

2018 J.P. Morgan Energy Conference

June 19, 2018

Don Marchand, Executive VP & CFO



Forward Looking Information and Non-GAAP Measures

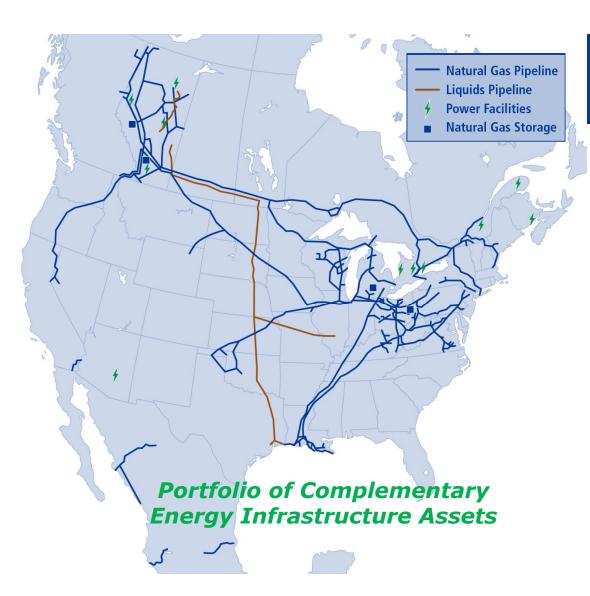
This presentation includes certain forward looking information, including future oriented financial information or financial outlook, which is intended to help current and potential investors understand management's assessment of our future plans and financial outlook, and our future prospects overall. 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 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 presentation. Our forward-looking information in this presentation includes statements related to: future dividend growth and the future growth of our core businesses.

Our forward looking information is based on certain key assumptions and is subject to risks and uncertainties, including but not limited to: our ability to successfully implement our strategic priorities and whether they 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 from our energy business, regulatory decisions and outcomes, including those related to recent FERC policy changes, outcomes of legal proceedings, including arbitration and insurance claims, performance and credit risk of our counterparties, changes in market commodity prices, changes in the regulatory environment, 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, including the economic benefit of asset drop downs to TC PipeLines, LP, interest, tax and foreign exchange rates, including the impact of U.S. Tax Reform, weather, cyber security, technological developments, economic conditions in North America as well as globally. You can read more about these risks and others in our April 26, 2018 Quarterly Report to Shareholders and 2017 Annual Report filed with Canadian securities regulators and the SEC and available at www.transcanada.com.

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.

This presentation contains reference to certain financial measures (non-GAAP measures) that do not have any standardized meaning as prescribed by U.S. generally accepted accounting principles (GAAP) and therefore may not be comparable to similar measures presented by other entities. These non-GAAP measures may include Comparable Earnings, Comparable Earnings per Common Share, Comparable Earnings Before Interest, Taxes, Depreciation and Amortization (Comparable EBITDA), Funds Generated from Operations, Comparable Funds Generated from Operations, Comparable Distributable Cash Flow (DCF) and Comparable DCF per Common Share. Reconciliations to the most closely related GAAP measures are included in this presentation and in our April 26, 2018 Quarterly Report to Shareholders filed with Canadian securities regulators and the SEC and available at www.transcanada.com.



TransCanada Today

- One of North America's Largest Natural Gas Pipeline Networks
 - 57,100 miles of pipeline
 - 653 Bcf of storage capacity
 - 23 Bcf/d; ~25% of continental demand
- Premier Liquids Pipeline System
 - 3,000 miles of pipeline
 - 555,000 bbl/d Keystone System transports ~20% of Western Canadian exports
- One of the Largest Private Sector Power Generators in Canada
 - 11 power plants, 6,100 MW
 - Primarily long-term contracted assets
- Enterprise Value ~\$100 billion

Advancing \$21 Billion Near-Term Capital Program

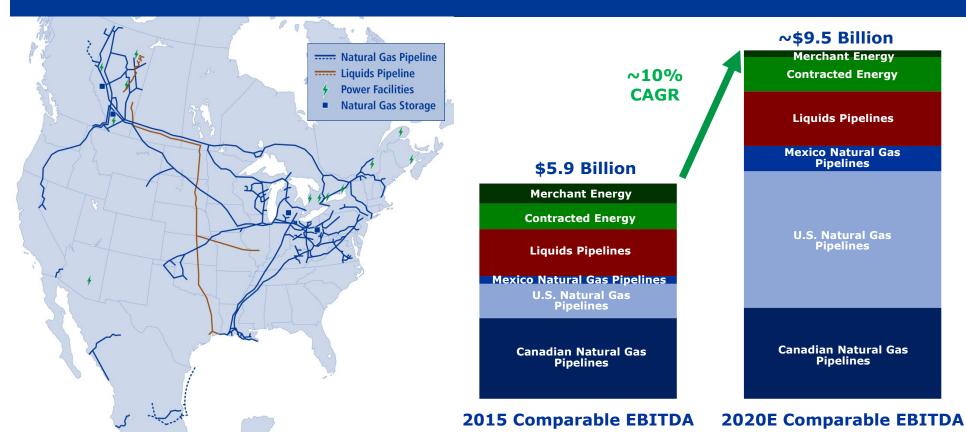
White Spruce NGTL System Expansions		Canadian Mainline Expansions Napanee Bruce Power 1 2
Villa de Reyes	Sur de Texas	Natural Gas Pipeline Natural Gas Expansions Liquids Pipeline Power Facilities Existing Assets

