

Committee	Risk focus	Description
Audit	Financial risk	<ul style="list-style-type: none"> Oversees management’s role in monitoring compliance with financial risk management policies and procedures and reviewing the adequacy of our financial risk management. Ensures that: <ul style="list-style-type: none"> 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, and 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. Oversees cyber security and its related risks to TransCanada.
Governance	Risk management process and management allocation of risks	<ul style="list-style-type: none"> Reviews TransCanada’s ‘top-of-mind’ business risks with management at each committee meeting. Oversees the risk responsibility matrix with management annually to ensure there is proper Board and committee oversight according to the terms of their charters. Ensures that we have management programs in place to mitigate those risks. 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.
Health, Safety and Environment	Operational risk, people and process safety, security and environmental risk	<ul style="list-style-type: none"> Monitors compliance with our health, safety and environment (HSE) corporate policies through regular reporting from management, within the framework of our integrated HSE management system that is used to capture, organize and document our related policies, programs and procedures. See the next page for more details.
Human Resources	Human resources and compensation risk	<ul style="list-style-type: none"> Oversees the compensation policies and practices to effectively identify and mitigate compensation risks and discourage members of the executive leadership team or others from taking inappropriate or excessive risks and to ensure our compensation policies are not reasonably likely to have a material adverse effect on TransCanada. See Compensation governance starting on page 50 for more information about how we manage our compensation risk.

HSE risk management system

Our management system for HSE is modeled after international standards, conforms to external industry consensus standards and voluntary programs, and complies with applicable legislative and regulatory 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, and
- **Action:** ongoing audit and review of HSE performance.

The committee reviews HSE performance and operational risk management. 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, and
- 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.

Generally, each year the committee or the committee Chair tours one of our existing assets or projects under development as part of its responsibility to monitor and review our HSE practices. Additionally, the Board and the committee have a joint site visit annually.

Succession planning

The Board is responsible for succession planning at the executive level including the development of the CEO succession plan. Succession planning for the CEO position is an ongoing process that includes analysis of each potential candidate's performance, skills and experience, assessment of the personal attributes and characteristics that the Board believes are necessary for the role, and assessment of developmental opportunities to increase senior executive bench strength.

The CEO prepares an overview of the executive vice-president roles, noting the required skills and expertise for each position and the current executive's areas of strength. He also prepares development plans for each executive and presents them to the Board. The CEO meets formally with each executive at least twice a year, and more frequently as necessary, to discuss progress on his or her development plan.

The CEO identifies potential future candidates for the executive vice-president positions and presents them to the Board for discussion. Each candidate is assessed based on their skills and experience and the competencies that are required for promotion to the senior executive level. Development opportunities are also identified so each candidate can receive additional or varied management experience, training, development and educational opportunities. The Board reviews each position and the performance assessment and competencies of potential successors at least once a year and makes decisions as appropriate.

Management diversity

Our executive leadership team includes our President and CEO, and all of our executive vice-presidents. Senior management includes our executive leadership team, as well as our senior vice-presidents and vice-presidents.

In 2013, management set and the Board reviewed three and five-year goals to increase the number of women in senior management.

Setting these goals supports our long-term commitment to ensuring TransCanada has a capable and diverse senior management team. We believe that having a defined goal for the representation of women in senior management is an effective way to increase the number of women on our executive leadership team over the long term. More women at the senior management level provides a larger group of women that can be considered for promotion to executive positions.

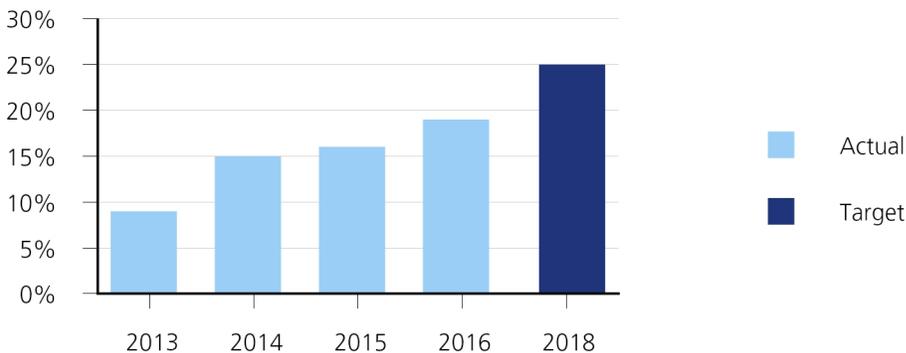
In order to achieve these goals we have focused on identifying, assessing and developing high potential candidates from our existing talent pool as well as strategic hires. High potential candidates are each assigned a sponsor on the executive leadership team who works with them to increase their exposure within the organization and at the Board.

The executive leadership team reviews and discusses this talent pool regularly and approves all senior management appointments. The Board approves all appointments to the executive leadership team.

Progress towards these goals is reviewed and assessed by the Human Resources committee and executive leadership team at least annually to ensure that we have a qualified pool of women, and that the women in senior management are being adequately supported and developed. The Board receives progress reports on our goals annually. In addition, the Human Resources committee annually reviews the company's initiatives to provide development opportunities for high potential and diverse candidates below the executive level.

We have achieved notable progress towards achieving our goals at the senior management level. In 2013, we set a three-year goal of 18 per cent of women in senior management. We exceeded that goal, with women holding 19 per cent of senior management positions at the end of 2016. Our target is to increase this percentage to 25 per cent by 2018.

Women in senior management



The Board encourages the inclusion of women candidates for consideration for all executive leadership positions, but ultimate decisions are made based on the qualifications of the candidates.

We do not have specific goals for the executive leadership team. In 2016, two of our eight or 25 per cent of our executive leadership team members were women. As of February 28, 2017, two of our nine, or 22 per cent of our executive leadership team were women.

Access to management

The Board has complete access to management, but gives reasonable advance notice to avoid disrupting the business and operations. The Board Chair and committee Chairs also connect with relevant members of the executive leadership team as needed.

The Board encourages the executive leadership team to include key managers in Board and committee meetings so they can share their expertise on specific matters. This gives the Board an opportunity to meet individuals who have the potential to assume more senior positions in the future, and for these individuals to gain exposure to the Board.

ORIENTATION AND EDUCATION

New directors participate in an orientation program featuring sessions on corporate strategy, our main business issues, and historical and financial information about TransCanada. They also have an opportunity to visit and tour our facilities and project sites and meet with the executive leadership team and other directors.

We tailor the sessions for each director based on individual needs and their specific areas of interest. New directors also meet one-on-one with members of the executive leadership team for an overview of the different areas of our business and operations and a discussion of key areas of interest. Briefing sessions are also held for new committee members.

Directors receive a reference manual with:

- details about their duties and obligations as a member of the Board
- information about our business and operations
- copies of the Board and committee charters
- copies of past public filings, and
- documents from recent Board meetings.

The Governance committee reviews the orientation program and manual every year so they continue to meet our needs and those of new directors.

The committee also develops the continuing education program every year based on current and emerging issues, our corporate objectives and input from other directors. Our 2016 education program included three in-depth focus sessions covering the business fundamentals of each of our lines of business (natural gas pipelines, liquids pipelines and energy).

Continuing education helps strengthen a director's knowledge and understanding of the business, industry, governance and other issues. Senior management and external experts make presentations to the Board and committees from time to time on various topics related to the business, including changes to legal, regulatory and industry requirements. Continuing education is also conducted on an informal basis and our directors are provided with articles and publications of interest.

We suggest seminars and education programs for our directors that may be relevant, and pay the registration fee and travel expenses as appropriate. We also offer to pay annual fees for memberships with organizations that are appropriate and provide relevant publications and educational opportunities to our directors.

2016 Director education program

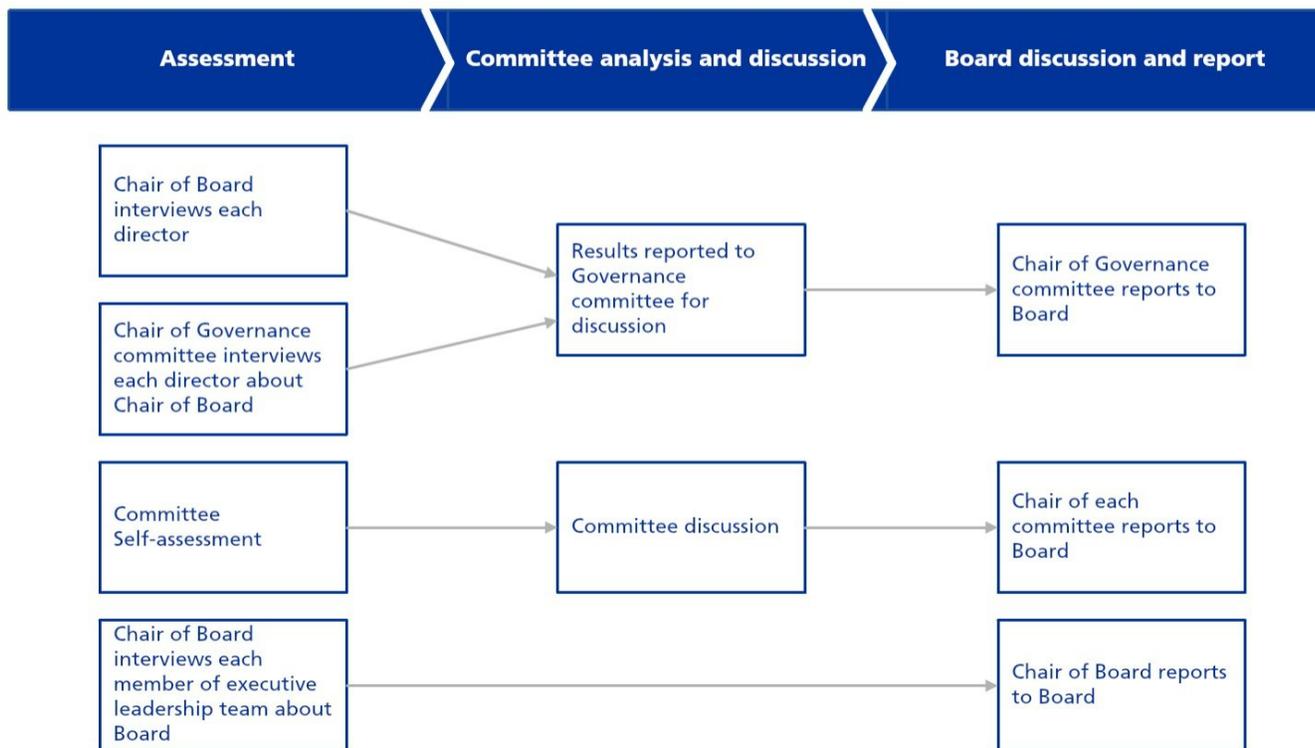
Date	Topic	Presented/hosted by	Attended by
May 5	Focus Session – North American Power	IHS	All directors
May 13	Focus Session – Oil Markets	IHS	All directors
June 2	National Conference, Calgary	Institute of Corporate Directors	D. Michael G. Stewart
June 3	Focus Session - Global and North America Natural Gas	IHS	All directors
June 13 - 14	Strategic planning session – economic outlook, clean energy landscape and renewables, natural gas pipelines, oil market fundamentals and asset allocation	Members of the executive leadership team and Senior Vice-President, Strategy and Corporate Development	All directors
August 9 - 10	Site visit - Columbia office and tour of construction sites, West Virginia	Chief Operating Officer	D. Michael G. Stewart
September 7	Strategic issues session – Mexico fundamentals and political risk	Credit Suisse and Estrategia Pública Consultores	All directors
September 8	Construction site tour – Tula, Hidalgo, Mexico	Mexico project team	All directors
November 2	Strategic issues session – oil & gas pipelines strategic review, and analysis on market activity	Executive Vice-President, Liquids Pipelines and Senior Vice-President, Strategy and Corporate Development	All directors
December 6	Strategic issues session – stakeholder environment	Senior Vice-President, Government Relations, Communication and Community Relations and Vice-President, Environment, Land and Indigenous Relations	All directors

BOARD EFFECTIVENESS AND DIRECTOR ASSESSMENT

The Governance committee oversees an assessment of the performance of the Board, the Chair, committees and individual directors annually and reports the results to the Board.

Interviews include questions about effectiveness, communication and personal and individual peer performance and solicit input from directors about areas for potential improvement. The interviews are open-ended to encourage discussion and seek specific input on topics such as risk, strategy and governance.

The Governance committee believes the interview process is the most effective way for directors to give feedback that can be reviewed by the entire Board. The committee also monitors developments in board governance and evolving best practices in corporate governance.



In 2016, the assessment process showed that the Chair, each director, and all committees are functioning effectively and fulfilling the mandates set out in the Board and committee charters.

In late 2016, we announced that Mr. Jackson would be retiring as Chair of the Board at the close of the 2017 annual meeting of shareholders, and that Mr. Vanaselja would be his successor. As a result, the assessment of the Chair of the Board for 2016 concentrated on 'lessons learned' during Mr. Jackson's tenure that would be valuable to Mr. Vanaselja as the incoming Chair of the Board.

Financial literacy

The Board has determined that all members of the Audit committee are *financially literate*, which means each member can read and understand a set of financial statements that are generally comparable to ours in terms of breadth and complexity of accounting issues. You can find more information about their education and financial experience in the director profiles starting on page 13, in the Audit committee report on page 46 and in the AIF which is available on our website (www.transcanada.com) and on SEDAR (www.sedar.com).

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, and
- 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 fulfill 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.

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 (expected retirement year)	Education	Committees	Key Expertise Areas											
			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 (2018)	Chartered Accountant	Audit Governance	X			X	X				X		X	X
Derek H. Burney (2018)	M.A. Political Science B.A. Political Science (Hon)	Audit Governance (Chair)		X		X	X		X		X			
Stéphan Crétier (2033)	MBA	Audit Health, Safety and Environment	X			X	X		X		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	Chair Governance Human Resources		X	X	X		X			X	X	X	
John E. Lowe (2029)	Certified Public Accountant	Audit Health, Safety and Environment	X	X			X	X	X		X	X	X	X
Paula Rospit Reynolds (2027)	B.A. Economics (Hon)	Health, Safety and Environment Human Resources (Chair)	X	X		X					X	X		X
Mary Pat Salomone (2030)	MBA B.A. Engineering	Health, Safety and Environment Human Resources		X	X	X		X	X		X		X	
Indira Samarasekera (2023)	PhD Metallurgical Engineering M.Sc. Mechanical Engineering B.Sc. Mechanical Engineering	Audit Governance			X	X	X				X			
D. Michael G. Stewart (2022)	B.Sc. Geological Science	Audit Health, Safety and Environment (Chair)		X				X	X		X	X	X	X
Siim A. Vanaselja (2027)	Hon. BBA	Audit (Chair) Governance	X			X			X		X			X
Richard E. Waugh (2018)	Hon. MBA B. Comm (Hon)	Governance Human Resources	X			X			X		X			X

Director tenure

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.

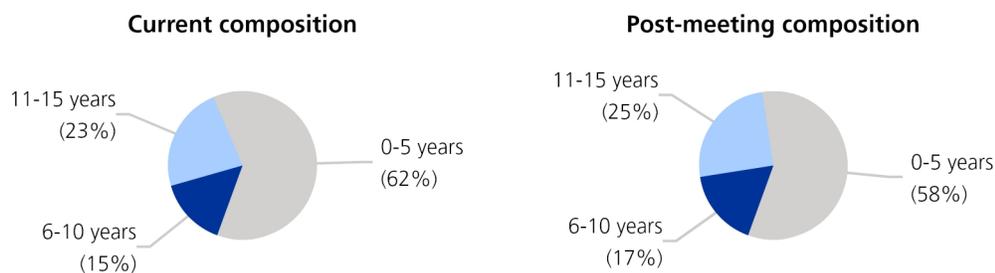
The Governance committee reviews factors like age, changes in principal occupation, consistently poor attendance, poor performance and other relevant circumstances that may trigger the resignation or retirement of a director.

TransCanada does not use term limits for our directors. We do not believe term limits are an effective mechanism to promote board renewal. In addition to the annual director assessment, which ensures that each of our Board members, committees and the Board is functioning effectively, the committee reviews director succession planning at least annually. This review provides the opportunity for the committee to focus on creating a board with an appropriate mix of experience and skills to guide the long-term strategy and ongoing business operations of the company. Our flexible retirement policy promotes effective Board turnover without limiting the mix of skills and experience on the Board.

The Board has waived the retirement age policy for Mr. Benson and Mr. Burney and asked each of them to stand for re-election at the 2017 annual meeting. The Board and Governance committee determined that the retirement age policy should be waived for Mr. Benson and Mr. Burney as they continue to provide significant contributions to the Board. Mr. Benson's extensive business experience and management skills continue to provide valuable input to TransCanada's business and affairs. Mr. Burney's experience and deep understanding of the evolving business and political environment continue to be important, particularly with respect to the Keystone XL Pipeline project. The Board believes that the skills, experience, and continuity provided by Mr. Benson and Mr. Burney's extended tenure will be valuable to the Board over the coming year.

While Mr. Jackson is stepping down as Board Chair, he is standing for re-election. We believe that his continued membership on the Board provides continuity, and allows TransCanada to benefit from his extensive experience in the oil and gas industry.

The graphs below show the composition of our Board by years of service as of the date of this circular and after the annual meeting, assuming all of the nominated directors are elected.



ENGAGEMENT

We believe it is important to engage with our stakeholders.

Members of our Board engage with governance organizations and shareholder advocacy groups to discuss emerging best practices and provide commentary on how we maintain our high standard of corporate governance.

TransCanada regularly engages with our shareholders and other stakeholders. Our executive leadership team hosts teleconferences to discuss our quarterly financial and operating results. The teleconferences are webcast and available to analysts, media, shareholders and the public. Our executive and senior management also typically speak at investor conferences and meet one-on-one with investors as part of our shareholder engagement. In 2016, we engaged with institutions representing more than 50 per cent of current outstanding shares.

A list of upcoming and past events and presentations, including presentation slides and webcasts, where available, can be found online at www.transcanada.com.

Investor relations welcomes opportunities to engage with our shareholders and other stakeholders. You may contact our investor relations department directly by phone, email, or regular mail at:

Investor Relations
TransCanada Corporation
450 1st Street S.W.
Calgary, Alberta
Canada T2P 5H1
investor_relations@transcanada.com
1.800.361.6522

COMMUNICATING WITH THE BOARD

Shareholder engagement allows us to hear directly from shareholders and other important stakeholders about any issues or concerns.

Shareholders, employees and others can contact the Board directly by writing to:

Chair of the Board of Directors
c/o Corporate Secretary
TransCanada Corporation
450 1st Street S.W.
Calgary, Alberta T2P 5H1

The Board, including committee Chairs, will also be available at the annual meeting to receive questions from shareholders.

SHAREHOLDER PROPOSALS

According to Canadian law, shareholder proposals can only be considered for the annual meeting of common shareholders if they are submitted by a specific date.

Our Corporate Secretary must receive any shareholder proposals **before 5:00 p.m. MDT on November 30, 2017** to be considered for the Management information circular for our 2018 annual meeting of common shareholders.

ADVANCE NOTICE BYLAW

Shareholders who wish to nominate a director for the 2017 annual meeting of common shareholders, other than by a shareholder proposal, must:

- notify the Corporate Secretary in writing, and
- provide the information required in our By-law Number 1, which can be found on our website (www.transcanada.com) or on SEDAR (www.sedar.com).

Any notices of director nominees must be received by the Corporate Secretary **before 5:00 p.m. MDT on April 5, 2017** for an individual to be included in our list of director nominees for our 2017 annual meeting of common shareholders.

The chart below explains when advance notice of director nominations is required for annual meetings and special meetings:

Type of meeting	Announcement timing	Advance notice deadline
Annual meeting	Public announcement more than 50 days before meeting	Not less than 30 days before meeting
	Public announcement 50 days or less before meeting	Not less than 10 days following the first public announcement of the meeting
Special meeting to elect directors	Public announcement more than 50 days before meeting	Not less than 15 days before meeting
	Public announcement 50 days or less before meeting	Not less than 15 days following the first public announcement of the meeting

BOARD COMMITTEES

The Board has four standing committees:

- Audit committee
- Governance committee
- Health, Safety and Environment committee, and
- Human Resources committee.

Each of the committees is comprised entirely of independent directors.

The Governance committee is responsible for reviewing the composition of each committee and recommending any changes once new directors are appointed or elected to the Board. Each committee must consist entirely of independent directors, except for the Health, Safety and Environment committee, which must have a majority of independent directors. Currently, all members of the Health, Safety and Environment committee are independent. Each committee has the authority to retain advisors to help it carry out its responsibilities. The Board does not have an executive committee.

Each committee reviews its charter at least once a year, and recommends any changes to the Governance committee and the Board. You can find the committee charters on our website (www.transcanada.com).

The Audit and the Human Resources committees hold simultaneous meetings, as do the Governance and Health, Safety and Environment committees, so each committee has sufficient time to focus on its responsibilities. As a result, Mr. Jackson, the independent non-executive Chair of the Board, is a voting member of the Governance committee and the Human Resources committee, and is not a member of the Audit committee or the Health, Safety and Environment committee.

The committees will be reconstituted after the annual meeting.

Each meeting has time set aside for members to discuss the committee operations and responsibilities without management present.

Audit committee

Members	Siim Vanaselja (Chair) Kevin E. Benson Derek H. Burney Stéphan Crétier (as of February 17, 2017) John Lowe Mary Pat Salomone (until April 29, 2016) Indira Samarasekera (as of April 29, 2016) D. Michael G. Stewart
Meetings in 2016	5 regularly scheduled meetings (February, April, July, November, December)
Independent	7 independent directors, 100 per cent independent and financially literate.
	Mr. Vanaselja, Mr. Benson and Mr. Lowe are “audit committee financial experts” as defined by the SEC in the U.S., and each have the accounting or related financial management experience required under the NYSE rules.
Mandate	The Audit committee is responsible for assisting the Board in overseeing the integrity of our financial statements and our compliance with legal and regulatory requirements. It is also responsible for overseeing and monitoring the accounting and reporting process and the process, performance and independence of our internal and external auditors.

The Audit committee meets in-camera with the Chief Financial Officer (CFO) at the beginning of each meeting, and also meets separately with the external auditors and Vice-President, Corporate Compliance and Internal Audit. The committee also meets in-camera at the end of each meeting.

