Peters & Co. 20th Annual Energy Conference

September 14, 2016

Karl Johannson, President, Natural Gas Pipelines

TransCanada
In business to deliver

Forward Looking Information and Non-GAAP Measures

This presentation includes certain forward looking information 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 is based on the following key assumptions: planned monetization of our U.S. Northeast power assets and a minority interest in our Mexican natural gas pipeline business, inflation rates, commodity prices and capacity prices, timing of financings and hedging, regulatory decisions and outcomes, foreign exchange rates, interest rates, tax rates, planned and unplanned outages and the use of our pipeline and energy assets, integrity and reliability of our assets, access to capital markets, anticipated construction costs, schedules and completion dates, acquisitions and divestitures.

Our forward looking information is subject to risks and uncertainties, including but not limited to: our ability to successfully implement our strategic initiatives and whether they will yield the expected benefits including the expected benefits of the acquisition of Columbia, timing and execution of our planned asset sales, the operating performance of our pipeline and energy assets, economic and competitive conditions in North America and globally, the availability and price of energy commodities and changes in market commodity prices, the amount of capacity sold and rates achieved in our pipeline businesses, the amount of capacity payments and revenues we receive from our energy business, regulatory decisions and outcomes, outcomes of legal proceedings, including arbitration and insurance claims, performance of our counterparties, changes in the political environment, changes in environmental and other laws and regulations, construction and completion of capital projects, labour, equipment and material costs, access to capital markets, interest and foreign exchange rates, weather, cyber security and technological developments. You can read more about these risks and others in our Quarterly Report to shareholders dated July 27, 2016 and 2015 Annual Report filed with Canadian securities regulators and the U.S. Securities and Exchange Commission (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 Share, Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA), Comparable EBITDA, Adjusted EBITDA, Earnings Before Interest and Taxes (EBIT), Comparable EBIT, Distributable Cash Flow, Comparable Distributable Cash Flow, Distributable Cash Flow per Share, Comparable Distributable Cash Flow per Share, Comparable Interest Expense, Comparable Interest Income and Other, Comparable Income Tax Expense, Comparable Net Income Attributable to Non-Controlling Interests, Comparable Net Income from Equity Investments, Comparable Depreciation and Amortization, and Funds Generated from Operations. Reconciliations to the most closely related GAAP measures are included in our Quarterly Report to shareholders dated July 27, 2016 filed with Canadian securities regulators and the SEC and available at www.transcanada.com.

Key Themes

Proven Strategy – Low Risk Business Model

- 90%+ of EBITDA derived from regulated assets or long-term contracts
- Planned sale of U.S. Northeast Power will further reduce merchant exposure

US$13 Billion Acquisition of Columbia Pipeline is Transformational

- Creates one of North America's largest regulated natural gas transmission businesses and positions the company for long-term growth

