

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 11-K

ANNUAL REPORT PURSUANT TO SECTION 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2015.

OR

TRANSITION REPORT PURSUANT TO SECTION 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission File No. 1-31690

A. Full title of the plan and the address of the plan, if different from that of the issuer named below:

**TransCanada 401(k) and Savings Plan
TransCanada USA Services Inc., 700 Louisiana Street, Suite 700
Houston, Texas 77002-2700**

B. Name of issuer of the securities held pursuant to the plan and the address of its principal executive office:

**TransCanada Corporation
450 – 1 Street S.W., Calgary, Alberta, T2P 5H1, Canada**

TRANSCANADA 401(k) AND SAVINGS PLAN

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All other schedules required by 29 CFR 2520.103-10 of the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974 have been omitted because they are not applicable.

Report of Independent Registered Public Accounting Firm

The Plan Administrator of TransCanada 401(k) and Savings Plan

We have audited the accompanying statement of net assets available for benefits of Plan Administrator of TransCanada 401(k) and Savings Plan (the Plan) as of December 31, 2015, and the related statement of changes in net assets available for benefits for the year then ended. These financial statements are the responsibility of the Plan's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the net assets available for benefits of the Plan as of December 31, 2015, and the changes in net assets available for benefits for the year then ended, in conformity with accounting principles generally accepted in the United States of America.

The supplemental information in the accompanying schedule of assets (held at end of year) as of December 31, 2015 has been subjected to audit procedures performed in conjunction with the audit of the Plan's financial statements. The supplemental information is the responsibility of the Plan's management. Our audit procedures included determining whether the supplemental information reconciles to the financial statements or the underlying accounting and other records, as applicable, and performing procedures to test the completeness and accuracy of the information presented in the supplemental information. In forming our opinion on the supplemental information in the accompanying schedules, we evaluated whether the supplemental information, including its form and content, is presented in conformity with the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974. In our opinion, the supplemental information is fairly stated in all material respects in relation to the basic financial statements taken as a whole.

/s/ Caron & Bletzer, PLLC

Kingston, NH
June 16, 2016

Report of Independent Registered Public Accounting Firm

The Plan Administrator
TransCanada 401(k) and Savings Plan:

We have audited the accompanying statement of net assets available for benefits of the TransCanada 401(k) and Savings Plan (the Plan) as of December 31, 2014 (the financial statement). This financial statement is the responsibility of the Plan’s management. Our responsibility is to express an opinion on this financial statement based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statement is free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statement. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statement referred to above presents fairly, in all material respects, the net assets available for benefits of the Plan as of December 31, 2014, in conformity with U.S. generally accepted accounting principles.

/s/ KPMG LLP

Houston, Texas
June 25, 2015

TRANSCANADA 401(k) AND SAVINGS PLAN

STATEMENTS OF NET ASSETS AVAILABLE FOR BENEFITS

<i>December 31 (thousands of U.S. dollars)</i>	2015		2014	
Assets				
Investments at fair value (Note 3)	\$	248,023	\$	243,461
Notes receivable from participants		5,785		5,772
Employer contribution receivable		503		492
Net Assets Available for Benefits	\$	254,311	\$	249,725

The accompanying notes to the financial statements are an integral part of these statements.

TRANSCANADA 401(k) AND SAVINGS PLAN

STATEMENT OF CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS

<i>Year ended December 31 (thousands of U.S. dollars)</i>	2015
Additions	
Contributions	
Employee contributions	\$ 17,663
Employer contributions	13,016
Employee rollovers	263
	30,942
Investment Income	
Net depreciation in fair value of investments (Note 3)	(19,236)
Interest and dividend income	15,179
	(4,057)
Interest on notes receivable from participants	268
Other Revenue	129
Total Additions	27,282
Deductions	
Benefits paid to participants	22,667
Administrative expenses	29
Total Deductions	22,696
Increase in Net Assets Available for Benefits	4,586
Net Assets Available for Benefits	
Beginning of Year	249,725
End of Year	\$ 254,311

The accompanying notes to the financial statements are an integral part of these statements.

TRANSCANADA 401(k) AND SAVINGS PLAN

NOTES TO FINANCIAL STATEMENTS

December 31, 2015 and 2014

NOTE 1: DESCRIPTION OF PLAN

The TransCanada 401(k) and Savings Plan (the Plan) is a defined contribution plan that provides retirement benefits for employees of TransCanada USA Services Inc. (TCUSA or the Company) or its subsidiaries that have attained the age of 21 and are not covered by a collective bargaining agreement. The Plan excludes employees hired under the Company's student program, special project employees, non-resident persons with no income from a United States source and non-resident persons who have been non-residents for a period of 183 days or more, unless the employee remains on the Company's payroll. The Plan is subject to the provisions of the *Employee Retirement Income Security Act of 1974*, as amended (ERISA).