2016 highlights

- **Reviewed** our 2016 interim and annual disclosure documents including the unaudited interim and audited annual consolidated financial statements and related management’s discussion and analysis, AIF and circular and recommended them for approval.
- **Oversaw** our financial reporting risks including issues relating to materiality and risk assessment.
- **Received** the external auditor’s formal written statement of independence (which sets out all of its relationships with TransCanada) and its comments to management about our internal controls and procedures.
- **Reviewed** the appointment of the external auditor and estimated fees and recommended them to the Board for approval.
- **Reviewed** the audit plans of the internal and external auditors and pre-approved the non-audit services performed by KPMG relating primarily to tax and benefit plans.
- **Recommended** the funding of the Registered Pension Plan and Supplemental Pension Plan.
- **Reviewed** the major accounting policies and estimates.
- **Received** reports from management on our cybersecurity plans and initiatives.
- **Oversaw** the corporate compliance program requirements, structure and results, including foreign corrupt practices and anti-bribery statutes and policies.
- **Monitored** Canadian and U.S. financial reporting and legal and regulatory developments affecting our financial reporting process, controls and disclosure.
- **Reviewed and recommended** changes to the suite of risk management policies, and reviewed developments and reports relating to counterparty, insurance and market risks.
- **Reviewed and recommended** prospectuses relating to the issuance of securities.
- **Recommended** amendments to the Public disclosure policy and *Code of business ethics*.
- **Approved** annual election to enter into uncleared swaps as permitted under U.S. legislation and monitored compliance.
- **Received** regular reports from management on risk management, finance and liquidity, treasury, pensions, compliance, material litigation and information services security controls.
- **Received** regular reports from Internal Audit.
- **Reviewed** adequacy of staff complements in accounting and tax.
- **Reviewed and Recommended** amendments to the Audit committee charter.
- **Reviewed** material litigation.

Our AIF includes more information about the Audit committee, including the committee charter, oversight responsibilities, each member’s education and experience, and policies and procedures for pre-approving permitted non-audit services. The 2016 AIF is available on our website (www.transcanada.com) and on SEDAR (www.sedar.com).

Governance committee

Members	Derek H. Burney (Chair) Kevin E. Benson S. Barry Jackson Indira Samarasekera (as of April 29, 2016) Siim A. Vanaselja Richard E. Waugh
Meetings in 2016	3 regularly scheduled meetings (February, April, November)
Independent	6 independent directors, 100 per cent independent
Mandate	<p>The Governance committee is responsible for assisting the Board with maintaining strong governance policies and practices at TransCanada, reviewing the independence and financial literacy of directors, managing director compensation and the Board assessment process, and overseeing our strategic planning process and risk management activities.</p> <p>It monitors the relationship between management and the Board, directors' share ownership levels, governance developments and emerging best practices. It is also responsible for identifying qualified candidates for the Board to consider as potential directors.</p> <p>It also recommends the meeting schedule for Board and committee meetings, site visits, and oversees matters related to the timing of our annual meeting.</p>

The Governance committee meets in-camera at the beginning and end of each meeting.

2016 highlights

- **Reviewed** the independence of each director according to our written criteria to give the Board guidance in its annual assessment of independence and the structure and composition of each committee, and the other directorships held by Board members (including public and private companies, Crown corporations and non-profit organizations).
- **Oversaw** our strategic planning process, including strategic issues to be considered and planning of our strategic issues and planning sessions.
- **Oversaw** our risk management activities, including receiving updates on 'top of mind' business risks and making recommendations to the Board as appropriate.
- **Reviewed** the identified principal risks with management to ensure we have proper Board and committee oversight and management programs in place to mitigate risks.
- **Monitored** director share ownership requirements.
- **Recommended** that director compensation be moved to a flat fee structure and that the director retainer be increased. The committee also recommended increases to the Audit committee and Human Resources committee Chair retainers.
- **Reviewed** our Corporate governance guidelines and committee charters and recommended appropriate changes to the Board for approval. The changes included limiting the total number of boards that a director may serve on to four, and the total number of boards that the CEO may serve on to two.
- **Reviewed** say on pay updates and voting trends.
- **Oversaw** the annual assessment of the Board, committees and Chair.
- **Monitored** updates to securities regulations (regulation and legal updates affecting our policies, procedures and disclosure practices) and matters relating to the financial markets. The committee continues to monitor legal developments and emerging best practices in Canada, the U.S. and internationally.
- **Oversaw** the Board's retirement policy, Board renewal, and the selection of new director candidates
- **Oversaw** the selection of the new Board Chair. The process was led by the Governance committee Chair.
- **Reviewed** our lobbying policies, activities and expenditures.
- **Reviewed** external governance assessments and made recommendations for revisions to governance practices to the Board as appropriate.

Health, Safety and Environment committee

Members	D. Michael G. Stewart (Chair) Stéphan Crétier (as of February 17, 2017) John Lowe Paula Rosput Reynolds John Richels (retiring May 5, 2017) Mary Pat Salomone Paule Gauthier (retired April 29, 2016)
Meetings in 2016	4 regularly scheduled meetings (February, April, June and November)
Independent	6 independent directors, 100 per cent independent
Mandate	<p>The Health, Safety and Environment committee is responsible of oversight for health, safety, security and environmental matters (HSE matters).</p> <p>The committee reviews and monitors:</p> <ul style="list-style-type: none"> the performance and activities of TransCanada on HSE matters including compliance with applicable and proposed legislation, regulations and orders; conformance with industry standards and best practices; people, health, safety and security; process safety; asset reliability; operational risk management and asset integrity plans and programs; and emergency response plans and programs the systems, programs and policies relating to HSE matters and whether they are being appropriately developed and effectively implemented actions and initiatives undertaken by TransCanada to prevent, mitigate and manage risks related to HSE matters which may have the potential to adversely impact our operations, activities, plans, strategies or reputation; or prevent loss or injury to our employees and assets or operations from malicious acts, natural disasters or other crisis situations any critical incidents respecting our assets or operations involving: the fatality of or a life threatening injury to a person; any pipeline ruptures resulting in significant property damage or loss of product; any whistleblower events relating to HSE matters; or any incidents involving personnel and public safety, property damage, environmental damage or physical security that have the potential to severely and adversely impact our reputation and or business continuity significant regulatory audits, findings, orders, reports and/or recommendations issued by or to TransCanada related to HSE matters or issues, together with management's response thereto.

The Health, Safety and Environment committee met separately with the Chief Operating Officer at the end of each meeting. The committee also meets in-camera at the end of each meeting.

2016 highlights

- **Received and reviewed** regular reports on HSE related activities, performance and compliance.
- **Received** regular reports on operational risk management, people and process safety and regulatory compliance matters related to asset integrity.
- **Reviewed** the status of critical incidents, root cause analysis and incident follow-up.
- **Monitored** management's response and the status of corrective action plans to significant audits from the National Energy Board, Pipeline and Hazardous Materials Safety Administration and other regulatory agencies.
- **Oversaw** our risk management activities related to health, safety, security and environment, and reported to the Board as appropriate.
- **Monitored** the effectiveness of health, safety and environment policies, management systems, programs, procedures and practices through the receipt of reports on four levels of governance activities related to internal and external audit findings.
- **Monitored** updates to Canadian and U.S. air emissions and greenhouse gas legislation, climate change initiatives and related compliance matters.
- **Committee Chair visited** the Columbia office, and toured construction sites in West Virginia.
- **Received** an update on Columbia HSE performance and integration.
- **Received** an overview of the Crisis Management Plan.
- **Received** an annual update on insurance coverage.
- **Received** and reviewed regular reports on the operational and HSE performance at Bruce Power.

Human Resources committee

Members	Paula Rosput Reynolds (Chair) S. Barry Jackson John Richels (retiring May 5, 2017) Mary Pat Salomone (as of April 29, 2016) Richard E. Waugh Paule Gauthier (retired April 29, 2016)
Meetings in 2016	5 regularly scheduled meetings (January, February, September, November and December)
Independent	5 independent directors, 100 per cent independent
Mandate	<p>The Human Resources committee is responsible for assisting the Board with developing strong human resources policies and plans, overseeing the compensation programs, and assessing the performance of the CEO and other members of the executive leadership team against pre-established objectives and recommending their compensation to the Board.</p> <p>It approves all executive incentive awards, and any major changes to the compensation programs and benefits plans for employees. It is also responsible for the benefits under our Canadian pension plans and reviewing our share ownership requirements for executives.</p>

The Human Resources committee meets in-camera at the beginning and end of each meeting.

2016 highlights

- **Assessed** the performance of the executive leadership team and recommended the 2016 executive compensation awards to the Board for approval.
- **Reappointed** Meridian Compensation Partners (Meridian) as the independent compensation advisor to the committee after determining that Meridian is independent based on the factors enumerated by the NYSE.
- **Increased** the number of common shares reserved for issuance under the stock option plan to allow for grants to be made over the next three years, as approved by shareholders.
- **Modified** the performance measure relative weightings for the named executives under the short-term incentive plan to reflect organizational changes.
- **Adopted** a provision for the 2016 grant under the executive share unit (ESU) plan that the cumulative comparable earnings per share multiplier will be a maximum of 1.0 if the ratio of cumulative dividends per share/ cumulative comparable funds generated from operations per share for the three-year period is greater than 50 per cent.
- **Reviewed** the methodology for determining exclusions from comparable earnings per share.
- **Reviewed** a compensation related risk checklist.
- **Reviewed** and recalibrated peer groups as necessary.
- **Reviewed** the stock option plan and recommended changes to amendment provisions to align with best practices.

Schedule C

CHARTER OF THE AUDIT COMMITTEE

1. PURPOSE

The Audit Committee shall assist the Board of Directors (the Board) in overseeing and monitoring, among other things, the:

- Company's financial accounting and reporting process;
- integrity of the financial statements;
- Company's internal control over financial reporting;
- external financial audit process;
- compliance by the Company with legal and regulatory requirements; and
- independence and performance of the Company's internal and external auditor.

To fulfill its purpose, the Audit Committee has been delegated certain authorities by the Board that it may exercise on behalf of the Board.

2. ROLES AND RESPONSIBILITIES

I. Appointment of the Company's External Auditor

Subject to confirmation by the external auditor of their compliance with Canadian and U.S. regulatory registration requirements, the Audit Committee shall recommend to the Board the appointment of the external auditor, such appointment to be confirmed by the Company's shareholders at each annual meeting. The Audit Committee shall also recommend to the Board the compensation to be paid to the external auditor for audit services. The Audit Committee shall also be directly responsible for the oversight of the work of the external auditor (including resolution of disagreements between management and the external auditor regarding financial reporting) for the purpose of preparing or issuing an audit report or related work. The external auditor shall report directly to the Audit Committee.

The Audit Committee shall review and approve the audit plan of the external auditor. The Audit Committee shall also receive periodic reports from the external auditor regarding the auditor's independence, discuss such reports with the auditor, consider whether the provision of non-audit services is compatible with maintaining the auditor's independence and take appropriate action to satisfy itself of the independence of the external auditor.

II. Oversight in Respect of Financial Disclosure

The Audit Committee, to the extent it deems it necessary or appropriate, shall:

- a) review, discuss with management and the external auditor and recommend to the Board for approval, the Company's audited annual consolidated financial statements, annual information form, management's discussion and analysis (MD&A), all financial information in prospectuses and other offering memoranda, financial statements required by securities regulators, all prospectuses and all documents which may be incorporated by reference into a prospectus, including, without limitation, the annual management information circular, but excluding any pricing or prospectus supplement relating to the issuance of debt securities of the Company;
- b) review, discuss with management and the external auditor and recommend to the Board for approval, the release to the public of the Company's interim reports, including the consolidated financial statements, MD&A and press releases on quarterly financial results;
- c) review and discuss with management and the external auditor the use of non-GAAP information and the applicable reconciliation;
- d) review and discuss with management any financial outlook or future-oriented financial information disclosure in advance of its public release; provided, however, that such discussion may be done generally (consisting of discussing the types of information to be disclosed and the types of presentations to be made). The Audit Committee need not discuss in advance each instance in which the Company may provide financial projections or presentations to credit rating agencies;
- e) review with management and the external auditor major issues regarding accounting policies and auditing practices, including any significant changes in the Company's selection or application of accounting policies, as well as major issues as to the adequacy of the Company's internal controls and any special audit steps adopted in light of material control deficiencies that could significantly affect the Company's financial statements;
- f) review and discuss quarterly findings reports from the external auditor on:
 - (i) all critical accounting policies and practices to be used;

- (ii) all alternative treatments of financial information within generally accepted accounting principles that have been discussed with management, ramifications of the use of such alternative disclosures and treatments, and the treatment preferred by the external auditor;
 - (iii) other material written communications between the external auditor and management, such as any management letter or schedule of unadjusted differences;
- g) review with management and the external auditor the effect of regulatory and accounting developments on the Company's financial statements;
- h) review with management and the external auditor the effect of any off-balance sheet structures on the Company's financial statements;
- i) review with management, the external auditor and, if necessary, legal counsel, any litigation, claim or contingency, including arbitration and tax assessments, that could have a material effect upon the financial position of the Company, and the manner in which these matters have been disclosed in the financial statements;
- j) review disclosures made to the Audit Committee by the Company's Chief Executive Officer (CEO) and Chief Financial Officer (CFO) during their certification process for the periodic reports filed with securities regulators about any significant deficiencies in the design or operation of internal controls or material weaknesses therein and any fraud involving management or other employees who have a significant role in the Company's internal controls;
- k) discuss with management the Company's material financial risk exposures and the steps management has taken to monitor and control such exposures, including the Company's risk assessment and risk management policies;

III. Oversight in Respect of Legal and Regulatory Matters

- (a) review with the Company's General Counsel legal matters that may have a material impact on the financial statements, the Company's compliance policies and any material reports or inquiries received from regulators or governmental agencies;

IV. Oversight in Respect of Internal Audit

- (a) review and approve the audit plans of the internal auditor of the Company including the degree of coordination between such plans and those of the external auditor and the extent to which the planned audit scope can be relied upon to detect weaknesses in internal control, fraud or other illegal acts;
- (b) review the significant findings prepared by the internal audit department and recommendations issued by it or by any external party relating to internal audit issues, together with management's response thereto;
- (c) review compliance with the Company's policies and avoidance of conflicts of interest;
- (d) review the report prepared by the internal auditor on officers' expenses and aircraft usage;
- (e) review the adequacy of the resources of the internal auditor to ensure the objectivity and independence of the internal audit function, including reports from the internal audit department on its audit process with subsidiaries and affiliates;
- (f) ensure the internal auditor has access to the Chair of the Audit Committee, the Board and the CEO and meet separately with the internal auditor to review with him or her any problems or difficulties he or she may have encountered and specifically:
 - (i) any difficulties which were encountered in the course of the audit work, including restrictions on the scope of activities or access to required information, and any disagreements with management;
 - (ii) any changes required in the planned scope of the internal audit;
 - (iii) the internal audit department responsibilities, budget and staffing; and to report to the Board on such meetings;

V. Oversight in Respect of the External Auditor

- (a) review any letter, report or other communication from the external auditor in respect of any identified weakness or unadjusted difference and management's response and follow-up, inquire regularly of management and the external auditor of any significant issues between them and how they have been resolved, and intervene in the resolution if required;
- (b) receive and review annually the external auditor's formal written statement of independence delineating all relationships between itself and the Company;
- (c) meet separately with the external auditor to review any problems or difficulties the external auditor may have encountered and specifically:

- (i) any difficulties which were encountered in the course of the audit work, including any restrictions on the scope of activities or access to required information, and any disagreements with management;
 - (ii) any changes required in the planned scope of the audit; and to report to the Board on such meetings;
- (d) meet with the external auditor prior to the audit to review the planning and staffing of the audit;
 - (e) receive and review annually the external auditor's written report on their own internal quality control procedures; any material issues raised by the most recent internal quality control review, or peer review, of the external auditor, or by any inquiry or investigation by governmental or professional authorities, within the preceding five years, and any steps taken to deal with such issues;
 - (f) review and evaluate the external auditor, including the lead partner of the external auditor team;
 - (g) ensure the rotation of the lead (or coordinating) audit partner having primary responsibility for the audit and the audit partner responsible for reviewing the audit as required by law, but at least every five years;

VI. Oversight in Respect of Audit and Non-Audit Services

- (a) pre-approve all audit services (which may entail providing comfort letters in connection with securities underwritings) and all permitted non-audit services, other than non-audit services where:
 - (i) the aggregate amount of all such non-audit services provided to the Company that were not pre-approved constitutes not more than five percent of the total fees paid by the Company and its subsidiaries to the external auditor during the fiscal year in which the non-audit services are provided;
 - (ii) such services were not recognized by the Company at the time of the engagement to be non-audit services;
 - (iii) such services are promptly brought to the attention of the Audit Committee and approved, prior to the completion of the audit, by the Audit Committee or by one or more members of the Audit Committee to whom authority to grant such approvals has been delegated by the Audit Committee;
- (b) approval by the Audit Committee of a non-audit service to be performed by the external auditor shall be disclosed as required under securities laws and regulations;
- (c) the Audit Committee may delegate to one or more designated members of the Audit Committee the authority to grant pre-approvals required by this subsection. The decisions of any member to whom authority is delegated to pre-approve an activity shall be presented to the Audit Committee at its first scheduled meeting following such pre-approval;
- (d) if the Audit Committee approves an audit service within the scope of the engagement of the external auditor, such audit service shall be deemed to have been pre-approved for purposes of this subsection;

VII. Oversight in Respect of Certain Policies

- (a) review and recommend to the Board for approval the implementation of, and significant amendments to, policies and program initiatives deemed advisable by management or the Audit Committee with respect to the Company's code of business ethics (COBE) risk management and financial reporting policies;
- (b) obtain reports from management, the Company's senior internal auditing executive and the external auditor and report to the Board on the status and adequacy of the Company's efforts to ensure its businesses are conducted and its facilities are operated in an ethical, legally compliant and socially responsible manner, in accordance with the Company's COBE;
- (c) establish a non-traceable, confidential and anonymous system by which callers may ask for advice or report any ethical or financial concern, ensure that procedures for the receipt, retention and treatment of complaints in respect of accounting, internal controls and auditing matters are in place, and receive reports on such matters as necessary;
- (d) annually review and assess the adequacy of the Company's public disclosure policy;
- (e) review and approve the Company's hiring policy for partners, employees and former partners and employees of the present and former external auditor (recognizing the *Sarbanes-Oxley Act of 2002* does not permit the CEO, controller, CFO or chief accounting officer to have participated in the Company's audit as an employee of the external auditor during the preceding one-year period) and monitor the Company's adherence to the policy;

VIII. Oversight in Respect of Financial Aspects of the Company's Canadian Pension Plans (the Company's pension plans), specifically:

- (a) review and approve annually the Statement of Investment Beliefs for the Company's pension plans;
- (b) delegate the ongoing administration and management of the financial aspects of the Canadian pension plans to the Pension Committee comprised of members of the Company's management team appointed by the Human Resources Committee, in accordance with the Pension Committee Charter, which terms shall be approved by both the Audit Committee and the Human Resources Committee, and the terms of the Statement of Investment Beliefs;
- (c) monitor the financial management activities of the Pension Committee and receive updates at least annually from the Pension Committee on the investment of the Plan assets to ensure compliance with the Statement of Investment Beliefs;
- (d) provide advice to the Human Resources Committee on any proposed changes in the Company's pension plans in respect of any significant effect such changes may have on pension financial matters;
- (e) review and consider financial and investment reports and the funded status relating to the Company's pension plans and recommend to the Board on pension contributions;
- (f) receive, review and report to the Board on the actuarial valuation and funding requirements for the Company's pension plans;
- (g) approve the initial selection or change of actuary for the Company's pension plans;
- (h) approve the appointment or termination of the pension plans' auditor;

IX. U.S. Stock Plans

- (a) review and approve the engagement and related fees of the auditor for any plan of a U.S. subsidiary that offers Company stock to employees as an investment option under the plan;

X. Oversight in Respect of Internal Administration

- (a) review annually the reports of the Company's representatives on certain audit committees of subsidiaries and affiliates of the Company and any significant issues and auditor recommendations concerning such subsidiaries and affiliates;
- (b) oversee succession planning for the senior management in finance, treasury, tax, risk, internal audit and the controllers' group;

XI. Information Security

- (a) review the report of the Chief Information Officer (or such other appropriate Company representative) on information security controls, education and awareness.

XII. Oversight Function

While the Audit Committee has the responsibilities and powers set forth in this Charter, it is not the duty of the Audit Committee to plan or conduct audits or to determine that the Company's financial statements and disclosures are complete and accurate or are in accordance with generally accepted accounting principles and applicable rules and regulations. These are the responsibilities of management and the external auditor. The Audit Committee, its Chair and any of its members who have accounting or related financial management experience or expertise, are members of the Board, appointed to the Audit Committee to provide broad oversight of the financial disclosure, financial risk and control related activities of the Company, and are specifically not accountable nor responsible for the day to day operation of such activities. Although designation of a member or members as an "audit committee financial expert" is based on that individual's education and experience, which that individual will bring to bear in carrying out his or her duties on the Audit Committee, designation as an "audit committee financial expert" does not impose on such person any duties, obligations or liability that are greater than the duties, obligations and liability imposed on such person as a member of the Audit Committee and Board in the absence of such designation. Rather, the role of any audit committee financial expert, like the role of all Audit Committee members, is to oversee the process and not to certify or guarantee the internal or external audit of the Company's financial information or public disclosure.

3. COMPOSITION OF AUDIT COMMITTEE

The Audit Committee shall consist of three or more directors, a majority of whom are resident Canadians (as defined in the *Canada Business Corporations Act*), and all of whom are unrelated and/or independent for the purposes of applicable Canadian and United States securities law and applicable rules of any stock exchange on which the Company's securities are listed. Each member of the Audit Committee shall be financially literate and at least one member shall have accounting or related financial management expertise (as those terms are defined from time to time under the requirements or guidelines for audit committee service under securities laws

and the applicable rules of any stock exchange on which the Company's securities are listed for trading or, if it is not so defined, as that term is interpreted by the Board in its business judgment).

4. APPOINTMENT OF AUDIT COMMITTEE MEMBERS

The members of the Audit Committee shall be appointed by the Board from time to time, on the recommendation of the Governance Committee and shall hold office until the next annual meeting of shareholders or until their successors are earlier appointed or until they cease to be directors of the Company.