Visible Growth Through 2020

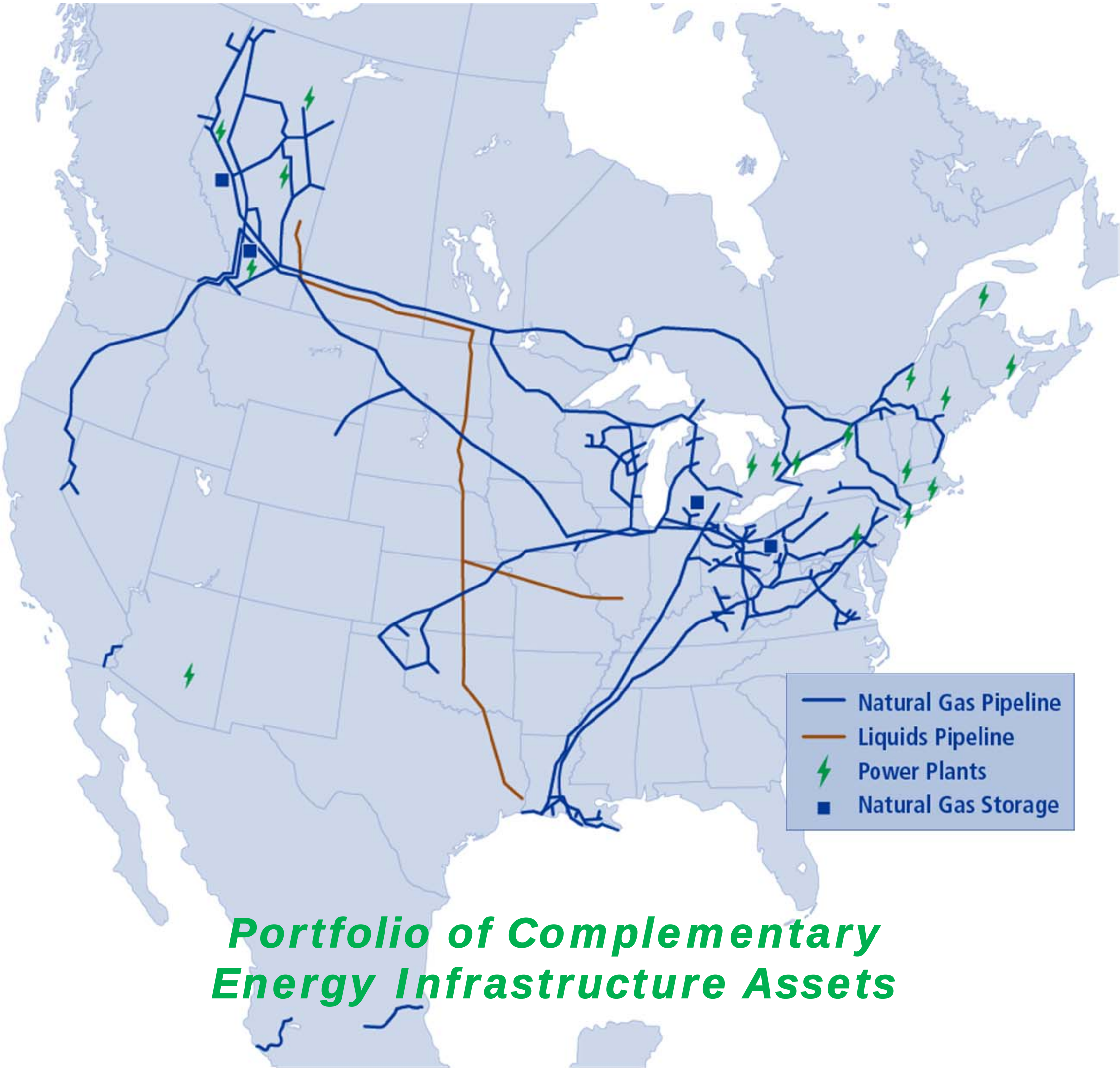
- $25 billion of near-term growth projects
- Over $45 billion of commercially secured long-term projects

Dividend Poised to Grow Through 2020

- 8-10% average annual growth rate expected
- Columbia Pipeline acquisition supports and may augment dividend growth

Financial Discipline

- Finance long-term assets with long-term capital
- Value 'A' grade credit rating
- Corporate structure is simple and understandable



TransCanada Today

- **One of North America's Largest Natural Gas Pipeline Networks**
  - 90,300 km (56,100 mi) of pipeline
  - 664 Bcf of storage capacity
  - 23 Bcf/d or approximately 27% of continental demand
- **Premier Liquids Pipeline System**
  - 4,300 km (2,700 mi) of pipeline
  - 545,000 bbl/d or 20% of Western Canadian exports
- **One of the Largest Private Sector Power Generators in Canada**
  - 17 power plants, 10,500 MW
- **Market Capitalization of $48 billion as of September 7, 2016**