The Board of Directors of TCUSA has appointed Fidelity Management Trust Company (Fidelity or the Trustee) as custodian and trustee of the Plan's assets. Fidelity Investments Institutional Operations Company serves as the recordkeeper for the Plan.

Employee and Employer Contributions

Each year, participants may elect to defer a percentage of their eligible compensation into the Plan subject to an annual limit of the lesser of 60 per cent of their eligible compensation or \$18,000, subject to certain limitations under the Internal Revenue Code of 1986, as amended (the Code). Participants age 50 or older who are making deferral contributions may also make catch-up contributions of up to \$6,000. In addition, employees may contribute up to 100 per cent of bonuses paid by the Company subject to certain limitations as noted above. The Company will match 100 per cent of each participant's contributions up to a maximum of five per cent of the participant's compensation for the Plan year. The Company will also make annual enhanced profit sharing contributions in an amount equal to seven per cent of a participant's base salary, if the participant has elected, or is deemed to have elected, not to accrue credited service under the TransCanada USA Services Inc. Retirement Plan. In 2015, the Company made enhanced contributions of \$3.9 million. Participants may also contribute amounts transferred to the Plan from another qualified plan at the participant's request (rollover).

Participant Accounts

Each participant's account is credited with the participant's and Company's contributions and an allocation of Plan earnings. Earnings are allocated from a particular fund based on the ratio of a participant's account invested in the fund to all participants' investments in that fund.

Participants are responsible for investment decisions relating to the investment of assets in their account. The Trustee carries out all investing transactions on behalf of the participant. In the event investment instructions are not received from the participant, contributions are allocated to the Plan's qualified default option, the Fidelity Freedom K target date funds, based upon the participant's expected retirement date.

Investment in TransCanada Corporation

Stock of TransCanada Corporation (TransCanada), indirect parent company to TCUSA, is available to participants in the Plan. Participants may elect to invest up to 10 per cent of contributions in TransCanada stock. Participants may elect to exchange up to 10 per cent of their existing account balance into TransCanada stock, subject to a 10 per cent maximum account value. Additionally, no more than 10 per cent of any rollover contribution can be invested in TransCanada stock.

Vesting

Participants are immediately vested in their contributions, including rollovers, employer contributions and any earnings thereon.

Notes Receivable from Participants

Participants may borrow from their fund accounts a minimum of \$1,000 up to a maximum equal to the lesser of \$50,000 reduced by the highest outstanding note balance in their account during the prior 12 month period or 50 per cent of their vested account balance. Note terms range from one to five years for general notes or up to 15 years for the purchase of a primary residence. The notes are secured by the balance in the participant's account and bear interest at a reasonable interest rate, as determined by the Plan Administrator, based on prevailing market interest rates at the time. Interest rates remain fixed throughout the duration of the term. Interest rates on notes outstanding at December 31, 2015 ranged from 4.25 per cent to 9 per cent (2014 - 4.25 per cent to 9 per cent). Principal and interest are paid through payroll deductions.

A note receivable from a participant shall be considered in default if any scheduled repayment remains unpaid as of the last business day of the calendar quarter following the calendar quarter in which the note is initially considered past due. In the event of a default or termination of employment the entire outstanding note and accrued interest is considered to be a deemed distribution to the participant.

Payment of Benefits

Participants are eligible to request a distribution of their vested amounts upon retirement, death, total and permanent disability, severance of employment with the Company or, in very limited circumstances, in the event of financial hardship. Distributions are made in the form of a lump-sum payment, installment payments or a rollover to another qualified account.

A participant's normal retirement age is 65, however, participants may elect to withdraw all or a portion of their contributions after the age of 59½, subject to certain conditions.

In certain circumstances, participants may elect to withdraw all or a portion of their vested matching and profit sharing contributions that have been in their account for at least 24 months and after they have at least 60 months of participation in the Plan.

Forfeitures

As participants are immediately 100 per cent vested in their account balance, there are no forfeitures.

Administrative Expenses

The Plan Administrator is responsible for filing all required reports on behalf of the Plan. The Company provides or pays for certain accounting, legal and management services on behalf of the Plan. The Company has not charged the Plan for these expenses or services. Loans and other transaction specific fees are charged to the accounts of participants electing such transaction. Certain investment related expenses, including management fees, are paid by the mutual funds the Plan invests in; including those sponsored by an affiliate of Fidelity. These expenses are presented as a reduction of investment income.