5. VACANCIES

Where a vacancy occurs at any time in the membership of the Audit Committee, it may be filled by the Board on the recommendation of the Governance Committee.

6. AUDIT COMMITTEE CHAIR

The Board shall appoint a Chair of the Audit Committee who shall:

- (a) review and approve the agenda for each meeting of the Audit Committee and, as appropriate, consult with members of management;
- (b) preside over meetings of the Audit Committee;
- (c) make suggestions and provide feedback from the Audit Committee to management regarding information that is or should be provided to the Audit Committee;
- (d) report to the Board on the activities of the Audit Committee relative to its recommendations, resolutions, actions and concerns; and
- (e) meet as necessary with the internal and external auditor.

7. ABSENCE OF AUDIT COMMITTEE CHAIR

If the Chair of the Audit Committee is not present at any meeting of the Audit Committee, one of the other members of the Audit Committee present at the meeting shall be chosen by the Audit Committee to preside at the meeting.

8. SECRETARY OF AUDIT COMMITTEE

The Corporate Secretary shall act as Secretary to the Audit Committee.

9. MEETINGS

The Chair, or any two members of the Audit Committee, or the internal auditor, or the external auditor, may call a meeting of the Audit Committee. The Audit Committee shall meet at least quarterly. The Audit Committee shall meet periodically with management, the internal auditor and the external auditor in separate executive sessions.

10. QUORUM

A majority of the members of the Audit Committee, present in person or by telephone or other telecommunication device that permit all persons participating in the meeting to speak to each other, shall constitute a quorum.

11. NOTICE OF MEETINGS

Notice of the time and place of every meeting shall be given in writing, facsimile communication or by other electronic means to each member of the Audit Committee at least 24 hours prior to the time fixed for such meeting; provided, however, that a member may in any manner waive a notice of a meeting. Attendance of a member at a meeting is a waiver of notice of the meeting, except where a member attends a meeting for the express purpose of objecting to the transaction of any business on the grounds that the meeting is not lawfully called.

12. ATTENDANCE OF COMPANY OFFICERS AND EMPLOYEES AT MEETING

At the invitation of the Chair of the Audit Committee, one or more officers or employees of the Company may attend any meeting of the Audit Committee.

13. PROCEDURE, RECORDS AND REPORTING

The Audit Committee shall fix its own procedure at meetings, keep records of its proceedings and report to the Board when the Audit Committee may deem appropriate but not later than the next meeting of the Board.

14. REVIEW OF CHARTER AND EVALUATION OF AUDIT COMMITTEE

The Audit Committee shall review its Charter annually or otherwise, as it deems appropriate and, if necessary, propose changes to the Governance Committee and the Board. The Audit Committee shall annually review the Audit Committee's own performance.

15. OUTSIDE EXPERTS AND ADVISORS

The Audit Committee is authorized, when deemed necessary or desirable, to retain and set and pay the compensation for independent counsel, outside experts and other advisors, at the Company's expense, to advise the Audit Committee or its members independently on any matter.

16. RELIANCE

Absent actual knowledge to the contrary (which shall be promptly reported to the Board), each member of the Audit Committee shall be entitled to rely on (i) the integrity of those persons or organizations within and outside the Company from which it receives information, (ii) the accuracy of the financial and other information provided to the Audit Committee by such persons or organizations and (iii) representations made by management and the external auditor, as to any information technology, internal audit and other non-audit services provided by the external auditor to the Company and its subsidiaries.

Schedule D

Compensation

We are committed to high standards of corporate governance, including compensation governance.

This section tells you how the Board makes director and executive compensation decisions at TransCanada, and explains its decisions for 2016.

Compensation governance

The Board, the Human Resources committee and the Governance committee are responsible for the integrity of our compensation governance practices.

Human Resources committee

- Paula Rosput Reynolds (Chair)
- S. Barry Jackson
- John Richels (retiring May 5, 2017)
- Mary Pat Salomone (as of April 29, 2016)
- Richard E. Waugh

Governance committee

- Derek H. Burney (Chair)
- Kevin E. Benson
- S. Barry Jackson
- Indira Samarasekera (as of April 29, 2016)
- Siim A. Vanaselja
- Richard E. Waugh

The Board approves all matters related to executive and director compensation. The committees are responsible for reviewing compensation matters and making any recommendations. Both committees are entirely independent. Each Human Resources committee member is independent under the NYSE compensation committee independence requirements.

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EXPERTISE

Human resources and executive compensation

The Human Resources committee is responsible for executive compensation. It consists of five independent directors who have an appropriate mix of skills and experience in management, business, industry, human resources, executive compensation and public accountability for carrying out their responsibilities.

Name	Human resources/compensation experience	CEO/EVP experience	Risk management	Governance	Law	Finance & accounting
Paula Rospud Reynolds (Chair)	X	X	X	X		X
S. Barry Jackson	X	X		X		
John Richels (retiring May 5, 2017)	X	X	X	X	X	X
Mary Pat Salomone (as of April 29, 2016)	X	X		X		X
Richard E. Waugh	X	X	X	X		X

All of the members have experience as members of human resources or compensation committees of other public companies. All of the members also have governance experience and most have finance and accounting experience.

Ms. Reynolds, the committee Chair, was the CEO of two U.S. public companies and was responsible for overseeing compensation plans and their implementation, and has experience in designing and assessing performance-based goals for executives. She has worked closely with compensation consultants and has been involved in all aspects of the design, implementation and administration of compensation programs.

Mr. Jackson has served as the chair or been a member of the compensation committee for several public companies. As a former CEO of a public oil and gas company, Mr. Jackson has experience in overseeing executive compensation programs and working closely with compensation consultants, and has been involved in all aspects of the design, implementation and administration of compensation programs as a senior executive and director.

Mr. Richels was the president and CEO of a publicly traded company and now serves as Chairman. He was also the CFO of a public company, and was the managing and chief operating partner for a law firm. Mr. Richels has experience in developing and implementing compensation plans and performance-based goals for executives and enterprise-wide personnel.

Ms. Salomone currently serves as the chair and member of compensation committees for two other publicly traded companies. She was previously the Senior Vice-President and Chief Operating Officer of a publicly traded energy infrastructure company and also held a number of senior positions within the energy infrastructure industry. Ms. Salomone has experience in the implementation and administration of the compensation programs and performance-based goals for executives.

Mr. Waugh, as the former CEO of a publicly traded financial institution, has experience in overseeing, administering and implementing executive compensation programs and compensation plans.

In addition to the committee's collective experience in compensation matters, all of the members stay actively informed of trends and developments in compensation matters and the applicable legal and regulatory frameworks.

Governance

You can find specific details about each director's background and experience in the director profiles starting on page 13, and more information about the committees starting on page 45.

The Governance committee is responsible for director compensation and risk oversight. It consists of five independent directors who have a mix of skills and experience in business, risk, governance, human resources and compensation. Five of the members are currently or have been members of human resources or compensation committees of other public companies. Five of the members also have experience as a CEO of one or more public companies, which has provided each of them with experience in oversight of and direct involvement in compensation matters.

COMPENSATION OVERSIGHT

The purpose of the Board's compensation oversight is to ensure that executives and directors are compensated fairly with respect to market in a way that does not lead to undue risk in TransCanada's business and operations.

The Board reviews our compensation policies and practices every year, considers the possibility of risks, and makes any adjustments it deems necessary to ensure that our compensation policies are not reasonably likely to have a material adverse effect on TransCanada. It carries out this work directly or through the Human Resources committee and the Governance committee.

The Board has approved various compensation policies and practices to effectively identify and mitigate compensation risks and discourage members of the executive leadership team or others from taking inappropriate or excessive risks.

Multi-year strategic plan

We have a multi-year strategic plan that identifies our core strategies to achieve our vision of being the leading energy infrastructure company in North America. Our core strategies include:

- maximizing the full-life value of our infrastructure assets and commercial positions
- commercially developing and building new asset investment programs
- cultivating a focused portfolio of high quality development options, and
- maximizing our competitive strengths.

Executive compensation is closely linked to the strategic plan. Our annual corporate objectives support the strategic plan and are integrated in our compensation decision-making process. At the end of each year, the Board assesses our performance against the corporate objectives to determine the Corporate factor that is used in calculating short-term incentive awards for the executive leadership team and all other employees. The Board also ensures that the annual individual performance objectives for each member of the executive leadership team align with our corporate objectives and reflect performance areas that are specific to each role when it determines total direct compensation for each executive.

Compensation philosophy

Our compensation philosophy guides all compensation program design and decisions. Our approach to compensation is structured to meet four key objectives: pay for performance, be market competitive, align executives' interests with those of our various stakeholders, and attract, engage and retain our executives. In setting compensation levels, each component – base salary, short-term and long-term incentives – as well as total direct compensation are determined with reference to median levels in our peer group (see pages 73 through 85 for details).

Executive compensation is designed to pay for performance, as a significant portion of total direct compensation is variable or at-risk compensation. See pages 90 through 94 for the pay mix for each named executive.

Executive compensation structured to manage risk

The Human Resources committee and the Board have structured the executive compensation program to ensure that executives are compensated fairly and in a way that does not present undue risk to TransCanada or encourage executives to take inappropriate risks.

- **Structured process:** The committee has implemented a formal decision-making process that involves management, the committee and the Board. The committee uses a multi-step review process for all compensation matters, first adopting goals and metrics of performance, reviewing how performance compares to the pre-established metrics and then seeking Board input as to the reasonableness of the results.
- **Benchmarking to ensure fairness:** Executive compensation is reviewed every year. Director compensation is reviewed every two years by the Governance committee and the Board. Both director and executive compensation are benchmarked against size appropriate peer groups to assess competitiveness and fairness, and the appropriateness of the composition of the applicable peer groups is reviewed.
- **Modelling and stress testing:** The committee uses modelling to stress test different compensation scenarios and potential future executive compensation. This includes an analysis of the potential effect of different corporate performance scenarios on previously awarded and outstanding compensation to assess whether the results are reasonable. The committee also uses modelling to assess the payments under the terms of the executives' employment agreements for severance and change of control situations.
- **Independent advice:** The committee uses an independent external compensation consultant to provide advice in connection with executive pay benchmarking, incentive plan design, compensation governance and pay for performance.
- **Alignment with shareholders:** The committee and the Board place a significant emphasis on long-term incentives when determining the total direct compensation for the executive leadership team. Our long-term incentives include stock options and performance vesting executive share units (ESUs) – both of which encourage value creation over the long-term and align executives' interests with our shareholders.
- **Pre-established objectives:** Each year the Board approves corporate, business/functional and individual objectives that are aligned with the overall business plan for each member of the executive leadership team. These objectives are used to assess performance and determine compensation.
- **Multi-year performance-based compensation:** Awards under the ESU plan are paid out based on our performance against objectives set for the three-year vesting period.
- **Limits on variable compensation payments:** Short-term incentive awards are subject to a minimum of a zero payout up to a maximum payout of two times target. Long-term incentive awards under the ESU plan are limited to a maximum payout of 2.0 times the final number of units accrued at the end of the vesting period (1.5 for awards prior to the 2015 grant).
- **Discretion:** The Board completes a formal assessment annually, and can then use its discretion to increase or decrease any compensation awards if it deems it appropriate based on market factors or other extenuating circumstances. However, to maintain the integrity of the metrics-based framework, the Board exercises its discretion sparingly.

Policies and guidelines to manage 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 objectives:** We adopt corporate objectives 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, units of exchange funds, and other hedging vehicles
- **Reimbursement:** We have an Incentive compensation reimbursement policy which requires employees at the vice-president level and above to repay vested and unvested short and long-term incentive compensation (including proceeds realized from the exercise of stock options) 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 with any applicable laws, such as the final Dodd-Frank rules. In addition, 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 incentive-based 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.
- **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 are as follows:

Year	Approval vote (%)
2016	97.47
2015	97.10
2014	94.28

- **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.

After considering the implications associated with our compensation policies and practices, completing a review of our policies and practices described above, and with advice from the independent consultant to the Human Resources committee, the Board believes that:

- we have the proper practices in place to effectively identify and mitigate potential risk, and
- TransCanada's compensation policies and practices do not encourage any member of our executive leadership team, or any employee to take inappropriate or excessive risks, and are not reasonably likely to have a material adverse effect on our company.

In addition to our compensation policies and practices, our corporate values – Safety, Responsibility, Integrity, and Collaboration – also guide director, officer and employee behaviour, underpin our company culture and define the character of the organization we share and work in every day.

INDEPENDENT CONSULTANT

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
- attending all of its committee meetings (unless otherwise requested by the committee Chair)
- 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.

Meridian Compensation Partners (Meridian) has been the independent compensation consultant since September 2014. The committee obtains independent advice from the consultant who provides a neutral source of data and information on compensation practices and trends. While the consultant's advice is an important tool in the committee's processes, the committee remains wholly responsible for making its own decisions and recommendations to the Board.

Meridian provides advice to the committee on matters relating to executive compensation, it does not provide consulting or other services to TransCanada, and is not permitted to provide services to management. Before engaging Meridian, and each year 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 table below shows the executive compensation-related fees paid in 2015 and 2016.

Executive compensation-related fees

(\$ in millions)

Meridian	2016	2015
Consulting to the Human Resources committee	0.15	0.17
All other fees	—	—
Total fees	\$0.15	\$0.17

DIRECTOR COMPENSATION CONSULTANT

In 2016, the Governance committee retained a compensation consultant, Willis Towers Watson, to assist in its review of board compensation, market competitiveness and board compensation trends.

The table below shows director compensation-related fees paid in 2015 and 2016.

Director compensation-related fees

(\$ in millions)

Willis Towers Watson	2016	2015
Consulting to the Governance committee		
• preparing a report on director compensation	0.04	—
All other fees		
• compensation consulting and market data services for executives and non-executives	0.05	0.03
• benefit and pension actuarial consulting services for our Canadian and U.S. operations	2.65	2.77
• pension administration services for our Canadian and U.S. operations	1.92	1.85
• preparing a report on LP director compensation	0.03	—
• insurance placement and advice	1.40	—
Total fees	\$ 6.09	\$ 4.65

Director compensation discussion and analysis

APPROACH

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 DSUs to link a significant portion of their compensation to the value of our shares (see *Deferred share units*, below for more information about the DSU plan).

The Board follows a formal performance assessment process to ensure directors are engaged and make meaningful contributions to the Board and committees they serve on.

The Governance committee reviews director compensation every two years, and makes compensation recommendations to the Board for its review and approval. Recommendations take into consideration the directors' time commitment, duties and responsibilities, and director compensation practices at comparable companies.

Directors of TransCanada also serve as directors of TCPL. Board and committee meetings of TransCanada and TCPL run concurrently, and the director compensation described below is for serving on both Boards. TransCanada does not hold any material assets directly, other than TCPL common shares and receivables from some of our subsidiaries. As a result, TCPL assumes all directors' costs according to a management services agreement between the two companies.

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Benchmarking

Director compensation is benchmarked against two peer groups. The companies in the custom peer group are relatively consistent with the group of Canadian publicly-traded companies included in the executive compensation peer group and this group provides an industry specific market reference point. Since directors tend to be recruited from a variety of industries, the general industry peer group provides an additional market reference point of publicly-traded Canadian companies that are similar in size and scope to TransCanada. Total compensation is determined with reference to median levels in our peer groups, so we can attract and retain qualified directors. The Governance committee reviews director compensation every two years, based on independent advice respecting compensation paid by our peer companies. The Governance committee refers to the report when conducting its compensation review.

The peer groups were revised in 2016, when the Governance committee reviewed director compensation. The custom peer group was revised to align with the peer group adopted by the Human Resources committee for 2016 named executive compensation. Talisman Energy Inc. was removed from the peer groups, as it is no longer a public company.

2016 peer groups

Custom peer group	General industry peer group
American Electric Power Co.	Agrium Inc.
Canadian National Railway Company	Canadian National Railway Company
Canadian Natural Resources Ltd.	Canadian Pacific Railway Limited
Cenovus Energy Inc.	Cenovus Energy Inc.
Dominion Resources Inc.	Enbridge Inc.
Enbridge Inc.	Encana Corporation
Encana Corporation	Maple Leaf Foods Inc.
Exelon Corporation	Metro Inc.
Fortis Inc.	National Bank of Canada
Husky Energy Inc.	Potash Corporation of Saskatchewan Inc.
Imperial Oil Ltd.	Resolute Forest Products Inc.
Kinder Morgan Inc.	Suncor Energy Inc.
NextRa Energy Inc.	TELUS Corporation
Occidental Petroleum Corporation	
PG&E Company	
Southern Company	
Spectra Energy Corp.	
Suncor Energy Inc.	
Teck Resources Ltd.	
Williams Companies Inc.	

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 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, Mr. Girling must instead meet our CEO share ownership requirement which is five times his base salary. Mr. Girling meets these ownership requirements (see page 77 for details).

As of February 28, 2017, all but three of our directors meet the share ownership requirements, as do most of our directors who have served for fewer than five years. Mr. Crétier, Ms. Salomone and Dr. Samarasekera each have five years from the date they were appointed to meet the director share ownership requirements:

Director	Date appointed	Share ownership date
Mr. Crétier	February 17, 2017	February 17, 2022
Ms. Salomone	February 12, 2013	February 12, 2018
Dr. Samarasekera	April 29, 2016	April 29, 2021

Ms. Salomone met the share ownership requirements at December 31, 2016. Director compensation was transitioned to a flat fee retainer, in lieu of meeting fees on January 1, 2017, and as a result the share ownership requirement increased from \$720,000 to \$940,000.

Deferred share units

DSUs are notional shares that have the same value as TransCanada shares. DSUs earn dividend equivalents as additional units, at the same rate as dividends paid on our shares.

Our DSU plan allows directors to choose to receive a portion of their retainers, meeting fees and travel fees in DSUs instead of cash. The plan also allows the Governance committee to use discretion to grant DSUs to directors as additional compensation (excluding employee directors such as our President and CEO). No discretionary grants of DSUs were made to directors in 2016.

Directors redeem their DSUs when they leave the Board. Directors can redeem their DSUs for cash or shares purchased on the open market.

COMPONENTS

Directors receive annual retainers, meeting fees and travel fees when applicable. They are also reimbursed for out-of-pocket expenses they incur while attending meetings, and are paid a per diem for Board and committee activities outside of our meeting schedule. Directors who are U.S. residents receive the same amounts in U.S. dollars. Mr. Girling is compensated in his role as President and CEO, and does not receive any director compensation. Both the annual Board retainer and the separate retainer for the Chair of the Board are paid in cash and DSUs according to the fee schedule below:

2016 compensation		
Retainers paid quarterly from the date the director is appointed to the Board and committees		
Board paid to each director except the Chair of the Board	\$180,000 per year (\$70,000 cash + \$110,000 in DSUs)	represented 1,904 DSUs for Canadian directors and 2,499 DSUs for U.S. directors in 2016
Chair of the Board receives a higher retainer because of his level of responsibility Flat fee (no meeting fees paid)	\$491,000 per year (\$201,000 in cash + \$290,000 in DSUs)	represented 5,021 DSUs in 2016
Committee paid to each committee member except the Chair of the committee	\$5,500 per year	
Committee Chairs receive a higher committee retainer for additional duties and responsibilities	\$20,000 per year	Audit
	\$15,000 per year	Human resources
	\$12,000 per year	Governance and health, safety and environment
Meeting fees Board and committee meetings	\$1,500 per meeting	
Travel fees if round trip travel is more than three hours	\$1,500 per round trip	
Other fees special assignments	\$1,500 (per diem for additional activities)	no other fees were paid in 2016

DSUs are credited quarterly, in arrears, using the closing price of TransCanada shares on the TSX at the end of each quarter. In 2016, all of our directors chose to receive 100 per cent of their retainer, meeting and travel fees in DSUs, except Mme. Gauthier, Ms. Salomone, Ms. Reynolds and Mr. Stewart.

Starting January 1, 2017, non-employee directors, except for the Chair of the Board, will receive a flat fee retainer of \$235,000, \$125,000 of which is paid in mandatory DSUs. Directors will no longer receive meeting fees. This change to a flat fee structure is simpler to administer, and provides a more accurate representation of the time commitment associated with serving on our Board. Our directors attend Board and special meetings, but also provide advice outside of meetings and are attentive to the best interests of TransCanada at all times. A majority of TransCanada's peers have adopted a flat fee structure. The Governance committee determined that a flat fee structure is a more appropriate form of compensation. The increase in retainer also aligns our compensation closer to the median of our peer groups.

Starting January 1, 2017, the Audit committee Chair retainer was increased by \$4,000, from \$20,000 to \$24,000, and the Human Resources committee Chair retainer was increased by \$3,000, from \$15,000 to \$18,000. These increases reflect the additional increased workload of chairing the Audit and Human Resources committees, and align our differentiated committee Chair retainer practices to the median of our peer groups.

Director compensation – 2016 details

The table below shows total director compensation awarded, credited or paid in 2016.

DIRECTOR COMPENSATION TABLE

Name	Fees earned (\$)	Share-based awards (\$)	Option-based awards (\$)	Non-equity incentive plan compensation (\$)	Pension value (\$)	All other compensation (\$)	Total (\$)
Kevin E. Benson	120,750	110,000	—	—	—	—	230,750
Derek H. Burney	134,000	110,000	—	—	—	—	244,000
Paule Gauthier (retired April 29, 2016)	46,203	36,164	—	—	—	—	82,367
S. Barry Jackson	201,000	290,000	—	—	—	38,164	529,164
John Lowe	170,311	144,441	—	—	—	—	314,752
Paula Rosput Reynolds	177,885	144,441	—	—	—	—	322,326
John Richels	169,308	144,441	—	—	—	—	313,749
Mary Pat Salomone	170,289	144,441	—	—	—	—	314,730
Indira Samarasekera (joined April 29, 2016)	83,769	74,137	—	—	—	—	157,906
D. Michael G. Stewart	128,750	110,000	—	—	—	—	238,750
Siim A. Vanaselja	143,500	110,000	—	—	—	—	253,500
Richard E. Waugh	128,250	110,000	—	—	—	—	238,250

Notes

- Mr. Lowe, Ms. Reynolds, Mr. Richels and Ms. Salomone received their share-based awards, retainers, meeting fees, travel and other fees in U.S. dollars. The values presented in this table are in Canadian dollars, which have been converted at a quarterly exchange rate of 1.2971 CAD/USD as at March 31, 2016, 1.3009 CAD/USD as at June 30, 2016, 1.3117 CAD/USD as at September 30, 2016 and 1.3427 CAD/USD as at December 31, 2016.
- Mr. Girling is compensated in his role as President and CEO, and does not receive any director compensation.
- Fees earned includes Board and committee retainers, meeting fees and travel fees paid in cash, including the portion they chose to receive as DSUs.
- Share-based awards include the portion of the Board retainer (\$110,000) and the Board Chair retainer (\$290,000) that we automatically pay in DSUs. There were no additional grants of DSUs in 2016.
- In 2016, we paid \$32,180 for third-party office and other expenses for Mr. Jackson and he received a reserved parking space valued at \$5,984.