US$13 Billion Acquisition of Columbia Pipeline Group

Transformational Acquisition Complete

- US$13 billion acquisition closed July 1, 2016
- Creates one of North America's largest regulated natural gas transmission businesses and positions the company for long-term growth
- Results in a combined $25 billion portfolio of secured, near-term growth projects
- Combines TransCanada's financial strength and project execution capabilities with Columbia's attractive growth opportunities

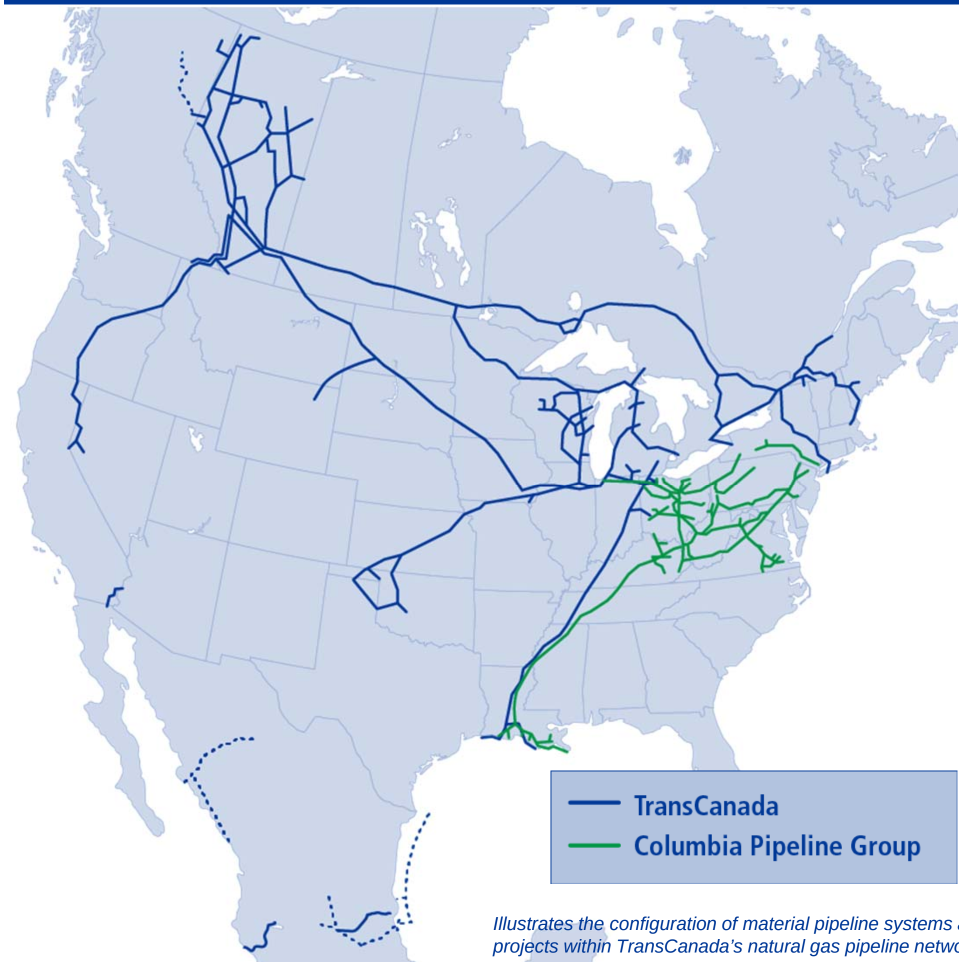
Financial Highlights

- Expected to be accretive to earnings per share in the first full year of ownership and thereafter
- Targeted annual cost, revenue and financing benefits of approximately US$250 million

Next Steps

- Complete integration
- Monetize U.S. Northeast power portfolio and minority interest in Mexican gas pipeline assets
- Develop Master Limited Partnership (MLP) strategy