Plan Termination

Although it has not expressed any intent to do so, with approval from its Board of Directors, the Company has the right under the Plan to discontinue contributions at any time and to terminate the Plan, subject to the provisions of ERISA.

NOTE 2: SUMMARY OF ACCOUNTING POLICIES

Basis of Accounting

The financial statements of the Plan are presented on an accrual basis of accounting in accordance with U.S. generally accepted accounting principles.

Use of Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, and changes therein, and disclosure of contingent assets and liabilities. Actual results could differ from these estimates.

Investment Valuation and Income Recognition

The Plan's investments are stated at fair value. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. See Note 3 for discussion of fair value measurements.

Interest income is recorded on the accrual basis and dividends are recorded on the ex-dividend date.

Net (Depreciation)/Appreciation in Fair Value of Investments consists of: (1) the unrealized gains or losses on investments held during the year and (2) the realized gains or losses recognized on the sale of investments during the year. Realized gains and losses from security transactions are reported on the average cost basis.

Purchases and sales of securities are recorded on a trade-date basis.

Notes Receivable from Participants

Notes Receivable from Participants includes the unpaid principal balance plus any accrued interest. Defaulted notes receivable from participants are recorded as a distribution based upon the terms of the plan document.

Other Revenue

The agreement between the Trustee and the Plan includes a revenue sharing arrangement whereby the Trustee shares revenue generated by the Plan that was paid from the mutual fund holdings sponsored by an affiliate of the Trustee. These deposits are included in the other revenue amount in the statement of changes in net assets available for benefits. The funds can be used to pay plan expenses or be allocated to participants. Income from revenue sharing during 2015 was \$128,667 of which \$96,797 (2014 - \$104,899) remains available at December 31, 2015 for allocation to participants or to offset future plan expenses.

Payment of Benefits

Benefits are recorded when paid.

Future Accounting Changes

In July 2015, the FASB issued ASU 2015-12, Plan Accounting: Defined Benefit Pension Plans (Topic 960), Defined Contribution Pension Plans (Topic 962), Health and Welfare Benefit Plans (Topic 965). ASU 2015-12 eliminates

disclosure requirements for individual investments that represent 5 percent or more of net assets available for benefits and the net appreciation or depreciation for investments by general type. It also states that investments of employee benefit plans will be grouped only by general type and if an investment is measured using the net asset value per share (or its equivalent) practical expedient and that investment is in a fund that files a U.S. Department of Labor Form 5500 as a direct filing entity, disclosure of that investment's strategy is no longer required. The requirements of the standard are effective for reporting periods in fiscal years that begin after December 15, 2015, with early adoption permitted.

The Company is evaluating the impact of the adoption of this ASU on the Plan financial statements.

NOTE 3: INVESTMENTS

Participants direct the investment of their account balances into a broad range of investment securities offered by the Plan. Investment securities are exposed to various risks, such as counterparty credit risk, liquidity risk and market risk. Due to the level of risk associated with certain investment securities and the level of uncertainty related to changes in value of these investments, it is reasonably possible that changes in the values of investment securities may occur in the near term and that such changes could materially affect participant account balances and the amounts reported in the financial statements.

The Plan offers alternatives that may mitigate participant risks, including the opportunity to diversify investments across multiple participant-directed fund elections including active and passively managed funds covering multiple asset classes. Additionally, the investments within each participant-directed fund election are further diversified into various financial instruments, with the exception of the TransCanada Stock Fund, which invests in securities of a single issuer.

The Plan's exposure to credit loss in the event of nonperformance of investments is limited to the carrying value of such instruments. The Plan's concentrations of credit risk, interest rate risk and market risk are dictated by the Plan's provisions as well as those of ERISA and the participants' investment preference.

Fair Value Hierarchy

The Plan's financial assets and liabilities recorded at fair value have been categorized into three levels based on a fair value hierarchy. In Level I, the fair value of assets and liabilities is determined by reference to quoted prices in active markets for identical assets and liabilities. In Level II, determination of the fair value of assets and liabilities includes valuations using inputs, other than quoted prices, for which all significant inputs are observable, directly or indirectly. This category includes fair value determined using valuation techniques, such as option pricing models and extrapolation using observable inputs. In Level III, determination of the fair value of assets and liabilities is based on inputs that are not readily observable and are significant to the overall fair value measurement. There were no Level II or Level III investments or transfers between levels in 2015 or 2014.

