

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM S-8
REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

TRANSCANADA CORPORATION

(Exact name of registrant as specified in its charter)

Canada

(State or other jurisdiction of incorporation or organization)

Not Applicable

(I.R.S. Employer Identification No.)

450 – 1st Street S.W.

Calgary, Alberta, T2P 5H1, Canada

(Address of Principal Executive Offices) (Zip Code)

TransCanada 401(k) and Savings Plan

TransCanada 401(k) and Savings IBEW 486 Plan

TransCanada 401(k) and Savings IBEW 1245 Plan

TransCanada 401(k) and Savings Local 1-2 Plan

(Full title of the plans)

TransCanada USA Services Inc.

717 Texas Street, Suite 2400, Houston, Texas 77002

(Name and address of agent for service)

(832) 320-5201

(Telephone number, including area code, of agent for service)

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of “large accelerated filer,” “accelerated filer” and “smaller reporting company” in Rule 12b-2 of the Exchange Act.

Large accelerated filer



Non-accelerated filer



(Do not check if a smaller reporting company)

Accelerated filer



Smaller reporting company



CALCULATION OF REGISTRATION FEE

Title of securities to be registered ⁽¹⁾	Title of Plan	Amount to be Registered ⁽²⁾	Proposed maximum offering price per share ⁽³⁾	Proposed maximum aggregate offering price ⁽³⁾	Amount of registration fee
Common Shares, no par value	TransCanada 401(k) and Savings Plan	200,000	\$46.06	\$9,254,000	\$1,055.70
Common Shares, no par value	TransCanada 401(k) and Savings IBEW 486 Plan	10,000	\$46.06	\$462,700	\$52.78
Common Shares, no par value	TransCanada 401(k) and Savings IBEW 1245 Plan	10,000	\$46.06	\$462,700	\$52.78
Common Shares, no par value	TransCanada 401(k) and Savings Local 1-2 Plan	30,000	\$46.06	\$1,388,100	\$158.35
Total		250,000		\$11,567,500	\$1,319.61

Notes:

1. Pursuant to Rule 416(c) under the Securities Act of 1933 (the "Securities Act"), this Registration Statement also covers an indeterminate amount of interests to be offered or sold pursuant to the employee benefit plans described in this Registration Statement. This Registration Statement also applies to rights under the Registrant's Amended and Restated Shareholders Rights Plan Agreement, which are attached to and tradable with the common shares registered hereby. No registration fees are required for such rights as they will be issued for no additional consideration.
 2. If, as a result of stock splits, stock dividends, stock distributions or similar transaction, the number of securities purported to be registered on this Registration Statement changes, the provisions of Rule 416 shall apply to this Registration Statement.
 3. Estimated solely for the purpose of calculating the registration fee in accordance with Rule 457(c) and Rule 457(h) under the Securities Act, based on the average of the high and low prices of the common shares of TransCanada Corporation as reported on the New York Stock Exchange on September 21, 2012.
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EXPLANATORY NOTE

This Registration Statement has been prepared and filed pursuant to and in accordance with the requirements of General Instruction E to Form S-8 regarding Registration of Additional Shares for the purpose of registering an additional two hundred fifty thousand (250,000) common shares, no par value, of TransCanada Corporation ("Common Shares") that are issuable at any time or from time to time under the TransCanada 401(k) and Savings Plan (200,000 Common Shares), TransCanada 401(k) and Savings IBEW 486 Plan (10,000 Common Shares), TransCanada 401(k) and Savings IBEW 1245 Plan (10,000 Common Shares) and TransCanada 401(k) and Savings Local 1-2 Plan (30,000 Common Shares) (collectively the "Plans").