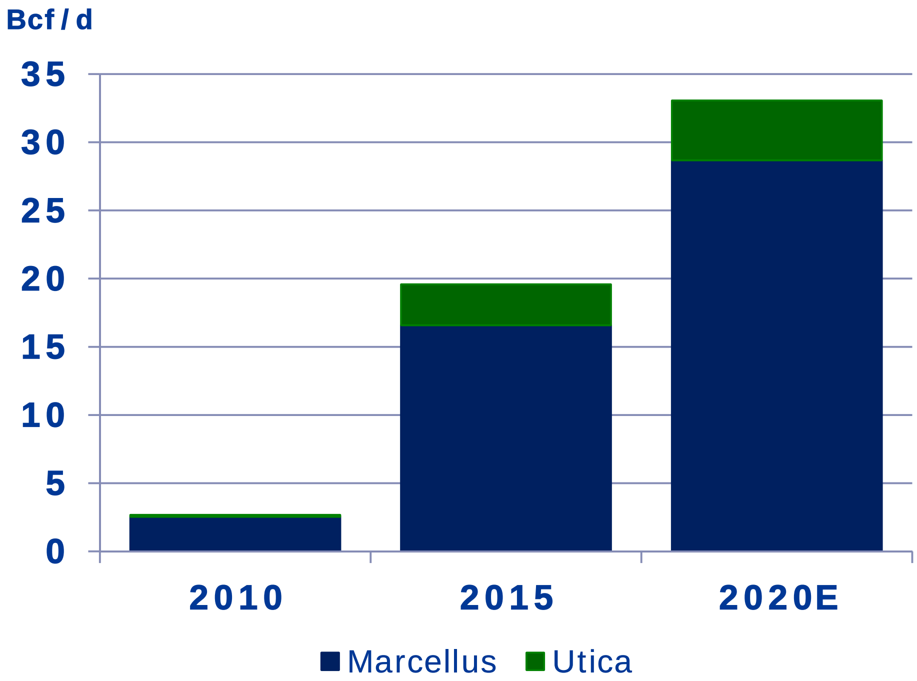
Strategic Rationale for Acquisition of Columbia Pipeline



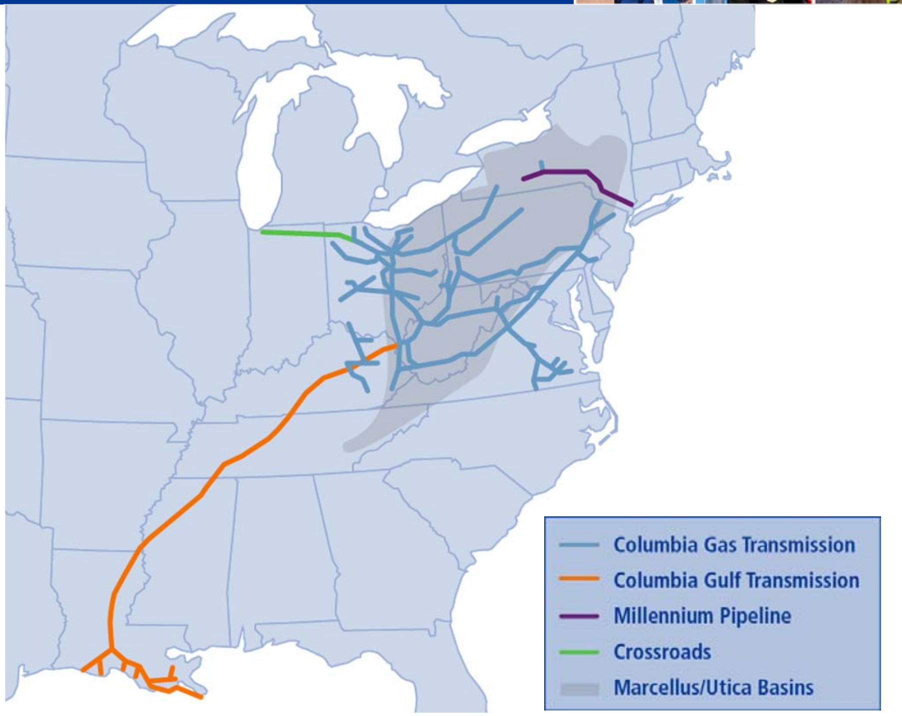
Illustrates the configuration of material pipeline systems and projects within TransCanada's natural gas pipeline network