Common Stock: Valued at the closing price reported on the New York Stock Exchange.

Mutual funds: Valued at the daily closing price reported by the fund. Mutual funds held by the Plan are open end mutual funds that are registered with the Securities and Exchange Commission. These funds are required to publish their daily net asset value and transact at that price. The mutual funds held by the Plan are deemed to be actively traded.

Financial assets measured at fair value on a recurring basis are classified as Level I. The fair value category of those investments, based on the primary underlying investment risk of the mutual funds, are as follows:

<i>December 31 (thousands of U.S. dollars)</i>	Quoted Prices in Active Markets (Level I)	
	2015	2014
Mutual funds		
Mid/Large Cap Stock	\$ 182,142	185,955
International	20,134	19,548
Fixed Income	18,400	18,598
Money Market	12,060	12,467
Small Cap Stock	9,800	—
	242,536	236,568
Common stock of TransCanada Corporation and other	5,487	6,893
Investments at Fair Value	\$ 248,023	243,461

The categories above for Mid/Large Cap Stock and Fixed Income include target dated funds in the amount of \$74.9 million and \$66.4 million as of December 31, 2015 and 2014, respectively.

Significant Investments

The following is a summary of investments which represented five per cent or more of the Plan's Net Assets Available for Benefits:

<i>December 31 (thousands of U.S. dollars)</i>	2015	2014
Spartan® 500 Index Fund	\$ 37,138	15,234
Baron Asset Fund	20,445	20,363
Mainstay LG Cap Growth Fund	19,278	16,816
Fidelity® Diversified International Fund	18,312	18,245
Fidelity Freedom K® 2025 Fund	14,661	*
JPMorgan Equity Income Fund Class R6	14,496	*
Fidelity Freedom K® 2020 Fund	14,332	14,055
Artisan Mid Cap Value Investor Shares	14,133	18,069
Fidelity® Dividend Growth Fund	*	20,050
Fidelity® Equity – Income Fund – Class K	*	16,265

* Investment is less than five percent of net assets available for benefits in indicated year.

Net Depreciation in Fair Value of Investments

Net Depreciation in Fair Value of Investments by major category (including investments purchased, sold and held during the year) was as follows:

<i>Year ended December 31 (thousands of U.S. dollars)</i>	2015
Mutual funds	\$ (16,746)
Common stock	(2,490)
Net Depreciation in Fair Value of Investments	\$ (19,236)

NOTE 4: INCOME TAXES

Effective December 15, 2009, the Plan was restated to a volume submitter plan. The Plan obtained its latest determination letter on March 30, 2012 in which the Internal Revenue Service stated that the Plan, as then designed was in compliance with the applicable requirements of the Code. The Plan Administrator believes that the Plan is designed and is currently being operated in compliance with the applicable requirements of the Code. The Plan is exempt from federal income taxes. Accordingly, no provision for federal income taxes has been made in the accompanying financial statements.

The Plan Administrator has analyzed any income tax assets and liabilities of the Plan and has concluded that as of December 31, 2015 and 2014, there are no uncertain income tax positions taken or expected to be taken that would require recognition of a liability or asset, or disclosure in the financial statements. The Plan is subject to audits by taxing jurisdictions, however, there are currently no audits in progress for any tax periods. The Plan Administrator believes it is no longer subject to income tax examinations for years prior to 2012.

NOTE 5: PARTY-IN-INTEREST AND RELATED PARTY TRANSACTIONS

Certain Plan investments are shares of mutual funds managed by an affiliate of Fidelity, the Trustee, therefore these investments qualify as party-in-interest transactions.

At December 31, 2015 Plan investments included \$5,486,439 (2014 – \$6,891,231) of TransCanada common stock and \$1,232 (2014 – \$1,523) in a stock purchase account. Transactions involving these investments are permitted party-in-interest transactions.

NOTE 6: SUBSEQUENT EVENTS

We have evaluated significant events and transactions through June 16, 2016 and determined that there were no events or transactions that would require recognition or disclosure in the Plan's financial statements for the year ended December 31, 2015.

