

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 September 2017
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 Form 40-F

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):

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):

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.

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: September 7, 2017

TRANSCANADA CORPORATION

By: /s/ Christine R. Johnston

Christine R. Johnston

Vice-President, Law and Corporate Secretary

EXHIBIT INDEX

99.1 A copy of the registrant's News Release dated September 7, 2017.

TransCanada Seeks 30-day suspension of Energy East Pipeline and Eastern Mainline Project Applications

CALGARY, Alberta - **September 7, 2017** - News Release - TransCanada Corporation (TSX, NYSE: TRP) (TransCanada) announced today it has filed a letter with the National Energy Board (NEB) seeking a 30-day suspension of the Energy East Pipeline and Eastern Mainline Project applications. The suspension will allow time to conduct a careful review of recent changes announced by the NEB regarding the list of issues and environmental assessment factors of the projects while understanding how these changes impact the projects' costs, schedules and viability.

Due to the significant changes to the regulatory process introduced by the NEB and the request for a 30-day suspension of the applications, TransCanada will cease recording Allowance for Funds Used During Construction (AFUDC) on the projects effective August 23, 2017, being the date of the NEB's announcement altering the terms of their assessment. Should TransCanada decide not to proceed with the projects after a thorough review of the impact of the NEB's amendments, the carrying value of its investment in the projects as well as its ability to recover development costs incurred to date would be negatively impacted.

"Apart from Energy East, we will continue to advance our \$24 billion near-term capital program in addition to our longer-term opportunities," said Russ Girling, TransCanada's president and chief executive officer. "Our portfolio of high quality projects is expected to generate growth in earnings and cash flow to support an expected annual dividend growth rate at the upper end of an eight to 10 per cent range through 2020."

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 91,500 kilometres (56,900 miles), tapping into virtually all major gas supply basins in North America. TransCanada is the continent's 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 6,200 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 over 4,300 kilometres (2,700 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. Visit TransCanada.com to learn more, or [connect with us on social media](#) and [3BL Media](#).

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 July 27, 2017 and 2016 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.

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