- **Premium natural gas pipeline and storage assets**
- **Extensive position in Marcellus and Utica basins**
- **FERC regulated assets generate stable and predictable earnings and cash flow**
- **US$7.3 billion portfolio of growth initiatives and modernization investments**
- **Complements our existing regulated natural gas pipeline and storage assets**
  - Long-term, fee-based contracts
  - Diversified customer base
- **Adds to basin diversification and access to large markets**
  - Improves access to U.S. Northeast, Midwest, Mid-Atlantic and Gulf Coast markets

Positioned to Capture Growing Marcellus and Utica Production



Source: EIA and IHS CERA, February 2016



Illustrates the configuration of material systems within Columbia's natural gas pipeline network

- **Significant growth in production expected**
- **Asset footprint favourably situated relative to production**

$25 Billion Visible Near-Term Capital Program

Illustrates the configuration of TransCanada's near-term projects

Project	Estimated Capital Cost*	Expected In-Service Date*
Columbia System	US7.3	2017-2021
Topolobampo	US1.0	2016
Mazatlan	US0.4	2016
Tuxpan-Tula	US0.5	2017
Tula-Villa de Reyes	US0.6	2018
Sur de Texas-Tuxpan	US1.3	2018
Canadian Mainline	0.7	2016-2017
NGTL System	5.4	2016-2020
Houston Lateral & Terminal	US0.6	2016
Grand Rapids	0.9	2017
Northern Courier	1.0	2017
Napanee	1.0	2018
Bruce Power Life Extension	1.2	2016-2020
Total Canadian Equivalent (1.30 exchange rate)	CAD25.4	

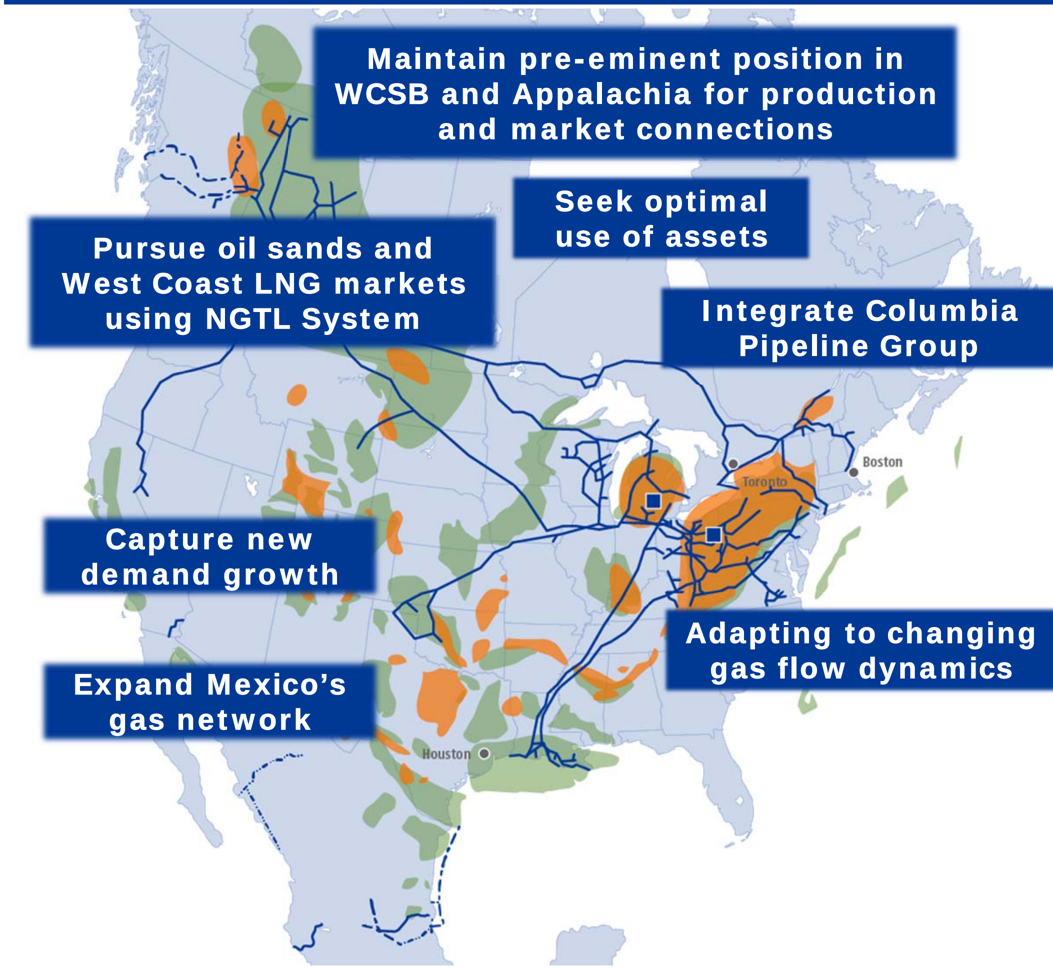
* *TransCanada share in billions of dollars. Certain projects are subject to various conditions including corporate and regulatory approvals.*