The table below is a breakdown of director compensation by component. It includes the total fees paid in cash and the DSUs credited as at the grant date, unless stated otherwise. *DSUs credited* includes the minimum portion of the Board retainer paid in DSUs and the retainers, meeting and travel fees that directors chose to receive as DSUs in 2016.

Name	Retainers			Meeting fees		Travel	Other	Totals		
	Board (\$)	Committee (\$)	Committee Chair (\$)	Board meetings (\$)	Committee meetings (\$)	Travel fee (\$)	Strategic planning sessions (\$)	Fees paid in cash (\$)	DSUs credited (\$)	Total cash & DSUs credited (\$)
Kevin E. Benson	70,000	11,000	—	24,750	12,000	1,500	1,500	—	230,750	230,750
Derek H. Burney	70,000	5,500	12,000	24,000	12,000	9,000	1,500	—	244,000	244,000
Paule Gauthier (retired April 29, 2016)	23,077	3,626	—	10,500	6,000	3,000	—	33,577	48,790	82,367
S. Barry Jackson	201,000	—	—	—	—	—	—	—	491,000	491,000
John Lowe	91,917	14,444	—	30,432	17,755	13,812	1,951	—	314,752	314,752
Paula Rospot Reynolds	91,917	7,222	19,697	27,505	17,749	11,844	1,951	80,073	242,253	322,326
John Richels	91,917	14,444	—	31,402	17,749	11,844	1,951	—	313,749	313,749
Mary Pat Salomone	91,917	14,444	—	32,378	17,755	11,844	1,951	170,289	144,441	314,730
Indira Samarasekera (joined April 29, 2016)	47,115	7,404	—	12,750	6,000	9,000	1,500	—	157,906	157,906
D. Michael G. Stewart	70,000	5,500	12,000	24,750	13,500	1,500	1,500	128,750	110,000	238,750
Siim A. Vanaselja	70,000	5,500	20,000	24,000	12,000	10,500	1,500	—	253,500	253,500
Richard E. Waugh	70,000	11,000	—	24,750	12,000	9,000	1,500	—	238,250	238,250

Notes

- Mr. Lowe, Ms. Reynolds, Mr. Richels and Ms. Salomone received their share-based awards, retainers, meeting fees, travel and other fees in U.S. dollars. The values presented in this table are in Canadian dollars, which have been converted at a quarterly exchange rate of 1.2971 CAD/USD as at March 31, 2016, 1.3009 CAD/USD as at June 30, 2016, 1.3117 CAD/USD as at September 30, 2016 and 1.3427 CAD/USD as at December 31, 2016.
- DSUs credited include all share-based awards vested or earned by the directors in 2016. The minimum portion of the Board retainer paid in DSUs in 2016 was \$290,000 for the Chair and \$110,000 for the other directors. DSUs credited also includes the portion of the retainers, meeting fees and travel fees directors chose to receive in DSUs in 2016.
- Total cash and DSUs credited is the total dollar amount paid for duties performed on the TransCanada and TCPL Boards.
- DSUs were paid quarterly based on share prices of \$51.06, \$58.46, \$62.31 and \$60.54, the closing prices of TransCanada shares on the TSX at the end of each quarter in 2016. Directors are able to redeem their DSUs when they leave the Board.

AT-RISK INVESTMENT

The table on the following page shows:

- the total value of each director's shares and DSUs or shares of our affiliates, including the DSUs credited as dividend equivalents up to January 31, 2017
- their holdings as a percentage of their 2016 annual retainer, and
- the minimum equity investment required, as a multiple of their annual cash retainer.

The change in value represents the value of DSUs received in 2016, including dividend equivalents credited up to January 31, 2017, plus any additional shares acquired in 2016. The change in value also includes increases and decreases in market value.

As of the date of this circular, all of our directors who have served for at least five years meet the share ownership requirements, as do most of our directors that have served for fewer than five years. Mr. Crétier, Ms. Salomone and Dr. Samarasekera have five years from the date they were each appointed to meet the share ownership requirements, as described on page 58. Ms. Salomone met the share ownership requirements at December 31, 2016. Director compensation was transitioned to a flat fee retainer, in lieu of meeting fees, on January 1, 2017, and as a result the share ownership requirement increased from \$720,000 to \$940,000.

Mr. Girling meets the CEO ownership requirements under the executive share ownership guidelines. See pages 58 and 77 for more information about our share ownership requirements for directors and executives.

None of the nominated directors (or all of our directors and executives as a group) own more than one per cent of TransCanada shares, or any class of shares of its subsidiaries and affiliates.

In the table:

- **DSUs** include DSUs credited as dividend equivalents up to January 31, 2017.
- **Total market value** is the market value of TransCanada shares and DSUs, calculated using a closing share price on the TSX of \$50.83 on February 23, 2016 and \$61.06 on February 28, 2017. It includes DSUs credited as dividend equivalents up to January 31, 2017.
- Mr. Richels' holdings include 10,000 shares held in a family partnership controlled by Mr. Richels and his wife.
- Mr. Stewart's holdings include 2,129 shares held beneficially by his wife.
- Mr. Waugh's holdings include 4,220 shares held by his wife.

At-risk investment

Name	Date	Common shares	DSUs	Total common shares and DSUs	At-risk investment		Minimum investment required	
					Total market value (\$)	As a multiple of annual retainer	Total value of minimum investment (\$)	Multiple of cash & equity retainer
Kevin E. Benson	2017	13,000	68,403	81,403	4,970,467	21.15	940,000	4x
	2016	13,000	61,866	74,866	3,805,439	21.14	720,000	4x
	Change	—	6,537	6,537	1,165,028	*		
Derek H. Burney	2017	12,910	62,782	75,692	4,621,754	19.67	940,000	4x
	2016	12,318	56,230	68,548	3,484,295	19.36	720,000	4x
	Change	592	6,552	7,144	1,137,459	*		
Stéphan Crétier (joined February 17, 2017)	2017	—	—	—	—	—	940,000	4x
	2016	—	—	—	—	—	—	4x
	Change	—	—	—	—	*		
S. Barry Jackson	2017	39,000	146,772	185,772	11,343,238	23.10	1,964,000	4x
	2016	39,000	132,848	171,848	8,735,034	17.79	1,964,000	4x
	Change	—	13,924	13,924	2,608,204	*		
John E. Lowe	2017	15,000	7,952	22,952	1,401,449	5.96	940,000	4x
	2016	15,000	2,271	17,271	877,885	4.88	720,000	4x
	Change	—	5,681	5,681	523,564	*		
Paula Rospud Reynolds	2017	6,000	21,613	27,613	1,686,050	7.17	940,000	4x
	2016	6,000	16,651	22,651	1,151,350	6.40	720,000	4x
	Change	—	4,962	4,962	534,699	*		
John Richels	2017	10,000	19,998	29,998	1,831,678	7.79	940,000	4x
	2016	10,000	13,866	23,866	1,213,109	6.74	720,000	4x
	Change	—	6,132	6,132	618,569	*		
Mary Pat Salomone	2017	3,000	11,407	14,407	879,691	3.74	940,000	4x
	2016	2,000	8,512	10,512	534,325	2.97	720,000	4x
	Change	1,000	2,895	3,895	345,366	*		
Indira Samarasekera (joined April 29, 2016)	2017	—	2,652	2,652	161,931	0.69	940,000	4x
	2016	—	—	—	—	—	720,000	4x
	Change	—	2,652	2,652	161,931	*		
D. Michael G. Stewart	2017	16,651	30,928	47,579	2,905,174	12.36	940,000	4x
	2016	16,008	27,882	43,890	2,230,929	12.39	720,000	4x
	Change	643	3,046	3,689	674,245	*		
Siim A. Vanaselja	2017	12,000	12,719	24,719	1,509,342	6.42	940,000	4x
	2016	12,000	7,898	19,898	1,011,415	5.62	720,000	4x
	Change	—	4,821	4,821	497,927	*		
Richard E. Waugh	2017	29,730	23,533	53,263	3,252,239	13.84	940,000	4x
	2016	29,730	18,557	48,287	2,454,428	13.64	720,000	4x
	Change	—	4,976	4,976	797,811	*		
Total	2017	157,291	408,759	566,050	34,563,013			
	2016	155,056	346,581	501,637	25,498,209			
	Change	2,235	62,178	64,413	9,064,804			

* The value of the minimum retainer has increased from \$720,000 to \$940,000, as a result the change in *at-risk investment as a multiple of annual retainer* has been omitted because it does not show the changes in director share ownership during 2016.

INCENTIVE PLAN AWARDS

Outstanding option-based and share-based awards

The table below shows all outstanding share-based awards previously granted to the directors that were outstanding at the end of 2016. Year-end values are based on \$60.54 being the closing price of TransCanada shares on the TSX at December 31, 2016. Non-executive directors are not eligible to participate in our stock option plan and, accordingly, none of our non-executive directors have outstanding option-based awards.

Name	Number of shares or units of share-based awards that have not vested (#)	Market or payout value of share-based awards that have not vested (\$)	Number of shares or units of vested share-based awards not paid out or distributed (#)	Market or payout value of vested share-based awards not paid out or distributed (\$)	Number of share-based awards vested during 2016	Share-base awards- value vested during 2016 (\$)
Kevin E. Benson	623	37,765	67,779	4,103,379	6,567	397,603
Derek H. Burney	572	34,662	62,209	3,766,171	6,573	397,960
S. Barry Jackson	1,338	81,032	145,433	8,804,562	13,990	846,994
John Lowe	72	4,390	7,879	477,027	5,632	340,992
Paula Rospud Reynolds	197	11,932	21,415	1,296,499	4,940	299,075
John Richels	182	11,041	19,815	1,199,657	6,095	369,049
Mary Pat Salomone	104	6,298	11,302	684,278	2,880	174,383
Indira Samarasekera (joined April 29, 2016)	24	1,464	2,627	159,091	2,627	159,090
D. Michael Stewart	282	17,075	30,646	1,855,309	3,058	185,162
Siim A. Vanaselja	115	7,022	12,602	762,982	4,788	289,884
Richard E. Waugh	214	12,992	23,318	1,411,673	4,956	300,062

Notes

- All share-based awards in this chart are DSUs.
- The total *Market or payout value of share-based awards that have not vested* is \$225,674 at December 31, 2016.
- *Shares or Units not vested* are dividends declared at December 31, 2016, but not payable until January 31, 2017. *Number of shares or units of share based awards that have not vested* is calculated using the closing price of TransCanada shares on the TSX at January 31, 2017 (\$61.39).
- Mme. Gauthier retired on April 29, 2016 and her remaining 66,779 share units were redeemed at \$2,061,618 on January 19, 2017.

Human Resources committee letter to shareholders

Dear Shareholder:

The Board is holding its eighth consecutive say on pay advisory vote regarding our approach to executive compensation. We are pleased with the level of shareholder support we have received to date. We are providing this letter and the accompanying compensation discussion and analysis (CD&A) to explain how the Human Resources committee and the Board have assessed the performance of the company and the executive team in 2016, and the basis on which we reached various compensation decisions for each of our named executive officers. We hope you concur with the framework and decisions the Board and the committee have reached this year regarding TransCanada's executive compensation programs and administration.

TransCanada's vision – to be the leading energy infrastructure company in North America, focusing on pipeline and power generation opportunities in regions where the company has or can develop a significant competitive advantage – has remained constant for more than a decade. This should come as no surprise because our business features long-lived, capital intensive assets, most of which are subject to regulated returns or other long-term contractual arrangements.

The leadership strives for continuous improvement and innovation each year, but the nature of the business equally requires steadfastness, stewardship and adherence to multi-year plans. Consequently, the incentives for performance must reflect continuity and long-term focus as well. You will see, as you read through this CD&A, that our compensation programs are largely unchanged in recent years. While the committee and its advisors keep abreast of compensation developments in North America, we are not inclined to chase the "design of the day". We believe our programs lead to the right outcomes. Over time, the committee has seen increasingly greater clarity in the corporate goal setting process, management holding itself to progressively higher standards and the compensation rewarded closely tracking results achieved. In some years, results have been disappointing by some measures and realized pay has been affected accordingly. In other years, such as this one, major strategic initiatives have been accomplished. These accomplishments have been reflected in higher compensation for executives this year compared to last – but also reflect growth in TransCanada's total shareholder return (TSR), as measured by share price appreciation and increased dividends.

Management builds long-term value by successfully bringing complex, long lead time projects into service and operating them profitably. Management also builds value by acquiring assets of similar character at reasonable valuations and integrating those operations into TransCanada's base businesses, as was the case in 2016. Because access to capital is essential, maintaining strength in the company's financial position is imperative and we expect management to balance short-term financial achievement with thoughtful capital management, credit quality and longer term growth and profitability. Given these parameters, management and the Board agree on an annual scorecard that features goals in the following areas: safety (always our first priority), financial performance, optimization of TransCanada's existing asset base, excellence in project management, and the development of new asset opportunities. Each year, we also agree on three-year earnings targets, with attention to free cash generation necessary to support dividend growth.

These enduring principles translate directly into TransCanada's executive compensation program. Along with ensuring that we maintain compensation sufficiently competitive to attract and retain qualified executives, we have a program where a substantial portion of compensation (>50 per cent) is tied to multi-year performance. To this end, our base pay structure is benchmarked to our peers and the targets for our annual bonus plan are similarly benchmarked. The remainder of the executive compensation package consists of long-term incentives in the form of both share unit grants, whose vesting is triggered according to pre-set performance conditions, and in the form of stock options. More detail on these programs can be found at page 78.

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The only change in our program relative to what was approved by shareholders in early 2016 has been to recognize TransCanada's reorganization into business units. We adjusted the weighting of annual awards to recognize business unit level results for those who lead business units and we have continued to evolve these weightings in 2017 to strengthen the link between business unit performance and executive pay. The preponderance of compensation opportunity remains in the long-term incentive program where rewards earned are directly related to share price performance, relative TSR and growth in comparable earnings per share (EPS) over the longer term.

Our deliberative process is as follows. Each year, the Board reviews, considers and adopts an annual plan and three-year outlook. From that plan, management develops corporate, business unit and individual goals for each upcoming year as well as the three-year cumulative EPS targets. These goals are translated into metrics for compensation purposes, which are then evaluated each year. The committee delves into the specifics, and in doing so, uses its collective experience and business judgment regarding the appropriate levels of challenge and risk to the enterprise.

2016 was a transformational year for TransCanada. Through the acquisition of Columbia Pipeline Group, Inc. (Columbia) and rationalizing of the energy portfolio, TransCanada has enhanced its business profile and future prospects. That success, coupled with the successful construction and/or operation of infrastructure in Canada, the U.S. and Mexico, has led to record comparable earnings and cash flow in 2016. Comparable earnings per share increased 12 per cent and comparable funds generated from operations were up seven per cent compared to 2015. It was a year of many challenges, but there's no doubt that shareholders have and will continue to benefit from these initiatives.

We are proud to have occupational and facility safety records that are among the best in the industry, and our pipeline and power facilities operated throughout 2016 without any major incidents. We strive for top quartile performance and achieved a 50 per cent improvement in staff and contractor days away from work, however, last March we experienced the tragic fatality of a contractor on one of our sites. This is unacceptable and as a result, the Board scored safety below target – an important signal that we must redouble our efforts on the journey to incident-free operations.

Ultimately the Board approved a Corporate factor for 2016 of 1.7, which is above target level performance and reflects overall strong performance on financial, operational and growth objectives, while recognizing the shortfall on safety. The Corporate factor was used in determining annual incentive awards for all non-union employees. The Board also approved a performance multiplier of 1.34 for the 2014 ESU grant that vested in 2016. This factor reflected relative TSR at the 67th percentile of the peer group over the three-year period ended December 31, 2016. While the Board reduces the administration of the various programs to numerical calculations, we also apply our business judgment regarding the reasonableness of the results. We concluded that 2016 was a year of considerable success and hence the rewards being conferred are not merely competitive but are appropriate.

The committee is advised by Meridian Compensation Partners as its independent consultant on all executive compensation matters. The consultant's mandate includes providing advice on compensation for the named executives, incentive design, compensation governance and pay for performance, attending all committee meetings, and providing data, analysis or opinions on compensation-related matters as requested. While the committee is ultimately responsible for making its own decisions and recommendations to the Board, the consultant brings expertise, experience, independence and objectivity to the committee's deliberations. The committee meets frequently in-camera with the consultant, thereby ensuring that the discussions regarding compensation are substantive and unconstrained. You can find additional information on the independent consultant on page 55.

Conclusion

The Board is keenly aware of our responsibility to ensure that our approach to executive compensation supports our strategy and aligns with the interests of our shareholders. The Board and committee are also aware that our decisions must be logical and understandable to our employees, shareholders, and other stakeholders. To this end, the circular includes significant detail in the CD&A section starting on the next page. We also respond to shareholder questions on an individual basis, take input from stakeholders, and continue to re-evaluate our practices to ensure that our program remains appropriate.

We thank you for your continued confidence in our company and welcome your comments or questions. You can contact the committee or the Board through the Corporate Secretary, TransCanada Corporation, 450-1 Street S.W., Calgary, Alberta T2P 5H1.

Sincerely,



Paula Rosput Reynolds
Chair, Human Resources Committee



S. Barry Jackson
Chair of the Board of Directors

Executive compensation discussion and analysis

EXECUTIVE SUMMARY

This CD&A explains our executive compensation program, our 2016 performance, the performance assessment by the Human Resources committee and the Board, and their compensation decisions for our named executives:

- Russell K. Girling, President and Chief Executive Officer
- Donald R. Marchand, Executive Vice-President and Chief Financial Officer
- Alexander J. Pourbaix, Chief Operating Officer
- Karl Johannson, Executive Vice-President and President, Natural Gas Pipelines, and
- William C. Taylor, Executive Vice-President and President, Energy.

The named executives and four other executive vice-presidents make up our executive leadership team.

Performance results

To evaluate corporate performance for 2016, the committee and the Board reviewed the results associated with the adopted scorecard. The goals involve quantitative and qualitative factors associated with safety, financial performance, execution of ongoing projects and transactions, operational performance and progress on key growth initiatives.

2016 was a “transformational” year for TransCanada, as the company undertook unprecedented growth and adjusted its business to enhance long-term stability for the benefit of our shareholders. The US \$13 billion acquisition of Columbia, together with another \$23 billion in near-term, “normal course” projects across North America has set the stage for what TransCanada expects to be steady and predictable growth in earnings and dividends through the rest of this decade.

While the Columbia acquisition was not specifically contemplated at the time we set our objectives for 2016, its impact was reflected in our performance assessment of the financial results achieved for the year and in our project execution evaluation. The acquisition, together with other significant accomplishments outlined below, resulted in above target results in most areas.

In 2016 we continued our unwavering focus of providing safe and reliable operations everywhere we do business. We are proud to have occupational and facility safety records that are among the best in the industry, and our pipeline and power facilities operated throughout 2016 without any major incidents, but we believe that no safety-related incidents are acceptable. While we continue to strive for top quartile performance and achieved a 50 per cent improvement in staff and contractor days away from work cases, we did not achieve the tough standards we set for ourselves. Last March, we experienced the tragic fatality of a contractor on one of our worksites. This is unacceptable and we have increased our already significant efforts to work with our contractors to ensure the safety of their workers on our sites. We have also reinforced our commitment to our goal of zero incidents by adopting safety as the first of our four corporate values. Moving forward, Safety, Integrity, Responsibility and Collaboration will be the guiding principles for everything we do.

Our comparable earnings per share (EPS) were \$2.78, an increase of 12 per cent over 2015 and above our target for the year. The committee evaluated the non-comparable items and concluded that the use of comparable earnings was the appropriate basis for determining EPS for scorecard purposes. Comparable funds generated from operations were also higher in 2016 than in 2015.

We secured new contracts and settlements in 2016 that will enhance revenues in future years. Key to our success in maximizing the value of existing assets was an agreement reached with our ANR customers on a tolling structure that will add significant earnings for the next six years.

We continued to progress our slate of development projects with advances on several fronts during the year. We progressed development and construction of our portfolio of near-term projects. For our \$48 billion of longer-term projects, we continued to manage costs while working to obtain the necessary permits and approvals to enable these projects to move forward once final investment decisions are made.

In addition to meeting the targets we set out related to project execution at the beginning of the year, the execution of the Columbia transaction, related financing and integration was considered under the project execution category. The committee concluded that performance in this area merited above-target recognition. The transaction closed in record time and there was an integration plan in place at closing.

Incremental to its existing asset base, the Columbia acquisition provides significant additional opportunities for growth, including the US \$2.0 billion Mountaineer Xpress pipeline, the \$1.4 billion Leach Xpress pipeline, and other potential projects for a total of US \$7.2 billion. In particular, we were awarded the Sur de Texas pipeline (our share US \$1.3 billion) and the Villa de Reyes pipeline (US \$0.6 billion) projects in Mexico.

We made significant improvements in our organization's capability to deliver on our strategy with excellence. The implementation of a new operating model and related business optimization reviews have resulted in increased clarity of accountability for results as well as more efficient, cost-effective operations. The committee determined that we had met the 2016 targets, which have driven changes that have allowed us to achieve lower sustainable cost levels that will benefit our customers and shareholders.

You can read more about 2016 performance starting on page 86.