Project	Estimated Capital Cost*	Invested to Date*	Expected In-Service Date*
Canadian Mainline	0.2	-	2018-2021
NGTL System	0.6	0.4	2018
WB XPress	US 0.9	US 0.5	2018
Mountaineer XPress	US 3.0	US 0.7	2018
Gulf XPress	US 0.6	US 0.3	2018
Villa de Reyes	US 0.8	US 0.5	2018
Sur de Texas**	US 1.3	US 1.1	2018
Napanee	1.3	1.1	2018
Bruce Power Life Extension**	0.9	0.3	Up to 2020
Modernization II	US 1.1	US 0.2	2018-2020
Other U.S. Gas**	US 0.3	US 0.1	2018-2020
White Spruce	0.2	-	2019
NGTL System	2.4	0.4	2019
Tula	US 0.7	US 0.5	2019
Buckeye XPress	US 0.2	-	2020
NGTL System	1.7	0.1	2020
NGTL System	2.5	-	2021
Foreign Exchange Impact (1.29 exchange rate)	2.6	1.1	
Total Canadian Equivalent	21.3	7.3	

^{*}Billions of dollars. Certain projects are subject to various conditions including corporate and regulatory approvals.

^{**}Our proportionate share.

Columbia Acquisition & Near-term Capital Program Drive Significant Growth

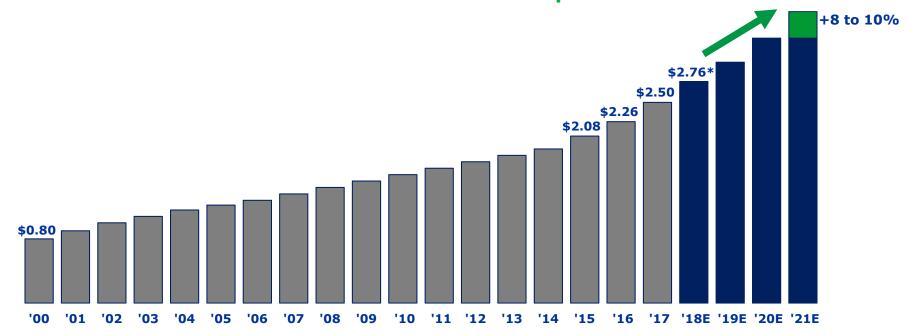


Over 95% of Comparable EBITDA to come from Regulated or Long-term Contracted Assets

*Comparable EBITDA is a non-GAAP measure. See the non-GAAP measures slide at the front of this presentation for more information.

Dividend History and Growth Outlook Through 2021

Annual Growth at the Upper End of 8 to 10 Percent Expected to End of Decade Further 8 to 10 Percent Growth Anticipated in 2021



Supported by Expected Growth in Earnings and Cash Flow and Continued Strong Coverage Ratios

*Annualized based on most recent quarterly declaration

FERC Actions

March 15, 2018 FERC Actions

- MLPs no longer permitted to recover income tax allowance in cost of service rates
- Proposes process to address impact of federal income tax rate reduction and revised Policy Statement for MLPs on interstate pipelines ratemaking

Implications if Enacted as Proposed

TransCanada

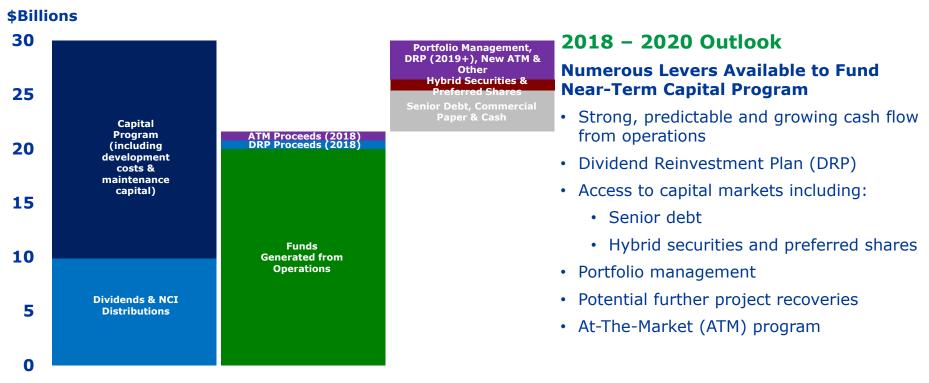
- Expect no material impact to earnings and cash flow from directly-held U.S. natural gas pipelines
- Drop downs to TC PipeLines not considered a viable funding lever at this time
 - Not a material funding source in prior guidance; numerous other levers available