$45 Billion+ of Commercially Secured Long-Term Projects*

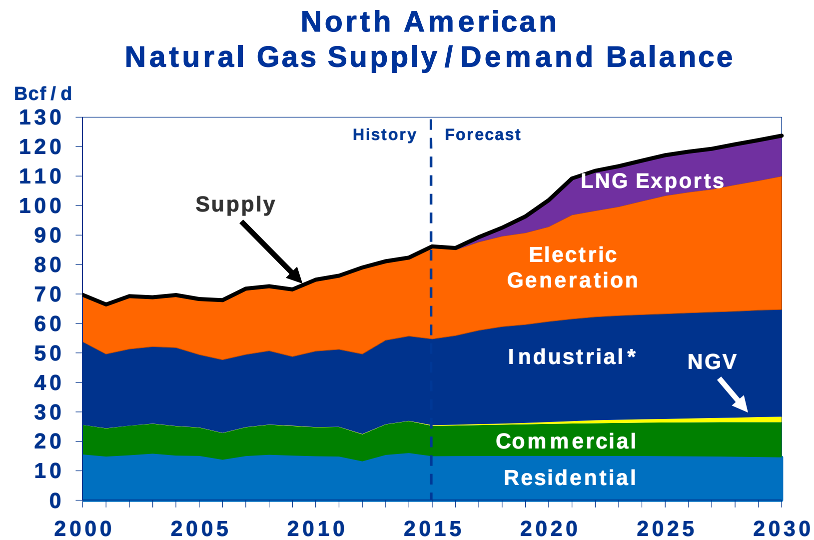
- **Bruce Power Life Extension Agreement**
  - Asset Management and Major Component Replacement post-2020 ($5.3 billion)
  - Extends operating life of facility to 2064
- **Four transformational projects**
  - Energy East ($15.7 billion) and related Eastern Mainline Expansion ($2.0 billion)
  - Keystone XL (US$8 billion)
  - Prince Rupert Gas Transmission ($5 billion)
  - Coastal GasLink ($4.8 billion)
- **Establish us as leaders in the transportation of crude oil and natural gas for LNG export**
  - 2 million bbl/d of liquids pipeline capacity
  - 4+ Bcf/d of natural gas pipeline export capacity

** TransCanada share in billions of dollars. Certain projects are subject to various conditions including corporate and regulatory approvals.*