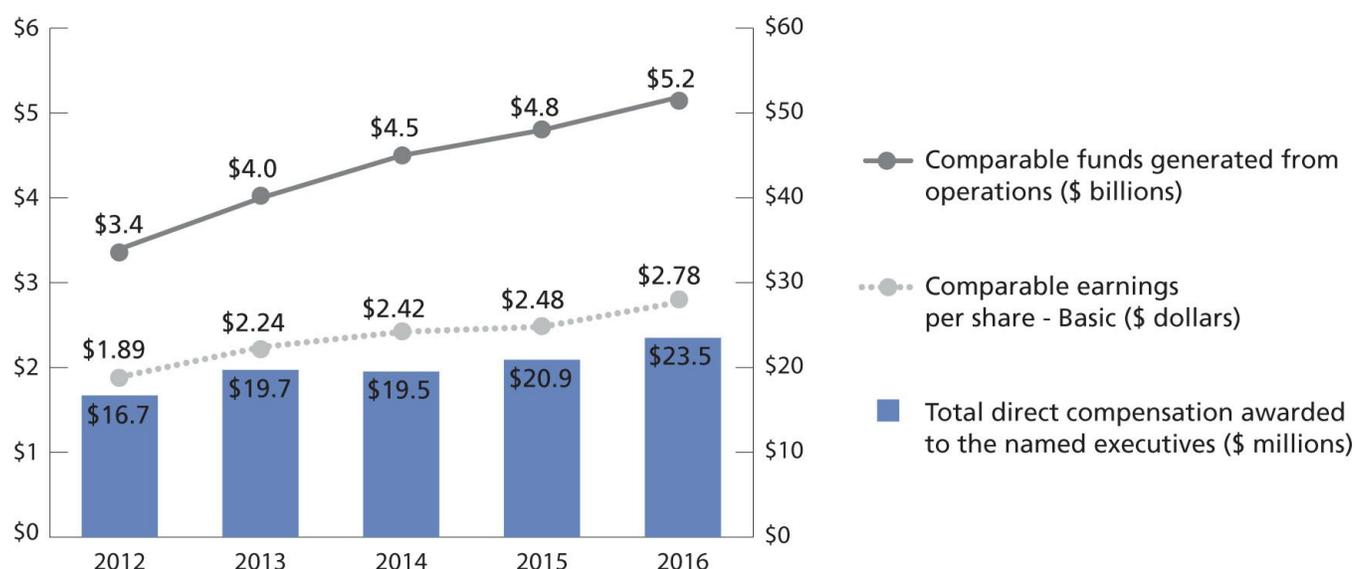
Compensation highlights

The Human Resources committee and Board made the following executive compensation decisions in 2017:

- After considering the performance results and their relative weightings, overall corporate performance for 2016 was assessed as above target with a Corporate factor of 1.7. The Corporate factor is used in the determination of the short-term incentive awards for all employees, including our named executives.
- The Board approved a performance multiplier for the 2014 grant of 1.34, according to the formula in effect when these grants were issued. This result reflects relative TSR performance at the 67th percentile of the peer group. The performance multiplier, combined with the change in valuation price from \$48.55 to \$60.48, and dividend reinvestment results in a payout that is 188 per cent of the original grant value.
- Three of our named executives received an increase to base salary to maintain competitiveness with our peer group, recognize proficiency in their roles, and reflect increases in scope of responsibility. For these executives, the average annual increase was 9 per cent. Increases are effective March 1, 2017.
- For the 2017 ESU grant, the Board approved three-year targets for comparable earnings per share and relative TSR.

Compensation vs. financial performance

The chart below compares our key financial results for the last five fiscal years to total direct compensation awarded to the named executives for the same period. Total direct compensation includes base salary, the short-term incentive award (paid in the first quarter following the performance year) and the grant value of ESU and stock option awards.



The table below shows total direct compensation awarded to our named executives as a percentage of our comparable earnings for the last five fiscal years:

	2012	2013	2014	2015	2016
Total direct compensation awarded to the named executives (as a % of comparable earnings)	1.3%	1.2%	1.1%	1.2%	1.1%

Notes

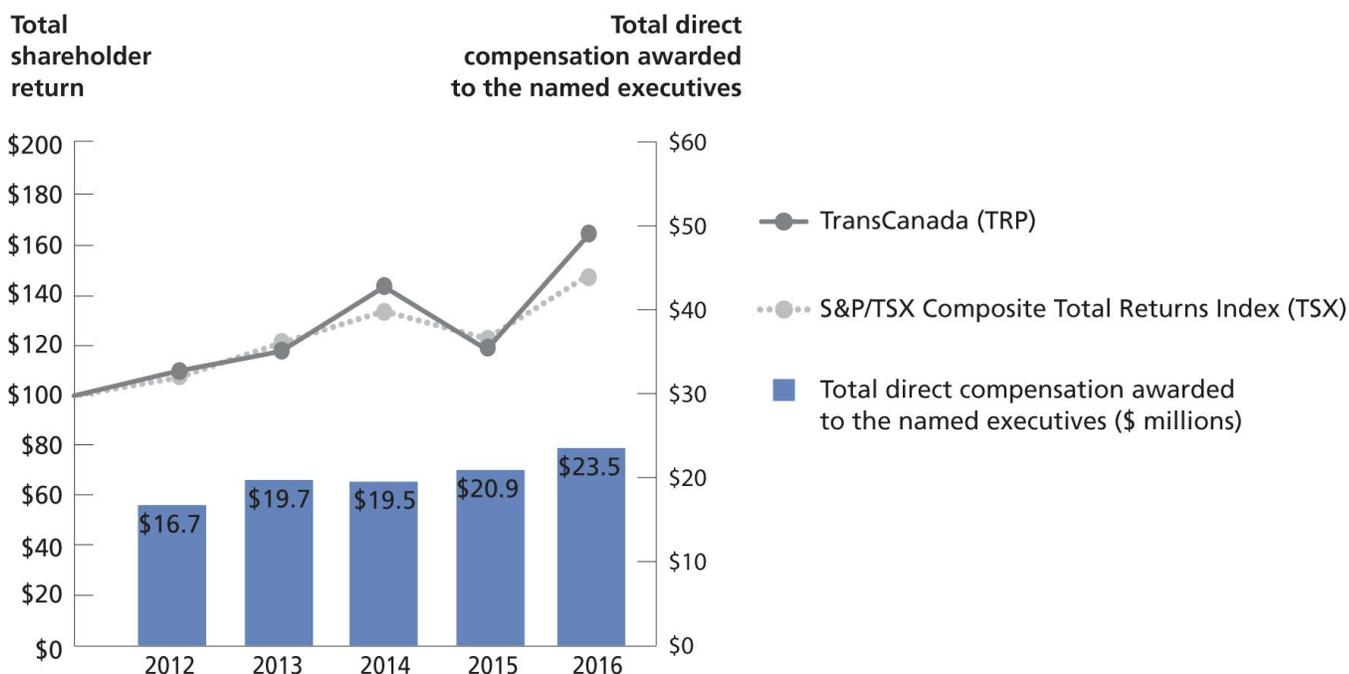
- The increase in **Total direct compensation** awarded to the named executives from 2012 to 2013 is due to base salary adjustments to reflect progression for certain named executives, higher short-term incentive awards due to strong corporate performance, and increases in long-term incentives to more closely align with median levels in the peer group. The increase from 2015 to 2016 is due primarily to higher short-term incentive awards due to strong corporate performance.
- **Comparable funds generated from operations**, **Comparable earnings per share**, and **Comparable earnings** are non-GAAP measures and do not have any standardized meanings prescribed by U.S. GAAP (see **Appendix B** for more information).

Compensation vs. total shareholder return

Our TSR, the change in value of TransCanada shares plus reinvestment of dividends, has tracked favourably against the S&P/TSX Composite Total Returns Index over the last five years, delivering an annual compound return of 10.5 per cent compared to 8.2 per cent for the Index.

The chart below illustrates TSR, assuming an initial investment of \$100 in TransCanada shares as of year end 2011, and compares it to the return of the S&P/TSX Composite Total Returns Index and the trend in total direct compensation awarded to our named executives over the same period.

TSR is only one of the performance measures the Board considers when assessing performance and determining compensation for our named executives, so we do not necessarily expect there to be a direct correlation between TSR and total direct compensation awarded in a given period. In addition, the realized value of long-term compensation awarded in any given year is not guaranteed. A portion of it is equity-based, and its value is directly affected by changes in our share price.



At year end	2011	2012	2013	2014	2015	2016	Compound annual return
TRP	\$100.00	\$109.85	\$117.79	\$143.66	\$118.29	\$164.93	10.5%
TSX	\$100.00	\$107.19	\$121.11	\$133.90	\$122.76	\$148.64	8.2%

Note

- The increase in **Total direct compensation** awarded to the named executives from 2012 to 2013 is due to base salary adjustments to reflect progression for certain named executives, higher short-term incentive awards due to strong corporate performance, and increases in long-term incentives to more closely align with median levels in the peer group. The increase from 2015 to 2016 is due primarily to higher short-term incentive awards due to strong corporate performance.

Program changes

The Board approved the following changes in 2016:

- For the ESU plan, the Board adopted a provision that the cumulative comparable earnings per share multiplier will be a maximum of 1.0 if the ratio of cumulative dividends per share/cumulative comparable funds generated from operations per share for the three year period is greater than 50 per cent. This amendment was made to ensure that rewards will be limited if the Board deems that cash cover to sustain the dividend has diminished.
- Increased the number of common shares reserved for issuance under the stock option plan to allow for grants to be made over the next three years, as approved by shareholders.
- Modified the performance measure relative weightings for the named executives, other than the CEO, under the short-term incentive plan to reflect organizational changes.
- Modified the formula for the CEO's short-term incentive award by removing the individual performance factor and weighting the award 100 per cent on corporate performance.

Additionally, the Board approved the following changes in 2017:

- Further modified the performance measure relative weightings for certain named executives under the short-term incentive plan to strengthen the link between corporate/business unit performance and executive pay.

The Board believes these changes ensure that our executive compensation program continues to meet our key compensation objectives as outlined in the next section.

APPROACH

TransCanada’s executive compensation program is designed to meet four key objectives:

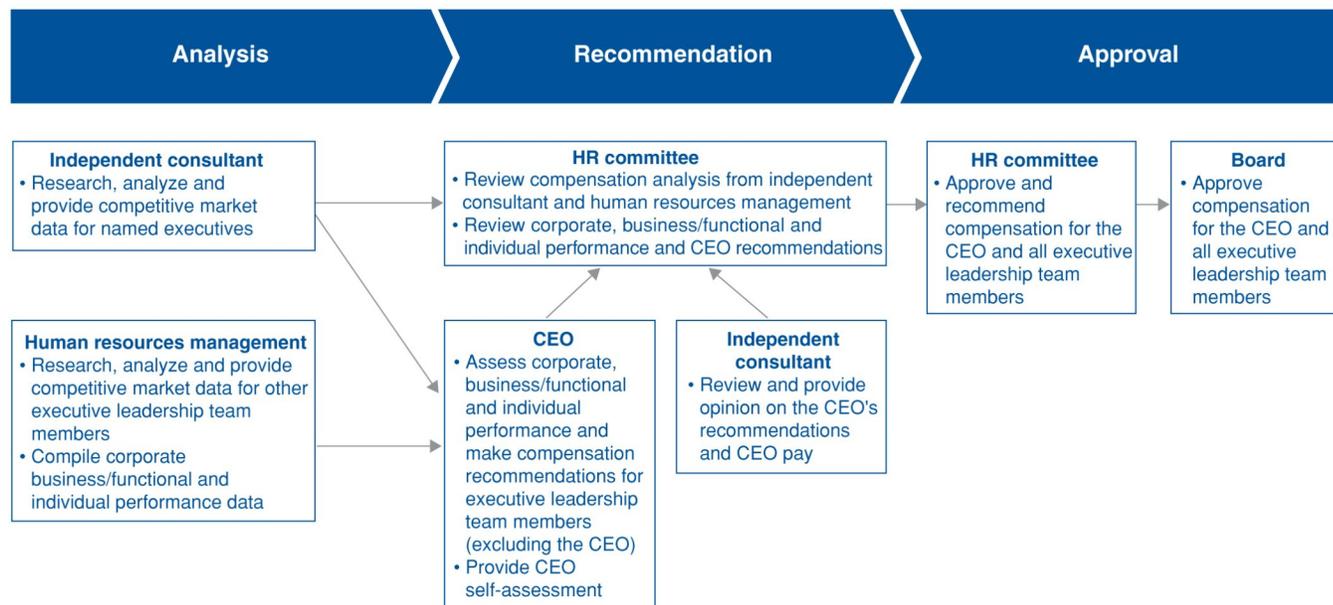
- provide a compensation package that 'pays for performance' by rewarding executives for delivering on our corporate objectives and achieving our overall strategy
- offer levels and types of compensation that are competitive with the market
- align executives’ interests with those of our various stakeholders, and
- attract, engage and retain our executives.

Compensation is also aligned with our risk management processes to ensure there is an appropriate balance between risk and reward. See pages 53 and 54 for more information.

Decision-making process

We follow a comprehensive decision-making process that involves management, the Human Resources committee and the Board, and takes into account market data, input from the CEO and advice from the committee’s independent consultant.

The Board makes all decisions affecting executive leadership team compensation based on the committee’s recommendations.



Compensation analysis

Assessing the market

The independent consultant to the committee analyzes and provides relevant market data and other information to the committee and the Board. This process includes benchmarking executive compensation against a peer group of companies (see ***Benchmarking*** on pages 75 and 76).

The committee and Board also consider compensation relative to other executives, scope and criticality of the role and experience when determining compensation levels. The committee uses the benchmarks as a guideline, recognizing that there can be dispersion among individual company's data and that the committee must also be mindful of the broader environment as it weighs adjustments.

Determining performance objectives

The Board approves annual corporate objectives to support our core strategies for operating safely and efficiently, achieving growth and creating value for shareholders. Our corporate performance scorecard incorporates these objectives, including a combination of financial, operational, safety, and growth measures which are weighted and approved by the Board.

The Board establishes annual performance objectives and relative weightings for the CEO and the other named executives. The CEO's performance objectives are reflected in the corporate scorecard. Performance objectives for the other named executives include the corporate scorecard, business/functional scorecards aligned to their roles, as well as their individual key performance areas and priorities for the year.

Recommendation

The committee and the Board assess the performance of the company and of the CEO.

The CEO assesses the performance of his direct reports, including the other named executives, obtains input from the Board on executive performance, and makes compensation recommendations to the committee.

The committee recommends compensation awards for the CEO and other named executives to the Board. The committee seeks advice from its independent consultant and other advisors, but is responsible for making its own decisions and recommendations to the Board.

The committee bases its recommendations on the relevant performance period. Although it reviews historical information on the value of previous grants, it does not make adjustments to any performance-related measures based on the number, term or current value of any outstanding compensation previously awarded or gains an executive may have realized in prior years. Similarly, the committee does not take into account the value of long-term incentive awards it grants in a given year to offset less-than-expected returns from awards granted in prior years. The committee believes that reducing or limiting grants or awards based on prior gains could detract from the integrity of the performance-based framework or undermine the incentives for executives to deliver strong performance.

Approval

The Board reviews the recommendations by the committee and approves all executive leadership team compensation decisions.

Benchmarking

We benchmark our executive compensation against a peer group of companies to assess the competitive market. Each year, the committee reviews the companies with its independent consultant, makes adjustments as it deems appropriate, and approves the peer group.

The peer group for the named executives reflects:

- the size of TransCanada relative to the peer companies
- a broader sample size which reduces potential volatility in the data
- the scope of TransCanada's North American business activities, and
- the broader market from which TransCanada competes for executive talent.

Our 2016 peer group for our named executives is listed below. The committee made minor adjustments to the peer group from 2015. Talisman Energy Inc. was removed as it is no longer a public company and Hess Corporation was removed to maintain the 50-50 weighting between Canadian and U.S. companies.

Named executive peer group

American Electric Power Co.	Imperial Oil Ltd.
Canadian National Railway Company	Kinder Morgan Inc.
Canadian Natural Resources Ltd.	NextEra Energy Inc.
Cenovus Energy Inc.	Occidental Petroleum Corporation
Dominion Resources Inc.	PG&E Company
Enbridge Inc.	Southern Company
Encana Corporation	Spectra Energy Corp.
Exelon Corporation	Suncor Energy Inc.
Fortis Inc.	Teck Resources Ltd.
Husky Energy Inc.	Williams Companies Inc.

We benchmark each named executive position against similar positions in the peer group. The committee recognizes that even with a relatively large peer group, the results can be skewed by changes in the underlying market data. As a result, the committee exercises judgment in the interpretation of the data and are guided by the independent consultant in this regard. Competitive market data for the peer group provides an initial reference point for determining executive compensation.

Profiles At December 31, 2015	TransCanada	Named executive peer group	
		Median	75th percentile
Assets	\$64.4 billion	\$61.0 billion	\$81.9 billion
Revenue	\$11.3 billion	\$16.2 billion	\$22.4 billion
Market capitalization at December 31, 2016 (Monthly closing price of shares × shares outstanding for the most recent quarter)	\$52.3 billion	\$40.9 billion	\$63.7 billion
Employees	5,512	10,550	15,376

Note

- **Peer group** scope information reflects 2015 data, unless otherwise noted, as this was the most current information available at the time the analysis was performed. For comparability, the **TransCanada** scope information also reflects 2015 data.

For 2017, the committee made minor adjustments to the peer group. Encana Corporation was removed because of its relative small size against multiple criteria. Spectra Energy Corp. was removed because it was being acquired. Again, the committee preserved the balance between Canadian and U.S. companies.

TransCanada is at the top end of the range by asset size and market capitalization and the median in terms of revenue.

Total direct compensation is generally set within a competitive range of the market median:



See **Components** on page 78 for more information about total direct compensation.

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. The ownership requirements are:

Executive level	Required ownership (multiple of base salary)
Chief Executive Officer	5x
Executive Vice-Presidents	2x
Senior Vice-Presidents	1x

Effective for 2015, the Board approved an increase in the share ownership requirement for the CEO to five times base salary, and determined that all executives must meet their ownership requirements through direct ownership of shares of TransCanada or units of TC PipeLines, LP only. Prior to this, up to 50 per cent could be held in the form of unvested ESUs.

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

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 2016, with the exception of Mr. Taylor who has until the end of 2020 to replace the value previously satisfied through unvested ESUs.

See the *Executive profiles* starting on page 90 for current share ownership levels.

COMPONENTS

Total direct compensation includes fixed and variable pay. Base salary is the only form of fixed compensation. Variable compensation includes our short and long-term incentive plans.

Element	Form	Performance period	Objective
Base salary (fixed)	Cash	<ul style="list-style-type: none"> One year 	<ul style="list-style-type: none"> Provide base compensation commensurate with the role Attract and retain executives
Short-term incentive (variable)	Cash	<ul style="list-style-type: none"> One year 	<ul style="list-style-type: none"> Motivate executives to achieve key annual business objectives Reward executives for relative contribution to TransCanada Align interests of executives and shareholders Attract and retain executives
Long-term incentive (variable)	ESUs	<ul style="list-style-type: none"> Three-year term Vesting at the end of the term Awards subject to a performance multiplier based on pre-established targets 	<ul style="list-style-type: none"> Motivate executives to achieve medium-term business objectives Align interests of executives and shareholders Attract and retain executives
	Stock options	<ul style="list-style-type: none"> Seven-year term One third vest each year beginning on the first anniversary of the grant date 	<ul style="list-style-type: none"> Motivate executives to achieve long-term sustainable business objectives Align interests of executives and shareholders Attract and retain executives

We also offer indirect compensation which includes retirement benefits, other benefits and perquisites. See pages 84 and 85 for more information.

Fixed compensation

Base salary

Base salaries for executive positions are generally aligned within a competitive range of median base salary levels in our peer group. The independent consultant to the committee analyzes and provides relevant market data to the committee and the Board.

Increases in base salary for the named executives are based on their performance, competitive market data, experience in and scope of the role and compensation relative to other executives at TransCanada. Base salary adjustments are typically effective March 1.

Variable or at-risk compensation

Variable compensation accounts for a significant portion of executive pay, and increases by executive level.

Short-term incentive

The short-term incentive plan is designed to attract and retain executives, and motivate them to achieve key annual business objectives. It rewards executives for their contributions to TransCanada and aligns interests of executives with shareholders.

Market data is used to establish short-term incentive targets for each executive role. Target awards are expressed as a percentage of base salary and are determined with reference to median market levels in our peer group. While targets are reviewed annually against the competitive market data, they are not expected to change year-to-year unless the role changes or is reassessed against market conditions.

Annual cash awards are made to the named executives based on a formula that takes into account:

- base salary and the short-term incentive target, expressed as a percentage of base salary, for each role
- performance against business/functional and individual objectives, expressed as an individual performance factor determined for each named executive, and
- performance against corporate performance objectives, expressed as the Corporate factor.

The CEO's performance objectives are reflected 100 per cent in the corporate scorecard and his short-term incentive award is based 100 per cent on corporate performance.

$$\text{Base salary} \times \text{Short-term incentive target} \times \left[\left(\text{Business/functional and individual performance factor} \times \text{Business/functional and individual weighting} \right) + \left(\text{Corporate performance factor} \times \text{Corporate weighting} \right) \right] = \text{Short-term incentive award (\$)}$$

Awards can range from 0 to 200 per cent of the short-term incentive target based on the level of corporate and business/functional and individual performance. Awards will generally be 50 per cent of the target if performance meets threshold standards, 100 per cent for target performance, and 200 per cent of the target for exceptional performance relative to pre-determined standards. There is no payout if overall performance is below the threshold.

The corporate and business/functional and individual factors are weighted for each executive and then added together to determine the overall award. The Board can adjust the calculated short-term incentive awards up or down at its discretion to take into account other factors when it believes it is appropriate to do so. Short-term incentive awards are paid as a lump sum cash payment in March following the performance year.

Awards for 2016 were based on the following target levels and performance measure relative weightings. Effective for 2017, performance measure relative weightings were modified to reflect changes as follows:

Short-term incentive target (% of base salary)	Performance measure relative weighting						
	2016			2017			
	Corporate	Business unit	Individual	Corporate	Business unit	Individual	
President & Chief Executive Officer (Russell K. Girling)	100%	100%	—	—	100%	—	—
Executive Vice-President & Chief Financial Officer (Donald R. Marchand)	65%	60%	—	40%	80%	—	20%
Chief Operating Officer (Alexander J. Pourbaix)	80%	80%	—	20%	80%	—	20%
Executive Vice-President & President, Natural Gas Pipelines (Karl Johannson)	65%	40%	40%	20%	60%	40%	—
Executive Vice-President & President, Energy (William C. Taylor)	65%	40%	40%	20%	60%	40%	—

Effective January 1, 2017, the target annual incentive for Mr. Girling was increased from 100% to 120%.

