SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 6-K

Report of Foreign Private Issuer Pursuant to Rule 13a-16 or 15d-16 of the Securities Exchange Act of 1934

For the month of June 2018

Commission File No. 1-31690

TRANSCANADA CORPORATION

(Translation of Registrant's Name into English)

450 – 1 Street S.W., Calgary, Alberta, T2P 5H1, Canada (Address of Principal Executive Offices)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F:

Form 20-F o Form 40-F x

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1): o

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7): o

Exhibit 99.1 to this report, furnished on Form 6-K, is furnished, not filed, and will not be incorporated by reference into any registration statement filed by the registrant under the Securities Act of 1933, as amended.

EXHIBIT INDEX

99.1 A copy of the registrant's News Release dated June 28, 2018.

2

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: June 28, 2018

TRANSCANADA CORPORATION

By: /s/ Christine R. Johnston

Christine R. Johnston

Vice-President, Law and Corporate Secretary

NewsRelease



TransCanada Replenishes Capacity Available Under At-The-Market Equity Program

CALGARY, Alberta — **June 28, 2018** — News Release — TransCanada Corporation (TSX, NYSE: TRP) (TransCanada or Company) today announced that it has replenished the capacity available under its existing \$1.0 billion, or its U.S. dollar equivalent at-the-market equity program (ATM Program). This will allow the Company to issue additional common shares from treasury (Common Shares) having an aggregate gross sales price of up to \$1.0 billion, for a revised total of \$2.0 billion, or its U.S. dollar equivalent (Amended ATM Program), to the public from time to time at the Company's discretion, at the prevailing market price when sold through the Toronto Stock Exchange (TSX), the New York Stock Exchange (NYSE) or on any other existing trading market for the Common Shares in Canada or the United States. The Amended ATM Program, which is effective to July 23, 2019, will be activated at the Company's discretion if and as required based on the spend profile of TransCanada's capital program and relative cost of other funding options.

Sales of the Common Shares through the Amended ATM Program will be made pursuant to the terms of an amended and restated equity distribution agreement dated June 28, 2018 the Company has signed with TD Securities Inc., TD Securities (USA) LLC, BMO Nesbitt Burns Inc., BMO Capital Markets Corp., J.P. Morgan Securities Canada Inc. and J.P. Morgan Securities LLC (collectively, the Agents).

Sales of Common Shares will be made through "at-the-market distributions" as defined in National Instrument 44-102 — *Shelf Distributions* on the TSX, the NYSE or on any other existing trading market for the Common Shares in Canada or the United States. The Common Shares will be distributed at the prevailing market prices at the time of the sale and, as a result, prices may vary among purchasers and during the period of distribution.

The Amended ATM Program is being made pursuant to the Company's base shelf prospectus dated June 23, 2017, as amended June 25, 2018, and pursuant to prospectus supplements dated June 26, 2017 and June 28, 2018. Copies of these documents are available on SEDAR at www.sedar.com and EDGAR at www.sec.gov. Alternatively, the Agents will send the documents upon request by contacting (i) in Canada, from TD Securities Inc., email: sdcconfirms@td.com, telephone: 289-360-2009, or (ii) in the United States, from TD Securities (USA) LLC, telephone: 212-827-7392, and from BMO Capital Markets, Brampton Distribution Centre C/O The Data Group of Companies, 9195 Torbram Road, Brampton, Ontario, L6S 6H2, telephone: 905-791-3151 Ext 4312, email: torbramwarehouse@datagroup.ca, and from J.P. Morgan, Attention: Broadridge Financial Solutions, 1155 Long Island Avenue, Edgewood, NY 11717, telephone: 866-803-9204, email: prospectus-eq_fi@jpmchase.com.

This news release shall not in any circumstances constitute an offer to sell or a solicitation of an offer to buy, nor shall there be any sale of these securities in any jurisdiction in which an offer, solicitation or sale would be unlawful prior to the registration or qualification under the applicable securities laws of any jurisdiction.

With more than 65 years' experience, TransCanada is a leader in the responsible development and reliable operation of North American energy infrastructure including natural gas and liquids pipelines, power generation and gas storage facilities. TransCanada operates one of the largest natural gas transmission networks that extends more than 91,900 kilometres (57,100 miles), tapping into virtually all major gas supply basins in North America. TransCanada is a leading provider of gas storage and related services with 653 billion cubic feet of storage capacity. A large independent power producer, TransCanada currently owns or has interests in approximately 6,100 megawatts of power generation in

Canada and the United States. TransCanada is also the developer and operator of one of North America's leading liquids pipeline systems that extends approximately 4,900 kilometres (3,000 miles), connecting growing continental oil supplies to key markets and refineries. TransCanada's common shares trade on the Toronto and New York stock exchanges under the symbol TRP.

FORWARD-LOOKING INFORMATION

This publication contains certain information that is forward-looking and is subject to important risks and uncertainties (such statements are usually accompanied by words such as "anticipate", "expect", "believe", "may", "will", "should", "estimate", "intend" or other similar words). Forward-looking statements in this document are intended to provide TransCanada security holders and potential investors with information regarding TransCanada and its subsidiaries, including management's assessment of TransCanada's and its subsidiaries' future plans and financial outlook. All forward-looking statements reflect TransCanada's beliefs and assumptions based on information available at the time the statements were made and as such are not guarantees of future performance. Readers are cautioned not to place undue reliance on this forward-looking information, which is given as of the date it is expressed in this news release, and not to use future-oriented information or financial outlooks for anything other than their intended purpose. TransCanada undertakes no obligation to update or revise any forward-looking information except as required by law. For additional information on the assumptions made, and the risks and uncertainties which could cause actual results to differ from the anticipated results, refer to the Quarterly Report to Shareholders dated April 26, 2018 and 2017 Annual Report filed under TransCanada's profile on SEDAR at www.sedar.com and with the U.S. Securities and Exchange Commission at www.sec.gov.

-30-

Media Enquiries: Grady Semmens 800.608.7859

TransCanada Investor & Analyst Enquiries: David Moneta / Duane Alexander 403.920.7911 or 800.361.6522