Common Shares having a value of \$5,000,000 of TransCanada Corporation (the "Registrant") have been previously registered for issuance under the Plans on a Registration Statement on Form S-8 (Registration No. 333-151736 filed on June 18, 2008, as amended by Post-Effective Amendment No. 1 to Registration Statement No. 333-151736 filed on December 22, 2008, collectively the "Prior Registration Statement") and, except as otherwise set forth in this Registration Statement, such Prior Registration Statement is incorporated herein by reference.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

Pursuant to General Instruction E to Form S-8, the contents of the Registrant's Prior Registration Statement are incorporated by reference into this Registration Statement. In addition, the following documents filed by the Registrant with the Securities and Exchange Commission (the "Commission") (File No. 001-31690) are also incorporated herein by reference:

- The Annual Report on Form 40-F of the Registrant for the fiscal year ended December 31, 2011, filed with the Commission on February 15, 2012.
- The Annual Report on Form 11-K of the TransCanada 401(k) and Savings Plan for the fiscal year ended December 31, 2011, filed with the Commission on June 27, 2012.
- The Annual Report on Form 11-K of the TransCanada 401(k) and Savings IBEW 486 Plan for the fiscal year ended December 31, 2011, filed with the Commission on June 27, 2012.
- The Annual Report on Form 11-K of the TransCanada 401(k) and Savings IBEW 1245 Plan for the fiscal year ended December 31, 2011, filed with the Commission on June 27, 2012.
- The Annual Report on Form 11-K of the TransCanada 401(k) and Savings Local 1-2 Plan for the fiscal year ended December 31, 2011, filed with the Commission on June 27, 2012.
- The Reports of Foreign Issuer on Form 6-K (only to the extent filed, as opposed to furnished) of the Registrant, which includes the Registrant's interim financial statements and management's discussion and analysis, each with respect to the three months ended March 31, 2012 and the three and six months ended June 30, 2012, filed with the Commission on April 27, 2012 and July 27, 2012, respectively.
- The description of the Common Shares set forth in the Registration Statement on Form 8-A (File No. 001-31690), including any amendment or report for the purpose of updating such description, filed with the Commission on May 14, 2003.

In addition, all reports and other documents subsequently filed by the Registrant or the Plans pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Securities Exchange Act of 1934, as amended, after the date of this Registration Statement and prior to the filing of a post-effective amendment which indicates that all securities offered have been sold or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference in this Registration Statement and to be part hereof from the date of filing of such reports or other documents.

Item 8. Exhibits.

Exhibit 23.1 Consent of KPMG, LLP

Exhibit 23.2 Consent of KPMG, LLP

Exhibit 24 Power of Attorney (included on the signature page of this registration statement)

The Registrant hereby undertakes that it will submit or has submitted each of the Plans and any amendment thereto to the Internal Revenue Service (“IRS”) in a timely manner and has made or will make all changes required by the IRS in order to qualify the Plans.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Calgary, in the Province of Alberta, on September 24, 2012.

TRANSCANADA CORPORATION

By: /s/ Russell K. Girling
Russell K. Girling
President and Chief Executive Officer
and Director

POWER OF ATTORNEY

Each person whose signature appears below constitutes and appoints each of Russell K. Girling, Donald R. Marchand, and Christine R. Johnston his or her true and lawful attorney-in-fact and agent, each acting alone, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any or all amendments (including post-effective amendments) to this Registration Statement, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, each acting alone, full power and authority to do and perform each and every act and thing appropriate or necessary to be done in connection therewith, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

This Power of Attorney may be executed in multiple counterparts, each of which shall be deemed an original, but which taken together shall constitute one instrument.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed below by the following persons in the capacities indicated on September 24, 2012.