Long-term incentive

Each year, the committee and the Board grant long-term incentive awards to the named executives based on median market levels, and potential to contribute to TransCanada's future success.

The allocation of long-term incentive awards for our executive leadership team is 50 per cent each to ESUs and stock options.

Executive share units

These are notional share units granted under the ESU plan. ESUs accrue dividend equivalents and vest on December 31 at the end of the three-year performance period. The payout depends on how well we perform against targets established at the beginning of the period.

ESU awards are paid out in a lump sum cash payment in the first quarter following the end of the performance period.

$$\begin{array}{|c|} \hline \text{Number of ESUs vesting} \\ \hline \end{array} \times \begin{array}{|c|} \hline \text{Valuation price on the vesting date} \\ \hline \end{array} \times \begin{array}{|c|} \hline \text{Performance multiplier} \\ \hline \end{array} = \begin{array}{|c|} \hline \text{ESU payout (\$)} \\ \hline \end{array}$$

Notes

- **Number of ESUs vesting** is the number of ESUs originally granted plus ESUs earned as dividend equivalents during the three-year performance period. Dividends and ESUs vest at the same time and only to the same extent that the underlying ESUs vest.
- **Valuation price on the vesting date** is the volume-weighted average closing price of TransCanada shares for the 20 trading days immediately prior to and including the vesting date (December 31).

2017 Executive share unit grant

The committee and the Board approved a 2017 ESU grant as follows:

Performance measure	Weighting	Measurement period
Relative TSR against the S&P/TSX 60 Index	25%	
Relative TSR against the ESU peer group	25%	January 1, 2017 to December 31, 2019
Comparable earnings per share	50%	

The cumulative **Comparable earnings per share** multiplier will be a maximum of 1.0 if the ratio of cumulative dividends per share/cumulative comparable funds generated from operations per share for the three-year period is greater than 50 per cent.

We have two peer groups for assessment of relative TSR. The first group is the S&P/TSX 60 Index, a group of publicly-traded peer companies that represents competitors for shareholder investment. The second group is the ESU peer group, consisting of specific business competitors as shown below.

2017 ESU grant peer group for relative TSR		
AltaGas Ltd.	Enbridge Inc.	Pembina Pipeline Corp.
Canadian Utilities Ltd.	Enterprise Products Partners L.P.	Sempra Energy
CenterPoint Energy Inc.	Fortis Inc.	Veresen Inc.
Dominion Resources Inc.	Inter Pipeline Ltd.	Williams Companies Inc.
Emera Inc.	Kinder Morgan Inc.	

2014 Executive share unit award

For the 2014 ESU grant, the performance multiplier was determined based on the guidelines in the table below.

Relative TSR is calculated using the twenty-day volume weighted average share price at the end of the three-year performance period.

If TransCanada's relative TSR is	Then the performance multiplier is	
At or below the 25th percentile of the ESU peer group (threshold)	0.50	We calculate the performance multiplier using a straight-line interpolation if performance is between: <ul style="list-style-type: none">• threshold and target, or• target and maximum
At the 50th percentile of the ESU peer group (target)	1.00	
At or above the 75th percentile of the ESU peer group (maximum)	1.50	

For more details on the ESU payout, see *Payout of 2014 executive share unit award* on page 88 and 89.

Stock options

Shareholders first approved our stock option plan in 1995, and the most recent version of the plan was last approved by shareholders in 2016. The plan is administered by the Human Resources committee, which is composed entirely of independent directors. The total number of shares that can be reserved for issuance to insiders, or issued to insiders at any time and within any one-year period, under any of our security based compensation arrangements (as defined in the TSX Company Manual), is limited to 10 per cent or less of our issued and outstanding shares. Non-executive directors are not eligible to participate in the plan.

Vesting

Stock options vest one third each year, beginning on the first anniversary of the grant date and have a seven-year term.

Executives are limited to trading TransCanada shares in four windows (known as **open trading windows**), which are designated quarterly. The open trading windows relate to the completion and disclosure of quarterly and annual financial reports.

Executives are not permitted to trade when they are in possession of material, non-public information. If the expiry date of a stock option does not fall during an open trading window, or falls within the first five days of an open trading window, the expiry date is extended to 10 business days after the next window opens. Similar extensions apply when there is a special trading blackout imposed during one of the four open trading windows and stock options expire during the trading blackout.

Exercise price

The exercise price of an option is the closing market price of TransCanada shares on the TSX on the last trading day immediately preceding the grant date. Option holders only benefit if the market value of our shares exceeds the exercise price at the time they exercise the options. We do not provide financial assistance to plan participants in connection with the exercise of options.

Adjustments

The number of shares subject to an option will be adjusted under the terms of the plan when exercised if, before the exercise of any option:

- the shares are consolidated, subdivided, converted, exchanged, reclassified or in any way substituted, or
- a stock dividend that is not in place of an ordinary course cash dividend is paid on the shares.

More about the stock option plan

Options cannot be transferred or assigned to another person. A personal representative can exercise options on behalf of the holder if he or she dies or is incapacitated.

The committee has the authority to suspend or discontinue the plan at any time without shareholder approval. Management does not have this right, and cannot make changes to the plan. The committee can recommend to the Board for approval certain amendments to the plan, or any stock option grant without shareholder approval, provided they are to:

- clarify an item
- correct an error or omission
- change the vesting date of an existing grant, or
- change the expiry date of an outstanding option to an earlier date.

The committee cannot make any amendments to the plan that adversely affect the holders' rights relating to any previously granted options without their consent.

The plan requires certain amendments to be approved by shareholders, including:

- increasing the number of shares available for issue under the plan
- lowering the exercise price of a previously granted option
- canceling and reissuing an option
- permitting options to be transferable or assignable other than for normal estate settlement purposes
- changing the categories of individuals eligible to participate in the plan
- providing financial assistance to a participant in connection with the exercise of options
- extending the expiry date of an option, or
- changing the types of amendments that require shareholder approval.

For more details on stock options, see ***Equity compensation plan information*** on page 101.

See the ***Compensation on termination*** table on page 104 and 105 for the effect of certain employment events on participants' entitlements under the plan.

Retirement benefits

Defined benefit plan

Our Canadian defined benefit (DB) plan includes a registered pension plan and a supplemental pension plan for eligible employees.

Participation in the DB plan is mandatory once an employee has 10 years of continuous service. All of the named executives participate in the DB plan.

Normal retirement for participants is when they turn 60, or between 55 and 60 if their age and years of continuous service add up to 85 points. The retirement benefit at normal retirement age is calculated as follows:

$$\left(\begin{array}{l} 1.25\% \text{ of employee's highest} \\ \text{average earnings (up to the final} \\ \text{average YMPE)} \end{array} + \begin{array}{l} 1.75\% \text{ of employee's highest} \\ \text{average earnings (above the final} \\ \text{average YMPE)} \end{array} \right) \times \begin{array}{l} \text{Credited} \\ \text{service} \end{array} = \begin{array}{l} \text{Annual retirement} \\ \text{benefit (\$)} \end{array}$$

Notes

- **Highest average earnings** is the average of an employee's best 36 consecutive months of pensionable earnings in their last 15 years of employment. **Pensionable earnings** means an employee's base salary plus the annual short-term incentive award up to a pre-established maximum, expressed as a percentage of base salary. For 2016, this is 100 per cent for the CEO, and between 60 to 80 per cent for the other named executives. Pensionable earnings do not include any other forms of compensation.
- **YMPE** is the Year's Maximum Pensionable Earnings under the Canada/Québec Pension Plan.
- **Final average YMPE** is the average of the YMPE in effect for the latest calendar year from which earnings are included in **Employees' highest average earnings** calculation plus the two previous years.
- **Credited service** is the employee's years of credited pensionable service in the plan. Registered DB plans are subject to a maximum annual benefit accrual under the **Income Tax Act** (Canada). As this is currently \$2,914 for each year of credited service, participants cannot earn benefits in the registered plan on any compensation that is higher than approximately \$182,000 per year.

Participants can retire between 55 and 60, but the benefit is reduced by 4.8 per cent per year for each year until they reach age 60 or 85 points, whichever is earlier. They can retire 10 years prior to normal retirement age, however the benefit is reduced by an actuarial equivalence from age 55.

Although our DB plan is non-contributory, participants can decide to make pension contributions to an enhancement account for buying ancillary or 'add on' benefits within the registered pension plan. The DB plan is integrated with the Canada/Québec Pension Plan benefits.

Supplemental pension plan

The DB pension plan uses a hold harmless approach, where the maximum amount allowed under the *Income Tax Act* (Canada) is paid from the registered pension plan and the remainder is paid from the supplemental pension plan. The supplemental pension plan is funded through a retirement compensation arrangement under the *Income Tax Act* (Canada). Currently there are approximately 670 participants in the supplemental pension plan (with pensionable earnings exceeding approximately \$182,000 per year) including the named executives.

Contributions to the fund are subject to Board approval, and are based on an actuarial valuation of the supplemental pension plan obligations each year.

Effective 2012, solely at the discretion of the Board, our funding practice for the supplemental pension plan was revised to align it generally with the registered pension plan wherein annual funding approximates current year service cost accruals and the five-year amortization of deficits.

The DB plan does not generally recognize past service, but the committee has used its discretion in the past to grant additional years of credited service to senior executives under the supplemental pension plan. See the *Defined benefit pension plan* table and footnotes on page 102 for details.

All pension plan participants, including our named executives, receive the normal form of pension when they retire:

- monthly pension for life, and 60 per cent is paid to the spouse after the employee dies, or
- if the employee is not married, the monthly pension is paid to the employee's beneficiary or estate for the balance of the 10 years, if the employee dies within 10 years of retirement.

Participants can choose a different form of payment, but must complete waivers, as required by law. Options include:

- increasing the percentage of the pension value that continues after they die
- adding a guarantee period to the pension, or
- transferring the lump sum commuted value of the registered pension plan to a locked-in retirement account up to certain tax limits and the excess is paid in cash. Subject to company discretion, the supplemental pension plan commuted value may also be transferred and paid in cash.

Other benefits

All employees, including the named executives, receive other benefits such as traditional health and welfare programs that are based on competitive market practices and help to attract and retain talent.

Perquisites

Named executives receive a limited number of perquisites, including:

- a flexible perquisite allowance of \$4,500 that the named executive can use at his discretion
- a limited number of luncheon and/or recreational club memberships, based on business needs
- a reserved parking space valued at \$5,984, and
- an annual car allowance of \$18,000.

All perquisites provided to the named executives have a direct cost to TransCanada and are valued on this basis.

CORPORATE PERFORMANCE

The following summarizes our 2016 corporate performance against annual objectives.

You can find definitions of these terms and more information about our financial and business performance in our 2016 MD&A on our website (www.transcanada.com) and on SEDAR (www.sedar.com).

	2016 target	2016 result	Rating (0-2.0)	Weighting	Factor
1. Financial					
Comparable earnings per share	\$2.55	\$2.78	2.0	20%	0.4
Comparable funds generated from operations (millions)	\$4,371	\$5,171			
2. Safety and asset integrity	Various targets	Partially met	0.9	10%	0.1
3. Maximizing value of existing asset base	\$100 million of incremental annual long-term value	Exceeded	2.0	20%	0.4
4. Project execution	Various targets	Exceeded	1.6	20%	0.3
5. Grow asset base	\$3 - \$5 billion	Exceeded	2.0	20%	0.4
6. Organizational capability	Various targets	Met	1.0	10%	0.1
Overall Corporate factor				100%	1.7

Notes

- The committee evaluated all non-comparable adjustments to 2016 EPS and funds generated from operations and concluded that they are non-recurring items or unrealized gains/losses and it is therefore appropriate to exclude them in evaluating performance against scorecard targets.

- Comparable earnings per share** as reported by the company was \$2.78, calculated as follows:

Net (loss)/income per common share	\$0.16
Ravenswood goodwill impairment	0.86
Loss on disposal of U.S. Power assets	1.15
Alberta PPA terminations and settlement	0.32
Acquisition related costs - Columbia	0.37
Keystone XL income tax recoveries	(0.04)
Keystone XL asset costs	0.06
Restructuring costs	0.02
Risk management activities	(0.12)
Comparable earnings per share	<u>\$2.78</u>

- We calculate both *Net income per common share* and *Comparable earnings per share* based on the weighted average number of our shares outstanding (864 million in 2016).
- Comparable earnings per share* and *Comparable funds generated from operations* are non-GAAP measures and do not have any standardized meaning as prescribed by U.S. GAAP (see *Appendix B* for more information).

The Board approved a Corporate factor of 1.7, which is above target level performance. The Corporate factor was used in determining the 2016 annual incentive awards for all non-union employees.

The Board considered the strong performance of the company related to objectives set out at the beginning of the year, as well as the transformational Columbia acquisition in determining the Corporate factor. The following provides context for the performance ratings in the table above:

Key performance areas	2016 results
Financial	<ul style="list-style-type: none"> • Comparable earnings per share were higher than target due largely to the Columbia acquisition. • In determining the financial performance rating, the Board excluded the impact of non-comparable earnings that are not related to the underlying operations of the business in the year. • Comparable funds generated from operations were higher than target.
Safety	<ul style="list-style-type: none"> • We did not achieve our employee and contractor safety targets. • We had a contractor fatality. • We met or exceeded our asset integrity targets (minimizing pipeline leaks and ruptures) and achieved a 50 per cent improvement in staff and contractor away from work cases.
Maximizing value of existing asset base	<ul style="list-style-type: none"> • We secured contracts and settlements with customers that will add significant operating earnings and cash flows in future years. Of note is the ANR rate case settlement.
Project execution	<ul style="list-style-type: none"> • Notable progress was made on our industry-leading portfolio of commercially secured projects, which now totals \$71 billion and includes \$23 billion in near-term projects that are expected to drive earnings and cash flow growth as they come on stream largely through 2018. • We completed the Columbia acquisition, including related financing, asset divestitures and integration.
Grow asset base	<ul style="list-style-type: none"> • We captured over \$20 billion including the Columbia acquisition and new pipeline development opportunities.
Organizational capability	<ul style="list-style-type: none"> • The implementation of a new operating model and related business reviews have resulted in increased clarity of accountability for results as well as more efficient, cost-effective operations. • The efforts in each of our business areas have driven changes that have allowed us to achieve lower sustainable cost levels that will benefit our customers and shareholders.

PAYOUT OF 2014 EXECUTIVE SHARE UNIT AWARD

Performance multiplier

The ESU award granted in 2014 vested on December 31, 2016, and will be paid in March 2017. This award provided for a performance multiplier from 0.5 to 1.5 based on the Board's assessment of how the company performed in terms of relative total shareholder return targets over the course of the three-year period. ESU payouts were calculated using a performance multiplier of 1.34, based on the following result:

Measure	Period	Performance level targets for 2014 ESU award			Actual performance	Multiplier
		Threshold	Target	Maximum		
Relative TSR against the peer group (see below)	January 2014 to December 2016	at or below the 25th percentile	50th percentile	at least the 75th percentile	P67	1.34

Notes

- **Relative TSR** is calculated using \$60.48, the twenty-day volume weighted average closing price of TransCanada shares on the TSX at December 31, 2016. Our absolute TSR performance was 43.6 per cent.

Our peer group for relative TSR for the 2014 ESU award consisted of a group of publicly-traded peer companies that represented investment opportunities for equity investors seeking exposure to the North American pipeline, power and utility sector.

2014 ESU grant peer group for relative TSR

Canadian Utilities Ltd.	Enbridge Inc.	Sempra Energy
Dominion Resources Inc.	Entergy Corporation	Southern Company
DTE Energy Co.	Exelon Corporation	Spectra Energy Corporation
Duke Energy Corporation	Fortis Inc.	TransAlta Corporation
Emera Inc.	PG&E Company	Xcel Energy Inc.

Awards to named executives

The table below is a summary of the details of the original 2014 ESU award and the amount paid to each named executive when the award vested at the end of 2016.

	2014 ESU award		2014 ESU payout			
	Number of ESUs granted	Value of ESU award (\$)	Number of ESUs vesting (includes dividend equivalents to December 31, 2016)	Performance multiplier	Value of ESU payout (\$)	% of original award
Russell K. Girling	50,205.973	2,437,500	56,483.431		4,577,598	
Donald R. Marchand	17,739.444	861,250	19,957.479		1,617,418	
Alexander J. Pourbaix	28,836.251	1,400,000	32,441.759	1.34	2,629,184	188%
Karl Johansson	15,576.725	756,250	17,524.345		1,420,229	
William C. Taylor	8,238.929	441,800	9,269.069		791,860	

Notes

- **Number of ESUs granted** is the value of the ESU award divided by the valuation price of \$48.55 (the volume-weighted average closing price of TransCanada shares on the TSX for the five trading days immediately prior to and including the grant date (January 1, 2014)).
- **Number of ESUs vesting** includes an equivalent number of units for the final dividend that is declared as of December 31, 2016 but which has not been paid at the vesting date. The final dividend value is awarded in cash and has been converted to units and is reflected under **Number of ESUs vesting**.
- **Value of ESU payout** is calculated using the valuation price of \$60.48 (the volume-weighted average closing price of TransCanada shares on the TSX for the twenty trading days immediately prior to and including the vesting date (December 31, 2016)).
- The **Value of ESU award** for Mr. Taylor is expressed here in Canadian dollars based on the Bank of Canada's average annual exchange rate of 1.1045 CAD/USD for 2014. The **Value of ESU payout** for Mr. Taylor is split for the portion of the term that he was on assignment in the U.S. The portion of the award in U.S. dollars is expressed here in Canadian dollars based on the Bank of Canada's average annual exchange rate of 1.3248 CAD/USD for 2016.

EXECUTIVE PROFILES

This next section profiles each of the named executives, including their key results in 2016, details of their compensation for 2016 and the two previous fiscal years, and their share ownership as at December 31, 2016.



Russell K. Girling

PRESIDENT AND CHIEF EXECUTIVE OFFICER

Mr. Girling is responsible for our overall leadership and vision in developing with our Board our strategic direction, values and business plans. This includes overall responsibility for operating and growing our business while managing risk to create long-term sustainable value for our shareholders.

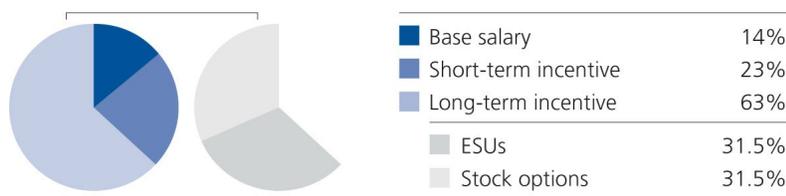
2016 Key results

- Record comparable earnings and comparable funds generated from operations
- Transformational US\$13 billion acquisition of Columbia
- Increased portfolio of near-term infrastructure growth projects to \$23 billion
- Led Business Transformation effort to increase organizational efficiency and effectiveness
- Delivered total shareholder return of 39.4%

- Mr. Girling's short-term incentive award was based 100 per cent on corporate performance.
- The short-term incentive award for 2016 performance was based on Mr. Girling's target of 100 per cent of base salary.
- Mr. Girling's 2016 short-term and long-term incentive awards as a percentage of 2016 base salary were 170 per cent and 462 per cent, respectively.

Compensation (as at December 31)	2016	2015	2014
Fixed			
Base salary	\$1,300,008	\$1,300,008	\$1,300,008
Variable			
Short-term incentive	2,210,014	1,560,000	1,690,000
Long-term incentive			
ESUs	3,000,000	2,800,000	2,437,500
Stock options	3,000,000	2,800,000	2,437,500
Total direct compensation	\$9,510,022	\$8,460,008	\$7,865,008
Change from last year	12%	8%	—

2016 Pay mix



Share ownership

Short-term incentive is attributed to the noted financial year, and is paid by March 15 of the following year.

Share ownership is based on the 20-day volume-weighted average closing price on the TSX of \$60.48 for TransCanada shares as at December 31, 2016.

Minimum level of ownership	Minimum value	Ownership under the guidelines	
		TransCanada shares	Total ownership as a multiple of base salary
5x	\$6,500,040	\$12,572,401	9.7x



Donald R. Marchand

EXECUTIVE VICE-PRESIDENT AND CHIEF FINANCIAL OFFICER (Executive Vice-President, Corporate Development and Chief Financial Officer to January 31, 2017)

Mr. Marchand is responsible for all corporate financial affairs of the company including financial reporting, taxation, finance, treasury, risk management and investor relations.

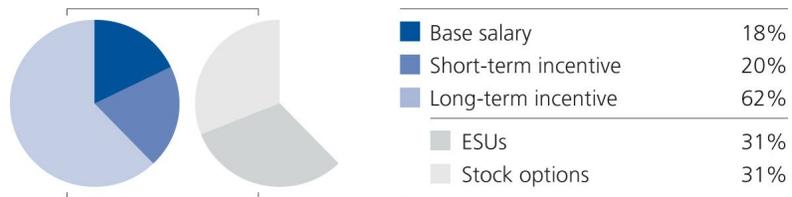
2016 Key results

- Transformational US\$13 billion acquisition of Columbia
- Sale of U.S. Northeast Power assets and agreement to buy-in public float of Columbia Pipeline Partners LP
- Record \$14 billion of capital markets funding plus arrangement of US\$7 billion acquisition bridge facilities on compelling terms
- 'A' grade credit ratings maintained
- Active, targeted investment community outreach program to advance knowledge and understanding of corporate strategy and events

- Mr. Marchand's short-term incentive award was based on a combination of corporate performance (60 per cent) and individual performance (40 per cent).
- The short-term incentive award for 2016 performance was based on Mr. Marchand's target of 65 per cent of base salary.
- Mr. Marchand's 2016 short-term and long-term incentive awards as a percentage of 2016 base salary were 113 per cent and 350 per cent, respectively.

Compensation (as at December 31)	2016	2015	2014
Fixed			
Base salary	\$575,004	\$575,004	\$530,004
Variable			
Short-term incentive	650,330	448,550	465,100
Long-term incentive			
ESUs	1,006,250	934,375	861,250
Stock options	1,006,250	934,375	861,250
Total direct compensation	\$3,237,834	\$2,892,304	\$2,717,604
Change from last year	12%	6%	—

2016 Pay mix



Share ownership

Minimum level of ownership	Minimum value	Ownership under the guidelines	
		TransCanada shares	Total ownership as a multiple of base salary
2x	\$1,150,008	\$1,310,964	2.3x

Short-term incentive is attributed to the noted financial year, and is paid by March 15 of the following year.