TRANSCANADA 401(k) AND SAVINGS PLAN
EIN #: 98-0460263
PLAN #: 001

SCHEDULE H, PART IV, LINE 4i – SCHEDULE OF ASSETS (HELD AT END OF YEAR)
AS OF DECEMBER 31, 2015

(a)	(b) Identity of Issue, Borrower, Lessor or Similar Party	(c) Description of Investment	(d) Cost of Investment**	(e) Current Value
	Spartan® 500 Index Fund	Mutual Fund	\$	37,138,338
	Baron Asset Fund	Mutual Fund		20,445,030
	Mainstay LG Cap Growth Fund	Mutual Fund		19,278,095
*	Fidelity® Diversified International	Mutual Fund		18,311,758
*	Fidelity Freedom 2025 Fund®	Mutual Fund		14,660,787
	JPMorgan Equity Income Fund Class R6	Mutual Fund		14,495,872
*	Fidelity Freedom 2020 Fund®	Mutual Fund		14,332,285
	Artisan Mid Cap Value Investor Shares	Mutual Fund		14,133,019
*	Fidelity® Retirement Money Market Portfolio	Mutual Fund		12,059,910
*	Spartan® U.S. Bond Index Fund	Mutual Fund		10,644,577
*	Fidelity Freedom 2030 Fund®	Mutual Fund		9,885,033
*	Spartan® Small Cap Index Fund	Mutual Fund		9,800,013
*	Fidelity Freedom 2035 Fund®	Mutual Fund		7,763,707
*	Fidelity Freedom 2040 Fund®	Mutual Fund		6,762,196
*	Fidelity Freedom 2015 Fund®	Mutual Fund		6,068,175
*	Fidelity Freedom 2045 Fund®	Mutual Fund		5,335,348
*	Spartan® Inflation-Protected Bond Index Fund	Mutual Fund		4,231,476
*	Fidelity Freedom 2050 Fund®	Mutual Fund		4,012,535
*	Spartan® External Market Fund	Mutual Fund		3,513,525
*	Fidelity Freedom 2010 Fund®	Mutual Fund		2,523,855
*	Fidelity Freedom 2055 Fund®	Mutual Fund		1,747,959
	Baird Core Plus Bond Fund	Mutual Fund		1,730,458
	Vanguard Total International Stock Index Fund	Mutual Fund		1,512,885
*	Fidelity Freedom Income Fund®	Mutual Fund		1,487,136
	Causeway Emerging Markets Fund	Mutual Fund		309,059
*	Fidelity Freedom 2005 Fund®	Mutual Fund		306,283
*	Fidelity Freedom 2060 Fund®	Mutual Fund		46,058
*	Fidelity Equity Income Fund®	Mutual Fund		89
	RS Partners Fund Class A	Mutual Fund		82
	Total Mutual Funds			242,535,543
*	TransCanada Corporation	Common Stock		5,486,439
*	TransCanada Stock Fund	Stock Purchase Account		1,232
*	Participant Loans	Interest rates ranging from 4.25% to 9.00% maturing through 2029		5,784,657
	Total Assets Held		\$	253,807,871

* Represents a party-in-interest (Note 5).

** Cost omitted for participant-directed investments.

See accompanying Report of Independent Registered Public Accounting Firm.

SIGNATURE

The Plan. Pursuant to the requirements of the Securities Exchange Act of 1934, the trustees (or other persons who administer the employee benefit plan) have duly caused this annual report to be signed on its behalf by the undersigned thereunto duly authorized.

Date: June 16, 2016

TransCanada 401(k) and Savings Plan

By: /s/ Jon A. Dobson
Jon A. Dobson
Member
TransCanada USA Investment Committee

EXHIBIT INDEX

- 23.1 Consent of Independent Registered Public Accounting Firm.
- 23.2 Consent of Independent Registered Public Accounting Firm.

Consent of Independent Registered Public Accounting Firm

To the Plan Administrator of the TransCanada 401(k) and Savings Plan:

We consent to the incorporation by reference in the Registration Statements (No. 333-184074 and No. 333-151736) pertaining to the TransCanada 401(k) and Savings Plan of our report dated June 16, 2016 relating to the statement of net assets available for plan benefits of the TransCanada 401(k) and Savings Plan as of December 31, 2015 and the related statement of changes in net assets available for plan benefits for the year then ended, included in this annual report on Form 11-K.

/s/ Caron & Bletzer, PLLC

Kingston, NH
June 16, 2016

Consent of Independent Registered Public Accounting Firm

The Plan Administrator
TransCanada 401(k) and Savings Plan:

We consent to the incorporation by reference in the registration statements (No. 333-184074 and No. 333-151736) on Form S-8 of TransCanada Corporation of our report dated June 25, 2015, with respect to the statement of net assets available for benefits of the TransCanada 401(k) and Savings Plan as of December 31, 2014, which report appears in the December 31, 2015 annual report on Form 11-K of the TransCanada 401(k) and Savings Plan.

/s/ KPMG LLP

Houston, Texas
June 16, 2016