TRANSCANADA CORPORATION

By: <u>/s/ Russell K. Girling</u> Russell K. Girling	President and Chief Executive Officer and Director
By: <u>/s/ Donald R. Marchand</u> Donald R. Marchand	Executive Vice-President and Chief Financial Officer
By: <u>/s/ G. Glenn Menuz</u> G. Glenn Menuz	Vice-President and Controller
By: <u>/s/ Kevin E. Benson</u> Kevin E. Benson	Director
By: <u>/s/ Derek H. Burney</u> Derek H. Burney	Director
By: <u>/s/ E. Linn Draper</u> E. Linn Draper	Director
By: <u>/s/ Paule Gauthier</u> Paule Gauthier	Director
By: <u>/s/ S. Barry Jackson</u> S. Barry Jackson	Director
By: <u>/s/ Paul L. Joskow</u> Paul L. Joskow	Director
By: <u>/s/ John A. MacNaughton</u> John A. MacNaughton	Director
By: <u>/s/ Paula Rosput Reynolds</u> Paula Rosput Reynolds	Director
By: <u>/s/ W. Thomas Stephens</u> W. Thomas Stephens	Director
By: <u>/s/ D. Michael G. Stewart</u> D. Michael G. Stewart	Director
By: <u>/s/ Richard E. Waugh</u> Richard E. Waugh	Director

Pursuant to the requirements of the Securities Act of 1933, the Plan Administrator has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Houston, State of Texas, United States of America on September 24, 2012.

TransCanada 401(k) and Savings Plan

By: /s/ Jon A. Dobson
Name: Jon A. Dobson
Title: Member, Investment Committee,
TransCanada USA Services Inc.

TransCanada 401(k) and Savings IBEW 486 Plan

By: /s/ Jon A. Dobson
Name: Jon A. Dobson
Title: Member, Investment Committee,
TransCanada USA Services Inc.

TransCanada 401(k) and Savings IBEW 1245 Plan

By: /s/ Jon A. Dobson
Name: Jon A. Dobson
Title: Member, Investment Committee,
TransCanada USA Services Inc.

TransCanada 401(k) and Savings and Local 1-2 Plan

By: /s/ Jon A. Dobson
Name: Jon A. Dobson
Title: Member, Investment Committee,
TransCanada USA Services Inc.

EXHIBIT INDEX

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Consent of Independent Registered Public Accounting Firm

The Plan Administrator
TransCanada 401(k) and Savings Local 1-2 Plan and TransCanada 401(k) and Savings Plan

We consent to the incorporation by reference in the registration statement on Form S-8 to be filed by TransCanada Corporation, of our reports dated June 25, 2012, with respect to the statements of net assets available for benefits of the TransCanada 401(k) and Savings Local 1-2 Plan and TransCanada 401(k) and Savings Plan as of December 31, 2011 and 2010, the related statements of changes in net assets available for benefits for the years then ended, and the supplemental schedules (1) schedule H, part IV, line 4a – schedule of delinquent participant contributions for the year ended December 31, 2011 (TransCanada 401(k) and Savings Plan) and schedule H, part IV, line 4i–schedule of assets (held at end of year) as of December 31, 2011, which appear in the annual reports on Form 11-K of the TransCanada 401(k) and Savings Local 1-2 Plan and TransCanada 401(k) and Savings Plan.

/s/KPMG LLP

Houston, Texas
September 21, 2012

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the use of:

- our Independent Auditors' Report dated February 13, 2012 on the consolidated balance sheets of TransCanada Corporation (the "Company") as at December 31, 2011 and 2010, and the related consolidated statements of income, comprehensive income, accumulated other comprehensive (loss)/income, equity and cash flows for each of the years in the three-year period ended December 31, 2011, and
- our Independent Auditors' Report of Registered Public Accounting Firm dated February 13, 2012 on the consolidated balance sheets of TransCanada Corporation (the "Company") as at December 31, 2011 and 2010, and the related consolidated statements of income, comprehensive income, accumulated other comprehensive (loss)/income, equity and cash flows for each of the years in the three-year period ended December 31, 2011, and
- our Report of Independent Registered Public Accounting Firm dated February 13, 2012 on the effectiveness of the Company's internal control over financial reporting as at December 31, 2011,

which reports appear in the Company's December 31, 2011 annual report on Form 40-F incorporated herein by reference.

/s/ KMPG LLP
Chartered Accountants
Calgary, Canada
September 21, 2012