Share ownership is based on the 20-day volume-weighted average closing price on the TSX of \$60.48 for TransCanada shares as at December 31, 2016.



Alexander J. Pourbaix

CHIEF OPERATING OFFICER

Mr. Pourbaix is accountable for the profitability and growth of all of TransCanada's business units as well as the Operations and Projects Centre of Excellence.

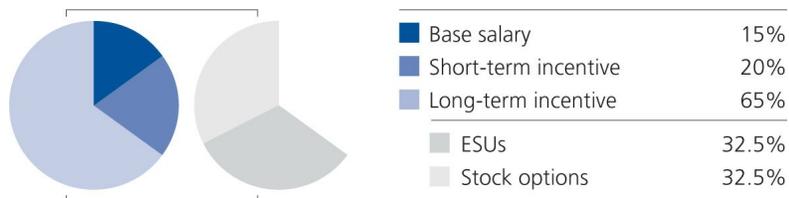
2016 Key results

- Led commercial negotiations on Columbia acquisition
- Oversaw successful integration of Columbia and delivery of cost synergies
- Significantly reduced headcount, process and systems complexity for operations and projects, all while maintaining safety and regulatory compliance
- Delivered final resolution of Alberta coal power purchase agreement dispute

- Mr. Pourbaix's short-term incentive award was based on a combination of corporate performance (80 per cent) and individual performance (20 per cent).
- The short-term incentive award for 2016 performance was based on Mr. Pourbaix's target of 80 per cent of base salary.
- Mr. Pourbaix's 2016 short-term and long-term incentive awards as a percentage of 2016 base salary were 136 per cent and 450 per cent, respectively.

Compensation (as at December 31)	2016	2015	2014
Fixed			
Base salary	\$800,004	\$800,004	\$800,004
Variable			
Short-term incentive	1,088,006	750,050	810,050
Long-term incentive			
ESUs	1,800,000	1,600,000	1,400,000
Stock options	1,800,000	1,600,000	1,400,000
Total direct compensation	\$5,488,010	\$4,750,054	\$4,410,054
Change from last year	16%	8%	—

2016 Pay mix



Share ownership

Minimum level of ownership	Minimum value	Ownership under the guidelines	
		TransCanada shares	Total ownership as a multiple of base salary
2x	\$1,600,008	\$3,796,451	4.8x

Short-term incentive is attributed to the noted financial year, and is paid by March 15 of the following year.

Share ownership is based on the 20-day volume-weighted average closing price on the TSX of \$60.48 for TransCanada shares as at December 31, 2016.



Karl Johansson

EXECUTIVE VICE-PRESIDENT AND PRESIDENT, NATURAL GAS PIPELINES

Mr. Johansson is responsible for the profitability and growth of our natural gas pipeline and regulated natural gas storage businesses in Canada, the United States and Mexico.

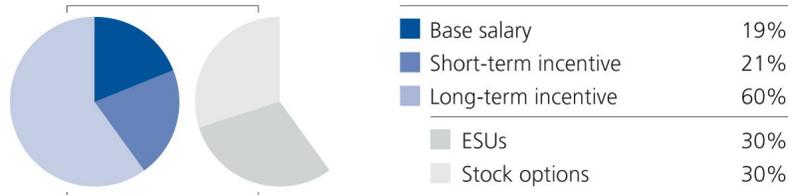
2016 Key results

- Strong financial results
- Settled three FERC pipeline rate cases resulting in improved EBITDA
- Columbia acquisition and integration
- Contracts to build two new natural gas pipeline projects in Mexico; the Sur de Texas and Villa de Reyes projects
- Regulatory approvals for \$1.3 billion of new projects on the NGTL System

- Mr. Johansson's short-term incentive award was based on a combination of corporate performance (40 per cent), business unit performance (40 per cent) and individual performance (20 per cent).
- The short-term incentive award for 2016 performance was based on Mr. Johansson's target of 65 per cent of base salary.
- Mr. Johansson's 2016 short-term and long-term incentive awards as a percentage of 2016 base salary were 111 per cent and 313 per cent, respectively.

Compensation (as at December 31)	2016	2015	2014
Fixed			
Base salary	\$575,004	\$575,004	\$550,008
Variable			
Short-term incentive	635,380	485,900	518,400
Long-term incentive			
ESUs	900,000	862,500	756,250
Stock options	900,000	862,500	756,250
Total direct compensation	\$3,010,384	\$2,785,904	\$2,580,908
Change from last year	8%	8%	—

2016 Pay mix



Share ownership

Short-term incentive is attributed to the noted financial year, and is paid by March 15 of the following year.

Share ownership is based on the 20-day volume-weighted average closing price on the TSX of \$60.48 for TransCanada shares as at December 31, 2016.

Minimum level of ownership	Minimum value	Ownership under the guidelines	
		TransCanada shares	Total ownership as a multiple of base salary
2x	\$1,150,008	\$1,767,286	3.1x



William C. Taylor

EXECUTIVE VICE-PRESIDENT AND PRESIDENT, ENERGY

Mr. Taylor is responsible for the profitability and growth of our power and non-regulated gas storage business in Canada and the United States.

2016 Key results

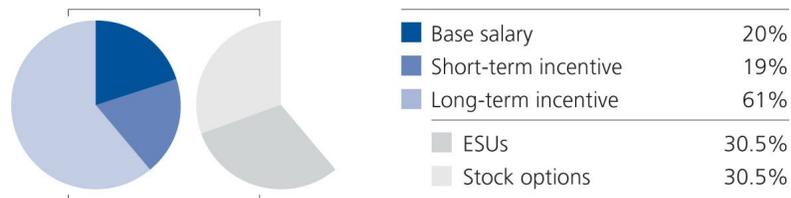
- Key role in divestiture process of U.S. Northeast Power business in support of Columbia acquisition
- Completed executive succession at Bruce Power
- Significant operating cost savings
- Strong overall Energy financial performance
- Negotiated final resolution of Alberta coal power purchase agreement dispute

- Mr. Taylor's short-term incentive award was based on a combination of corporate performance (40 per cent), business unit performance (40 per cent) and individual performance (20 per cent).
- The short-term incentive award for 2016 performance was based on Mr. Taylor's target of 65 per cent of base salary.
- Mr. Taylor's 2016 short-term and long-term incentive awards as a percentage of 2016 base salary were 95 per cent and 300 per cent, respectively.

Compensation (as at December 31)	2016	2015	2014
Fixed			
Base salary	\$450,000	\$450,000	\$400,008
Variable			
Short-term incentive	427,050	380,250	355,713
Long-term incentive			
ESUs	675,000	585,000	441,800
Stock options	675,000	585,000	441,800
Total direct compensation	\$2,227,050	\$2,000,250	\$1,639,321
Change from last year	11%	22%	—

The values provided to Mr. Taylor in U.S. dollars have been expressed in Canadian dollars based on the Bank of Canada's average annual exchange rate for the financial year noted, namely 1.1045 CAD/USD for 2014.

2016 Pay mix



Share ownership

Minimum level of ownership	Minimum value	Ownership under the guidelines	
		TransCanada shares	Total ownership as a multiple of base salary
2x	\$900,000	\$614,779	1.4x

Per the amendments approved in 2015 (page 77), Mr. Taylor has until the end of 2020 to replace the value previously satisfied through unvested ESUs.

Short-term incentive is attributed to the noted financial year, and is paid by March 15 of the following year.

Share ownership is based on the 20-day volume-weighted average closing price on the TSX of \$60.48 for TransCanada shares as at December 31, 2016.

Executive compensation – 2016 details

All amounts are in Canadian dollars, unless otherwise indicated.

SUMMARY COMPENSATION TABLE

The table below is a summary of the compensation awarded to our named executives for the last three fiscal years ended December 31, 2016, 2015 and 2014.

Name and principal position	Year	Salary (\$)	Share-based awards (\$)	Option-based awards (\$)	Non-equity incentive plan compensation		Pension value (\$)	All other compensation (\$)	Total compensation (\$)
					Annual incentive plans (\$)	Long-term incentive plans (\$)			
Russell K. Girling President & Chief Executive Officer	2016	1,300,008	3,000,000	3,000,000	2,210,014	—	615,000	13,000	10,138,022
	2015	1,300,008	2,800,000	2,800,000	1,560,000	—	326,000	13,000	8,799,008
	2014	1,300,008	2,437,500	2,437,500	1,690,000	—	224,000	13,000	8,102,008
Donald R. Marchand Executive Vice-President & Chief Financial Officer	2016	575,004	1,006,250	1,006,250	650,330	—	209,000	19,020	3,465,854
	2015	567,504	934,375	934,375	448,550	—	454,000	13,829	3,352,633
	2014	527,504	861,250	861,250	465,100	—	165,000	23,102	2,903,206
Alexander J. Pourbaix Chief Operating Officer	2016	800,004	1,800,000	1,800,000	1,088,006	—	551,000	8,000	6,047,010
	2015	800,004	1,600,000	1,600,000	750,050	—	179,000	20,308	4,949,362
	2014	796,670	1,400,000	1,400,000	810,050	—	725,000	19,967	5,151,687
Karl Johansson Executive Vice-President & President, Natural Gas Pipelines	2016	575,004	900,000	900,000	635,380	—	226,000	23,443	3,259,827
	2015	570,838	862,500	862,500	485,900	—	301,000	12,055	3,094,793
	2014	537,508	756,250	756,250	518,400	—	580,000	43,741	3,192,149
William C. Taylor Executive Vice-President & President, Energy	2016	450,000	675,000	675,000	427,050	—	164,000	268,327	2,659,377
	2015	441,668	585,000	585,000	380,250	—	530,000	385,819	2,907,737
	2014	421,546	441,800	441,800	355,713	—	848,000	369,868	2,878,727

Notes

- Mr. Marchand was appointed Executive Vice-President and Chief Financial Officer on February 1, 2017. Mr. Marchand was appointed Executive Vice-President, Corporate Development and Chief Financial Officer on October 1, 2015. Amounts shown for 2015 include compensation earned for three months in his new position and nine months in his previous position as Executive Vice-President and Chief Financial Officer.
- Mr. Pourbaix was appointed Chief Operating Officer on October 1, 2015. Amounts shown for 2015 include compensation earned for three months in his new position and nine months in his previous position as Executive Vice-President and President, Development.
- The values provided to Mr. Taylor in U.S. dollars have been expressed in Canadian dollars based on the Bank of Canada's average annual exchange rate for the financial year noted, namely 1.1045 CAD/USD for 2014, 1.2787 CAD/USD for 2015, and 1.3248 CAD/USD for 2016.
- **Salary** is the actual base salary earned during each of the three years.
- **Share-based awards** is the long-term incentive compensation that was awarded as ESUs. The number of ESUs granted is the value of the ESU award divided by the volume-weighted average closing price of TransCanada shares for the twenty trading days (five for the 2014 grant) immediately prior to and including the grant date: \$44.90 in 2016, \$54.64 in 2015, and \$48.55 in 2014.
- **Option-based awards** is the long-term incentive compensation that was awarded as stock options. The exercise price is the closing market price of TransCanada shares on the TSX on the trading day immediately prior to the grant date: \$48.44 in 2016, \$56.58 in 2015, and \$49.03 in 2014. See **Stock option valuation** below for more information.
- **Annual incentive plans** is the short-term incentive award, paid as an annual cash bonus and attributable to the noted financial year. Payments are made in the first quarter of the following year.
- There are no long-term non-equity incentive plans.
- **Pension value** includes the annual compensatory value from the DB pension plan. The annual compensatory value is the compensatory change in the accrued obligation and includes the service cost to TransCanada in 2016, plus compensation changes that were higher or lower than the base salary assumptions, and plan changes. See **Retirement benefits** below for more information.

- **All other compensation** includes other compensation not reported in any other column for each named executive and includes:

- payments to the named executives by any of our subsidiaries and affiliates (including directors' fees paid by affiliates and amounts paid for serving on management committees of entities that we hold an interest in). These include:

	2016	2015	2014
Mr. Pourbaix	\$ —	\$ —	\$12,000
Mr. Taylor	48,000	48,000	31,500

- matching contributions we made on behalf of the named executives under the employee stock savings plan:

	2016	2015	2014
Mr. Girling	\$13,000	\$13,000	\$13,000
Mr. Marchand	5,750	5,675	5,275
Mr. Pourbaix	8,000	8,000	7,967
Mr. Johansson	5,750	5,708	5,375

- cash payments if the named executive elected to receive payment in lieu of vacation entitlement from the previous year:

	2016	2015	2014
Mr. Marchand	\$13,270	\$8,154	\$17,827
Mr. Pourbaix	—	12,308	—
Mr. Johansson	17,693	6,346	38,366
Mr. Taylor	15,577	22,309	1,508

- payments, taxes, and gross-ups related to relocation, pension, and financial counseling amounts made on behalf of a named executive include:

	2016	2015	2014
Mr. Taylor	\$204,750	\$315,510	\$336,860

- Perquisites in 2016, 2015 and 2014 are not included because they are less than \$50,000 and 10 per cent of each named executive's total base salary.

Additional notes to the summary compensation table

Stock option valuation

The amount under *Option-based awards* is calculated using the grant date fair value of the stock option award, as determined by the committee.

The committee and Board have approved the Binomial valuation model as the methodology to determine stock option awards. The Binomial valuation model is a generally accepted valuation method for stock options. The Binomial valuation model is used to calculate TransCanada's accounting value, which we use for both compensation and financial reporting purposes. Each year, the committee and Board review the valuation as prepared by management's independent consultant. The value takes into account the historic and implied volatility of the underlying shares, dividend yield, risk-free interest rate, option term, vesting period, and expected life based on historical stock option exercise activity for TransCanada plan participants.

The table below is a summary of the final compensation value using the Binomial valuation model for the stock option awards granted in 2016, 2015 and 2014:

Grant date	Exercise price (\$)	Compensation value of each stock option (\$)
March 22, 2016	48.44	5.67
February 19, 2015	56.58	6.45
February 25, 2014	49.03	5.54

Total stock option exercises in 2016 (supplemental table)

The table below shows for each named executive:

- the number of stock options exercised in 2016, and
- the total value they realized when the options were exercised.

	Total stock options exercised (#)	Total value realized (\$)
Russell K. Girling	200,000	4,811,131
Donald R. Marchand	—	—
Alexander J. Pourbaix	122,557	2,808,391
Karl Johannson	19,011	440,077
William C. Taylor	—	—

INCENTIVE PLAN AWARDS

Outstanding option-based and share-based awards

The table below shows all outstanding option-based and share-based awards previously granted to the named executives that were still outstanding at the end of 2016. Year-end values are based on \$60.54, the closing price of TransCanada shares on the TSX at December 31, 2016.

Name	Option-based awards				Share-based awards		
	Number of securities underlying unexercised options (#)	Option exercise price (\$)	Option expiration date	Value of unexercised in-the-money options (\$)	Number of shares or units of shares that have not vested (#)	Market or payout value of share-based awards that have not vested (\$)	Market or payout value of vested share-based awards not paid out or distributed (\$)
Russell K. Girling	133,080	35.08	26-Feb-2017	3,388,217	125,116	3,787,261	—
	100,000	36.90	16-Jun-2017	2,364,000			
	158,172	37.93	18-Feb-2018	3,576,269			
	385,475	41.95	17-Feb-2019	7,165,980			
	383,275	47.09	15-Feb-2020	5,155,049			
	439,982	49.03	25-Feb-2021	5,064,193			
	434,109	56.58	19-Feb-2022	1,719,072			
529,101	48.44	22-Mar-2023	6,402,122				
Donald R. Marchand	47,500	36.26	29-Jul-2017	1,153,300	41,871	1,267,435	—
	30,756	37.93	18-Feb-2018	695,393			
	96,369	41.95	17-Feb-2019	1,791,500			
	123,368	47.09	15-Feb-2020	1,659,300			
	155,460	49.03	25-Feb-2021	1,789,345			
	144,864	56.58	19-Feb-2022	573,661			
	177,469	48.44	22-Mar-2023	2,147,375			
Alexander J. Pourbaix	97,540	37.93	18-Feb-2018	2,205,379	73,480	2,224,240	—
	213,687	41.95	17-Feb-2019	3,972,441			
	220,819	47.09	15-Feb-2020	2,970,016			
	252,708	49.03	25-Feb-2021	2,908,669			
	248,062	56.58	19-Feb-2022	982,326			
	317,460	48.44	22-Mar-2023	3,841,266			
Karl Johannson	18,348	37.93	18-Feb-2018	414,848	37,982	1,149,715	—
	32,899	41.95	17-Feb-2019	611,592			
	48,450	45.29	2-Nov-2019	738,863			
	97,236	47.09	15-Feb-2020	1,307,824			
	136,507	49.03	25-Feb-2021	1,571,196			
	133,721	56.58	19-Feb-2022	529,535			
	158,730	48.44	22-Mar-2023	1,920,633			
William C. Taylor	15,209	35.08	26-Feb-2017	387,221	27,257	825,069	—
	16,487	37.93	18-Feb-2018	372,771			
	26,071	41.95	17-Feb-2019	484,660			
	26,132	47.09	15-Feb-2020	351,475			
	72,202	49.03	25-Feb-2021	831,045			
	90,698	56.58	19-Feb-2022	359,164			
	119,048	48.44	22-Mar-2023	1,440,481			

Notes

- **Value of unexercised in-the-money options** is based on outstanding vested and unvested stock options and the difference between the option exercise price and year-end closing price of our shares.
- **Number of shares or units of shares that have not vested** includes the amount of the grant, plus reinvested units earned as dividend equivalents of all outstanding ESUs as at December 31, 2016.
- **Market or payout value of share-based awards that have not vested** is the minimum payout value of all outstanding ESUs as at December 31, 2016. The value is calculated by multiplying 50 per cent of the number of units that have not vested by the year-end closing price of our shares.
- No value is shown for **Market or payout value of vested share-based awards not paid out or distributed**. The ESU award granted in 2014 vested on December 31, 2016, and will be paid in March 2017. These awards are shown in the next table.

Incentive plan awards – value vested during the year

The table below shows the total value of all option-based and share-based awards previously granted to the named executives that vested in 2016. It also shows the total amount they earned from non-equity incentive plan awards in 2016.

Name	Option-based awards – value vested during the year (\$)	Share-based awards – value vested during the year (\$)	Non-equity incentive plan compensation – value earned during the year (\$)
Russell K. Girling	238,907	4,577,598	2,210,014
Donald R. Marchand	76,900	1,617,418	650,330
Alexander J. Pourbaix	137,643	2,629,184	1,088,006
Karl Johannson	60,610	1,420,229	635,380
William C. Taylor	16,290	791,860	427,050

Notes

- **Option-based awards** is the total value the named executives would have realized if they had exercised the stock options on the vesting date.
- **Share-based awards** is the payout value of the 2014 ESU awards for the named executives. See the **Payout of 2014 executive share unit award** section for more information.
- **Non-equity incentive plan compensation** is the short-term incentive award for 2016. This amount is shown under **Annual incentive plans** in the **Summary compensation table** on page 95.

Value of outstanding options at vesting (supplemental table)

The next table shows the details by grant for calculating the total value of the option-based awards in the table above. Stock options vest one third each year, beginning on the first anniversary of the grant date. The *share price on vesting date* is the closing price for TransCanada shares on the TSX on the vesting date or the first trading day following that date.

Name	Grant date	Total number of securities under options granted (#)	Option exercise price (\$)	Number of options that vested during the year (#)	Share price on vesting date (\$)	Value at vesting (\$)
Russell K. Girling	19-Feb-2015	434,109	56.58	144,703	49.98	—
	25-Feb-2014	439,982	49.03	146,660	48.73	—
	15-Feb-2013	383,275	47.09	127,758	48.96	238,907
Donald R. Marchand	19-Feb-2015	144,864	56.58	48,288	49.98	—
	25-Feb-2014	155,460	49.03	51,820	48.73	—
	15-Feb-2013	123,368	47.09	41,123	48.96	76,900
Alexander J. Pourbaix	19-Feb-2015	248,062	56.58	82,687	49.98	—
	25-Feb-2014	252,708	49.03	84,236	48.73	—
	15-Feb-2013	220,819	47.09	73,606	48.96	137,643
Karl Johannson	19-Feb-2015	133,721	56.58	44,574	49.98	—
	25-Feb-2014	136,507	49.03	45,503	48.73	—
	15-Feb-2013	97,236	47.09	32,412	48.96	60,610
William C. Taylor	19-Feb-2015	90,698	56.58	30,233	49.98	—
	25-Feb-2014	72,202	49.03	24,068	48.73	—
	15-Feb-2013	26,132	47.09	8,711	48.96	16,290

EQUITY COMPENSATION PLAN INFORMATION

Securities authorized for issue under equity compensation plans

The table below shows the:

- number of shares to be issued under the stock option plan when outstanding options are exercised
- weighted average exercise price of the outstanding options, and
- number of shares available for future issue under the option plan.

	Number of securities to be issued upon exercise of outstanding options (#)	Weighted-average exercise price of outstanding options (\$)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in the first column) (#)
Equity compensation plans approved by security holders	10,629,958	48.28	13,630,114
Equity compensation plans not approved by security holders	N/A	N/A	N/A
Total	10,629,958	48.28	13,630,114

Stock option grants as a percentage of outstanding shares

Effective date	Total number of shares outstanding (A)	Total number of options outstanding (B)	Total reserve (C)	Total options granted during year (D)	Dilution	Overhang	Burn rate
					Options outstanding as a % of shares outstanding (B / A)	% of stock options outstanding plus total reserve divided by total shares outstanding ((B + C) / A)	Grant as a % of shares outstanding (D / A)
Dec 31, 2014	708,662,996	8,464,305	8,215,001	2,292,289	1.19	2.35	0.32
Dec 31, 2015	702,614,096	9,833,700	6,109,768	2,214,028	1.40	2.27	0.32
Dec 31, 2016	863,759,075	10,629,958	13,630,114	2,479,654	1.23	2.81	0.29

RETIREMENT BENEFITS

All of the named executives participate in our DB plan. The table below shows their benefits under the DB plan.