TC PipeLines

- Could be materially adversely impacted in absence of mitigation
 - Estimated annual revenue reduction of up to US\$100 million
 - Reduced quarterly cash distributions to unitholders by 35 percent
- TransCanada owns 26 percent of TC PipeLines therefore impact not expected to be significant to TransCanada

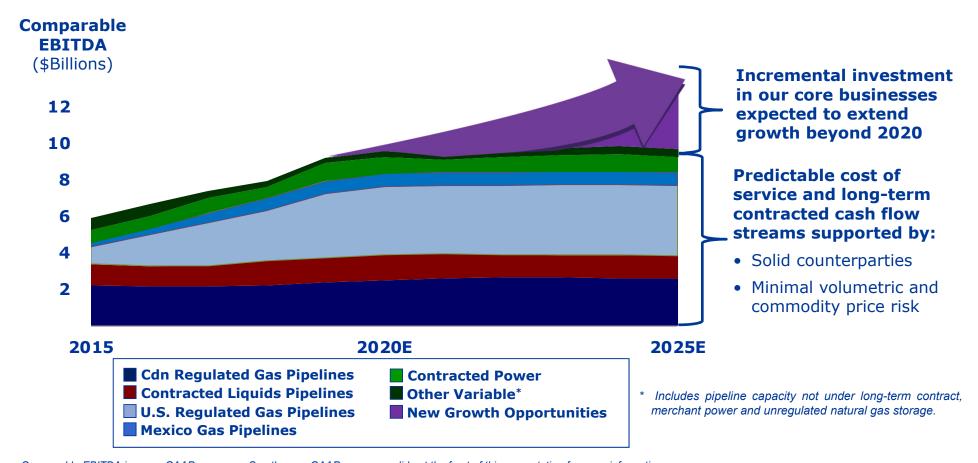
Expect No Material Financial Impact to TransCanada

Funding Program Through 2020

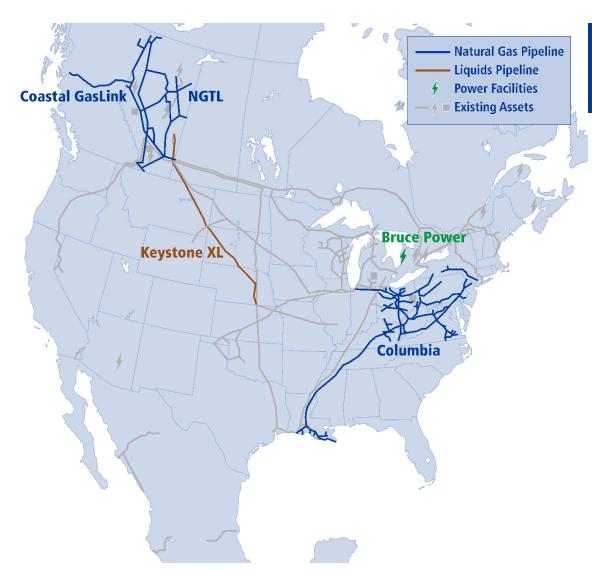


Funding Program Manageable
Completion of \$21 Billion Near-Term Capital Program Does Not Require
Discrete Equity

Stability and Longevity of Core Asset Base



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\$20 Billion+ of Medium- to Longer-Term Projects in Development*

Natural Gas Pipelines

- Coastal GasLink (~\$4.8 billion)
- Future expansions of existing pipelines including NGTL System and Columbia

Liquids Pipelines

- Keystone XL (~US\$8 billion)
- Keystone XL could facilitate further development:
 - Grand Rapids Phase II
 - · Heartland Pipeline
 - Keystone Hardisty Terminal

Energy

- Bruce Power Life Extension (~\$5.3 billion*)
- · Growth in contracted power

^{*} TransCanada share in billions of dollars; Bruce Power in 2014 dollars. Certain projects are subject to various conditions including corporate and regulatory approvals.

Key Takeaways

Track Record of Delivering Long-Term Shareholder Value

13% average annual return since 2000

Visible Growth Portfolio

\$21 billion to 2020 Additional opportunity set includes over \$20 billion of medium- to longer-term projects

Attractive, Growing Dividend

Dividend raised 10.4% 5.1% yield 8-10% expected CAGR through 2021

Strong Financial Position

Numerous levers available to fund future growth

Performance Highlights Diversified, Low Risk Business Strategy



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