Defined benefit pension plan

at December 31, 2016		Annual benefits		Opening present value of defined benefit obligation (\$)	Compensatory change (\$)	Non-compensatory change (\$)	Closing present value of defined benefit obligation (\$)
Name	Number of years of credited service	At year end (\$)	At age 65 (\$)				
Russell K. Girling	21.00	941,000	1,416,000	14,266,000	615,000	1,448,000	16,329,000
Donald R. Marchand	22.92	347,000	506,000	5,584,000	209,000	637,000	6,430,000
Alexander J. Pourbaix	21.00	484,000	802,000	7,608,000	551,000	729,000	8,888,000
Karl Johannson	21.00	310,000	449,000	5,247,000	226,000	544,000	6,017,000
William C. Taylor	20.75	221,000	361,000	4,092,000	164,000	241,000	4,497,000

Notes

- In 2004, the committee approved arrangements for Mr. Girling, Mr. Pourbaix, Mr. Johannson and Mr. Taylor to receive additional credited service to recognize their high potential and to retain them as employees. The credited service was received for years when they were not formally enrolled in the pension plan, but were employees of TransCanada. Messrs. Girling, Pourbaix and Johannson each received an additional three years of credited service on September 8, 2007 after maintaining continuous employment with us of the same duration. Mr. Taylor received an additional 2.08 years of credited service. The additional credited service is recognized only in the supplemental pension plan for earnings exceeding the maximum set under the *Income Tax Act* (Canada).
- Annual benefits at year end** is the annual lifetime benefit payable at age 60, based on the years of credited service and the actual pensionable earnings history, as of December 31, 2016.
- Annual benefits at age 65** is the annual lifetime benefit payable at age 65, based on the years of credited service at age 65 and the actual pensionable earnings history, as of December 31, 2016
- Opening and closing present value of defined benefit obligation** is at December 31, 2015 and December 31, 2016, respectively. It represents actuarial assumptions and methods that are consistent with those used for calculating the pension obligations disclosed in our 2015 and 2016 consolidated financial statements. These assumptions reflect our best estimate of future events, and the values in the above table may not be directly comparable to similar estimates of pension obligations that may be disclosed by other corporations.
- Compensatory change** in the present value of the obligation includes the service cost to TransCanada in 2016, plus compensation changes that were higher or lower than the base salary assumption, and plan changes.
- Non-compensatory change** in the present value of the obligation includes the interest on the accrued obligation at the start of the year and changes in assumptions in the year.

Accrued pension obligations

Our accrued obligation for the supplemental pension plan was approximately \$370 million at December 31, 2016. The current service costs were approximately \$7 million and the interest costs were approximately \$14 million for a total of \$21 million.

The accrued pension obligation is calculated using the method prescribed by U.S. GAAP and is based on management's best estimate of future events that affect the cost of pensions, including assumptions about future base salary adjustments and short-term incentive awards.

You can find more information about the accrued obligations and assumptions in Note 22 *Employee post-retirement benefits* to our 2016 consolidated financial statements, which are available on our website (www.transcanada.com) and on SEDAR (www.sedar.com).

TERMINATION AND CHANGE OF CONTROL

Termination

We have an employment agreement with each named executive that outlines the terms and conditions that apply if the executive leaves TransCanada. The table on the following page is a summary of the material terms and provisions if the executive resigns, is terminated, retires or dies. These do not apply when there is a change of control.

The general terms and provisions of ESUs are discussed under each event, however, the committee can use its discretion to decide how to treat unvested ESUs upon termination for executives who have an employment agreement. Each employment agreement includes a non-competition provision that applies for 12 months following the executive's separation date.

Like all other employees, the named executives are eligible for retiree benefits if they are 55 or older with 10 or more years of continuous service on the separation date. Retiree benefits include:

- a health spending account that can be used to pay for eligible health and dental expenses and/or to purchase private health insurance
- a security plan that provides a safety net if there are significant medical expenses, and
- life insurance that provides a death benefit of \$10,000 to a designated beneficiary.

The employee stock plan, spousal and dependent life insurance, accident insurance and disability insurance end at the separation date.

Compensation on termination

The table below shows how each named executive's compensation is treated if he leaves TransCanada.

Base salary	Resignation	Payments end.
	Termination without cause	Severance allowance includes a lump-sum payment of the base salary as of the separation date multiplied by the notice period.
	Termination with cause	Payments end.
	Retirement	
	Death	
Short-term incentive	Resignation	Not paid.
	Termination without cause	Year of separation: Equals the average bonus pro-rated by the number of months in the current year prior to the separation date. Years after separation: Equals the average bonus multiplied by the notice period.
	Termination with cause	Not paid.
	Retirement	Year of separation: Equals the average bonus pro-rated by the number of months in the current year prior to the separation date.
	Death	
ESUs	Resignation	Vested units are paid out; unvested units are forfeited.
	Termination without cause	Vested units are paid out. Unvested units are forfeited, however the original grant value is generally paid out on a pro rata basis.
	Termination with cause	Vested units are paid out, unvested units are forfeited.
	Retirement	Vested units are paid out. Unvested units continue to vest and the value is assessed at the end of the term. The award is pro-rated for the period of employment up to the retirement date.
	Death	Vested units are paid out. Unvested units are forfeited, however, the original grant value is generally paid out on a pro rata basis.
Stock options	Resignation	Vested stock options must be exercised by their expiry date or six months from the separation date (whichever is earlier). No stock options vest after the last day of employment.
	Termination without cause	Vested stock options must be exercised by the earlier of i) their expiry date or ii) the later of a) the end of the notice period, and b) six months following the separation date. No stock options vest after the separation date.
	Termination with cause	Vested stock options must be exercised by their expiry date or six months from the separation date (whichever is earlier). No stock options vest after the last day of employment.
	Retirement	Grants after January 1, 2012 Outstanding stock options continue to vest and must be exercised by their expiry date or three years from the separation date (whichever is earlier). If there is less than six months between the vesting date and the expiry date, the expiry date is extended for six months from the final vesting date of the options.
		Grants before 2012 Outstanding stock options vest immediately and must be exercised by their expiry date or three years from the separation date (whichever is earlier).
Death	Outstanding stock options vest immediately and must be exercised by their expiry date or the first anniversary of death (whichever is earlier).	

Pension	Resignation	Paid as a commuted value or monthly benefit according to the Registered Plan, the Supplemental Plan, or both, as applicable. For termination without cause , credited service is provided for the applicable notice period.
	Termination without cause	
	Termination with cause	
	Retirement	
	Death	
Benefits	Resignation	Coverage ends, or retiree benefits begin if eligible.
	Termination without cause	Coverage continues during the notice period (or an equivalent lump-sum payout is made). Retiree benefits eligibility is determined at the end of the notice period.
	Termination with cause	Coverage ends, or retiree benefits begin if eligible.
	Retirement	Coverage ends, or retiree benefits begin if eligible.
	Death	Coverage continues to eligible dependents for a specified period of time after death.
Perquisites	Resignation	Payments end.
	Termination without cause	A lump-sum cash payment equal to the corporate cost of the perquisite package in the one-year period preceding the separation date multiplied by the notice period.
	Termination with cause	Payments end.
	Retirement	
	Death	
Other	Resignation	–
	Termination without cause	Out-placement services.
	Termination with cause	–
	Retirement	–
	Death	–

Notes

- **Resignation** includes voluntary resignation but not resignation as a result of constructive dismissal. If a named executive resigns because of constructive dismissal, it is treated as **termination without cause**.
- The **short-term incentive** award is not paid on resignation unless the Board uses its discretion.
- **Average bonus** equals the average short-term incentive award paid to the named executive for the three years preceding the separation date.
- The **notice period** is currently two years for each named executive.

Change of control

Under the terms of the employment agreements, the stock option plan and ESU plan, a *change of control* includes an event where another entity becomes the beneficial owner of:

- more than 50 per cent of the voting shares of TransCanada, or
- more than 50 per cent of the voting shares of TCPL (not including the voting shares held by TransCanada).

Other events can also constitute a change of control including a merger where TransCanada is not the surviving entity, a sale of all or substantially all of TCPL's assets or if the incumbent board ceases to be a majority of the Board.

The following is a summary of the terms and provisions that apply to the compensation of the named executives if there is a change of control and there has been a termination without cause or a constructive dismissal within two years of the change of control ('double trigger'). Upon a double trigger for the named executives, a two-year notice period applies which provides for:

- payment of a severance allowance equal to the annual compensation during the notice period which is composed of base salary and the three-year average of annual incentive compensation
- a pensionable service credit of two years under the supplemental pension plan
- continuation of health, dental, life and accident insurance benefits during the notice period or cash payment in lieu of such benefits
- a cash payment in lieu of perquisites during the notice period
- professional out-placement services to a maximum of \$25,000
- accelerated vesting and payment of ESUs, and
- accelerated vesting of stock options.

If, for any reason, we are unable to implement accelerated vesting (for example, our shares stop trading), we will pay the named executive a cash amount. This would be equal to the net amount of the compensation the named executive would have received if, on the date of a change of control, he had exercised all vested options and unvested options that would have had accelerated vesting.

Separation and other payments

The table below is a summary of the incremental payments that would be made to each named executive under the different separation events, with and without a deemed change of control. All payments have been calculated using December 31, 2016 as the separation date and the date of a change of control as if it applies. These amounts would be paid under the terms of the employment agreements.

They do not include certain amounts that would be provided under normal course, such as the value of:

- any stock options or ESUs vesting as part of normal employment
- pension benefits that would normally be provided following resignation, or
- retiree benefits.

Name	Without a change of control		With a change of control		
	Termination with cause (\$)	Termination without cause (\$)	Retirement (\$)	Death (\$)	Termination without cause (\$)
Russell K. Girling	–	17,396,956	6,397,602	18,500,507	31,210,240
Donald R. Marchand	–	6,003,835	2,138,745	6,223,342	10,656,770
Alexander J. Pourbaix	–	10,398,660	3,511,886	10,644,260	17,714,313
Karl Johannson	–	5,101,426	1,966,789	5,639,172	10,050,409
William C. Taylor	–	3,926,900	1,179,531	3,751,465	6,932,747

Notes

- **Termination without cause following a change of control** also applies if the named executive resigns because of constructive dismissal and the separation date is within two years of the date of a change of control.
- There are no incremental payments that would be made to each named executive in the event of a change of control without termination.
- The amounts from share-based compensation include the payouts of outstanding 2014 ESU awards for some separation events:
 - include additional units from reinvested dividends up to and including an equivalent number of units for the final dividend that is declared as of December 31, 2016, based on \$60.48, the twenty-day volume-weighted average closing price of TransCanada shares on the TSX at December 31, 2016, and
 - include the performance multiplier of 1.34 as determined by the committee and the Board.
- ESUs and stock options continue to vest under the **Retirement** scenario provided the named executive is age 55 or over.
- The values provided to Mr. Taylor in U.S. dollars have been expressed here in Canadian dollars based on the Bank of Canada's average annual exchange rate for the financial year noted, namely 1.1045 CAD/USD for 2014, 1.2787 CAD/USD for 2015, and 1.3248 CAD/USD for 2016.

Every year the committee reviews the severance amounts calculated for each named executive under his employment agreement. The data represents the total value to be paid to the executive if he is terminated without cause and with and without a deemed change of control.

Appendices

Appendix A: Charter of the Board of Directors

I. INTRODUCTION

- A. The Board's primary responsibility is to foster the long-term success of the Company consistent with the Board's responsibility to act honestly and in good faith with a view to the best interests of the Company.
- B. The Board of Directors has plenary power. Any responsibility not delegated to management or a committee of the Board remains with the Board. This Charter is prepared to assist the Board and management in clarifying responsibilities and ensuring effective communication between the Board and management.

II. COMPOSITION AND BOARD ORGANIZATION

- A. Nominees for directors are initially considered and recommended by the Governance Committee of the Board, approved by the entire Board and elected annually by the shareholders of the Company.
- B. The Board must be comprised of a majority of members who have been determined by the Board to be independent. A member is independent if the member has no direct or indirect relationship which could, in the view of the Board, be reasonably expected to interfere with the exercise of a member's independent judgment.
- C. Directors who are not members of management will meet on a regular basis to discuss matters of interest independent of any influence from management.
- D. Certain of the responsibilities of the Board referred to herein may be delegated to committees of the Board. The responsibilities of those committees will be as set forth in their Charter, as amended from time to time.

III. DUTIES AND RESPONSIBILITIES

A. Managing the Affairs of the Board

The Board operates by delegating certain of its authorities, including pending authorizations, to management and by reserving certain powers to itself. Certain of the legal obligations of the Board are described in detail in Section IV. Subject to these legal obligations and to the Articles and By-laws of the Company, the Board retains the responsibility for managing its own affairs, including:

- i) planning its composition and size;
- ii) selecting its Chair;

- i) nominating candidates for election to the Board;
- ii) determining independence of Board members;
- iii) approving committees of the Board and membership of directors thereon;
- iv) determining director compensation; and
- v) assessing the effectiveness of the Board, committees and directors in fulfilling their responsibilities.

B. Management and Human Resources

The Board has the responsibility for:

- i) the appointment and succession of the Chief Executive Officer (CEO) and monitoring CEO performance, approving CEO compensation and providing advice and counsel to the CEO in the execution of the CEO's duties;
- ii) approving a position description for the CEO;
- iii) reviewing CEO performance at least annually, against agreed-upon written objectives;
- iv) approving decisions relating to senior management, including the:
 - a) appointment and discharge of officers of the Company and members of the senior executive leadership team;
 - b) compensation and benefits for members of the senior executive leadership team;
 - c) annual corporate and business/functional and individual performance objectives utilized in determining incentive compensation or other awards to officers; and
 - d) employment contracts, termination and other special arrangements with senior executive officers, or other employee groups if such action is likely to have a subsequent material⁽¹⁾ impact on the Company or its basic human resource and compensation policies.
- v) taking all reasonable steps to ensure succession planning programs are in place, including programs to train and develop management;
- vi) the overall oversight of the Company sponsored Canadian pension plans and ensuring that processes are in place to properly oversee the administration and management of such pension plans either directly or through delegation of the duties and responsibilities to one or more Board Committees;

(1) For purposes of this Charter, the term "material" includes a transaction or a series of related transactions that would, using reasonable business judgment and assumptions, have a meaningful impact on the Corporation. The impact could be relative to the Corporation's financial performance and liabilities as well as its reputation.

- vii) approving certain matters relating to all employees, including:
 - a) the annual salary policy/program for employees;

- b) new benefit programs or changes to existing programs that would create a change in cost to the Company in excess of \$10,000,000 annually; and

- c) material benefits granted to retiring employees outside of benefits received under approved pension and other benefit programs.

C. Strategy and Plans

The Board has the responsibility to:

- i) participate in strategic planning sessions to ensure that management develops, and ultimately approve, major corporate strategies and objectives;
- ii) approve capital commitment and expenditure budgets and related operating plans;
- iii) approve financial and operating objectives used in determining compensation;
- iv) approve the entering into, or withdrawing from, lines of business that are, or are likely to be, material to the Company;
- v) approve material divestitures and acquisitions; and
- vi) monitor management's achievements in implementing major corporate strategies and objectives, in light of changing circumstances.

D. Financial and Corporate Issues

The Board has the responsibility to:

- i) take reasonable steps to ensure the implementation and integrity of the Company's internal control and management information systems;
- ii) monitor operational and financial results;
- iii) approve annual financial statements and related Management's Discussion and Analysis, review quarterly financial results and approve the release thereof by management;
- iv) approve the Management Information Circular, Annual Information Form and documents incorporated by reference therein;
- v) declare dividends;
- vi) approve financings, changes in authorized capital, issue and repurchase of shares, issue and redemption of debt securities, listing of shares and other securities, issue of commercial paper, and related prospectuses and trust indentures;
- vii) recommend appointment of external auditors and approve auditors' fees;
- viii) approve banking resolutions and significant changes in banking relationships;
- ix) approve appointments, or material changes in relationships with corporate trustees;
- x) approve contracts, leases and other arrangements or commitments that may have a material impact on the Company;
- xi) approve spending authority guidelines; and
- xii) approve the commencement or settlement of litigation that may have a material impact on the Company.

E. Business and Risk Management

The Board has the responsibility to:

- i) take reasonable steps to ensure that management has identified the principal risks of the Company's businesses and implemented appropriate strategies to manage these risks, understands the principal risks and achieves a proper balance between risks and benefits;
- ii) review reports on capital commitments and expenditures relative to approved budgets;
- iii) review operating and financial performance relative to budgets or objectives;
- iv) receive, on a regular basis, reports from management on matters relating to, among others, ethical conduct, environmental management, employee health and safety, human rights, and related party transactions; and
- v) assess and monitor management control systems by evaluating and assessing information provided by management and others (e.g. internal and external auditors) about the effectiveness of management control systems.

F. Policies and Procedures

The Board has responsibility to:

- i) monitor compliance with all significant policies and procedures by which the Company is operated;
- ii) direct management to ensure the Company operates at all times within applicable laws and regulations and to the highest ethical and moral standards;
- iii) provide policy direction to management while respecting its responsibility for day-to-day management of the Company's businesses; and
- iv) review significant new corporate policies or material amendments to existing policies (including, for example, policies regarding business conduct, conflict of interest and the environment).

G. Compliance Reporting and Corporate Communications

The Board has the responsibility to:

- i) take all reasonable steps to ensure the Company has in place effective disclosure and communication processes with shareholders and other stakeholders and financial, regulatory and other recipients;
- ii) approve interaction with shareholders on all items requiring shareholder response or approval;
- iii) take all reasonable steps to ensure that the financial performance of the Company is adequately reported to shareholders, other security holders and regulators on a timely and regular basis;
- iv) take all reasonable steps to ensure that financial results are reported fairly and in accordance with generally accepted accounting principles;
- v) take all reasonable steps to ensure the timely reporting of any other developments that have significant and material impact on the Company; and
- vi) report annually to shareholders on the Board's stewardship for the preceding year (the Annual Report).

IV. GENERAL LEGAL OBLIGATIONS OF THE BOARD OF DIRECTORS

A. The Board is responsible for:

- i) directing management to ensure legal requirements have been met and documents and records have been properly prepared, approved and maintained;
- ii) approving changes in the By-laws and Articles of Incorporation, matters requiring shareholder approval, and agendas for shareholder meetings;
- iii) approving the Company's legal structure, name, logo, mission statement and vision statement; and
- iv) performing such functions as it reserves to itself or which cannot, by law, be delegated to Committees of the Board or to management.

Appendix B: Non-GAAP measures

In our disclosure, we use the following non-GAAP measures:

- *Comparable earnings*
- *Comparable earnings per common share*
- *Comparable EBITDA*
- *Comparable EBIT*
- *Funds generated from operations*
- *Comparable funds generated from operations*
- *Comparable distributable cash flow*
- *Comparable distributable cash flow per common share*

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.

See our 2016 MD&A for reconciliation of the GAAP measures to the non-GAAP measures.

CALCULATING THE MEASURES

Comparable measures

We calculate the comparable measures by adjusting certain GAAP and non-GAAP measures for specific items we believe are significant but not reflective of our underlying operations in the period. These comparable measures are calculated on a consistent basis from period to period and are adjusted for specific items in each period, as applicable.

The following table identifies our non-GAAP measures against their equivalent GAAP measures:

Comparable measure	Original measure
comparable earnings	net income/(loss) attributable to common shares
comparable earnings per common share	net income/(loss) per common share
comparable EBITDA	segmented earnings
comparable EBIT	segmented earnings
comparable funds generated from operations	net cash provided by operations
comparable distributable cash flow	net cash provided by operations

Our decision whether to adjust for a specific item is subjective and made after careful consideration.

Specific items may include:

- certain fair value adjustments relating to risk management activities
- income tax refunds and adjustments and changes to enacted tax rates
- gains or losses on sales of assets
- legal, contractual and bankruptcy settlements
- impact of regulatory or arbitration decisions relating to prior year earnings
- restructuring costs
- impairment of goodwill, investments and other assets including ongoing maintenance and liquidation costs
- acquisition costs.

We exclude the unrealized gains and losses from changes in the fair value of derivatives used to reduce our exposure to certain financial and commodity price risks. These derivatives generally provide effective economic hedges, but do not meet the criteria for hedge accounting. As a result, the changes in fair value are recorded in net income. As these amounts do not accurately

reflect the gains and losses that will be realized at settlement, we do not consider them reflective of our underlying operations.

Comparable earnings

Comparable earnings represents earnings or loss attributable to common shareholders on a consolidated basis adjusted for specific items. Comparable earnings is comprised of segmented earnings, interest expense, AFUDC, interest income and other, income taxes and non-controlling interests adjusted for the specific items.

Comparable EBIT and comparable EBITDA

Comparable EBIT represents segmented earnings adjusted for the specific items described above. We use comparable EBIT as a measure of our earnings from ongoing operations as it is a useful measure of our performance and an effective tool for evaluating trends in each segment. Comparable EBITDA is calculated the same way as comparable EBIT but excludes the non-cash charges for depreciation and amortization.

Funds generated from operations

Funds generated from operations includes net cash provided by operations before changes in operating working capital. We believe it is a useful measure of our consolidated operating cash flow because it does not include fluctuations from working capital balances, which do not necessarily reflect underlying operations in the same period, and is used to provide a consistent measure of the cash generating performance of our assets.

Comparable distributable cash flow

Comparable distributable cash flow is defined as comparable funds generated from operations less preferred share dividends, distributions to non-controlling interests and maintenance capital expenditures. Maintenance capital expenditures are expenditures incurred to maintain our operating capacity, asset integrity and reliability, and include amounts attributable to our proportionate share of maintenance capital expenditures on our equity investments. Although we deduct maintenance capital expenditures in determining comparable distributable cash flow, in certain of our rate-regulated businesses, maintenance capital expenditures are included in their respective rate bases, on which we earn a regulated return and recover depreciation through future tolls.

Effective December 31, 2016, we adopted, on a retrospective basis, a new accounting standard under U.S. GAAP which allows us to classify certain distributed earnings received from equity investments as cash from operations on the consolidated statement of cash flows, which had previously been included in Investing activities. As a result, we no longer need to adjust for distributions in excess of equity earnings in the calculation of comparable distributable cash flow.

We believe comparable distributable cash flow is a useful supplemental measure of performance that defines cash available to common shareholders before capital allocation.