Our Natural Gas Pipelines Strategy

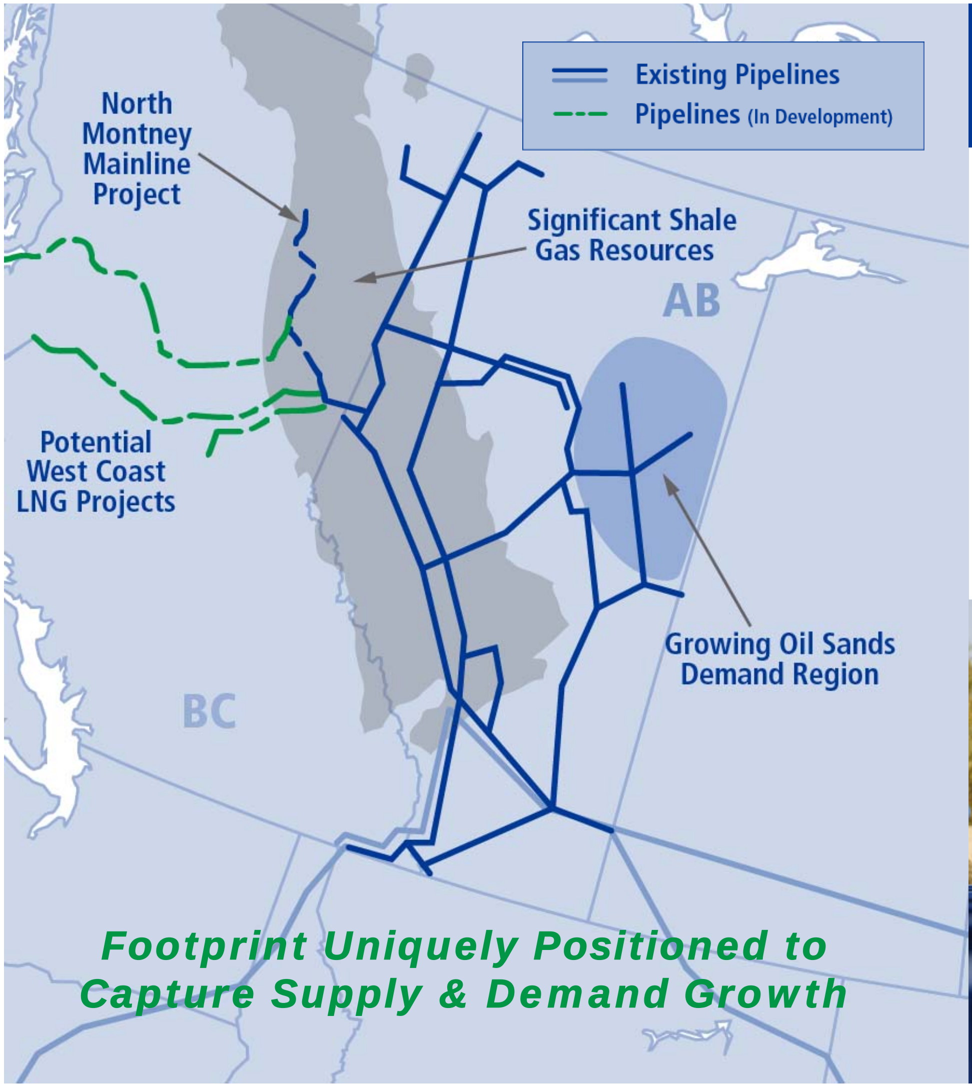


Growing Natural Gas Supply and Demand Provides Opportunity



** Includes fuel used within the LNG process*

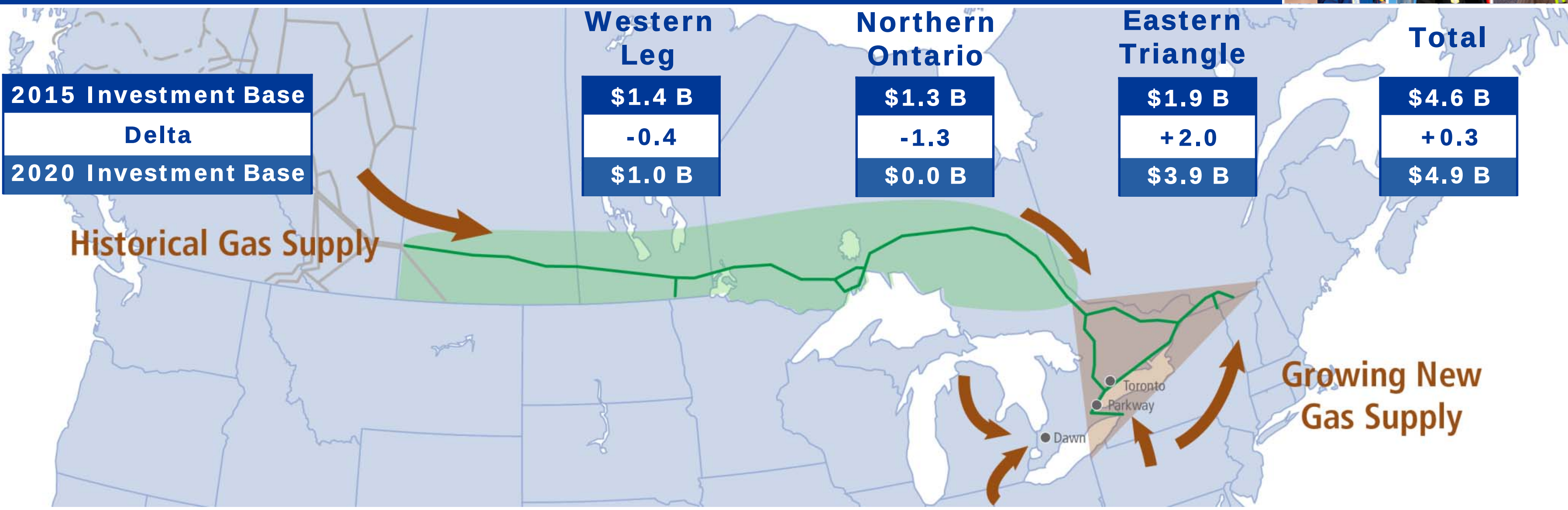
Source: TransCanada



NGTL System's Unparalleled Position

- **Primary transporter of WCSB supply**
- **Averaging 11.4 Bcf/d in 2016 year-to-date**
- **Key connections to Alberta and export markets**
- **2016/17 Revenue Requirement Settlement**
  - Includes a ROE of 10.1% on 40% deemed common equity plus certain incentives
- **Significant new firm contracts**
- **$5.4 billion of investments through 2020**

Canadian Mainline – Critically Important Infrastructure



	Western Leg	Northern Ontario	Eastern Triangle	Total
2015 Investment Base	$1.4 B	$1.3 B	$1.9 B	$4.6 B
Delta	-0.4	-1.3	+2.0	+0.3
2020 Investment Base	$1.0 B	$0.0 B	$3.9 B	$4.9 B

- LDC Settlement creates long-term stability and reduces risk considerably
- Multi-year agreement commenced in 2015 with certain elements expiring in 2020 and 2030
- Base ROE of 10.1% on 40% deemed common equity
- Annual contribution and incentives could result in ROE of 8.7% to 11.5%
- Strong delivery volumes – averaged ~4 Bcf/d in 2015

Mainline Significantly De-Risked

Growing the U.S. Gas Pipelines Network

- Majority of portfolio highly contracted over the long-term
- Well-positioned in key geographic areas with access to multiple supply basins and large market centres
- ANR rate case proceeding well
- Opportunities across the system

Mexico – Solid Position and Growing

- **Pipelines underpinned by long-term contracts with the Comisión Federal de Electricidad (CFE)**
- **Guadalajara and Tamazunchale pipelines are in-service**
- **Five new projects will increase investment in Mexico to over US$5 billion**
  - US$1 billion Topolobampo and US$400 million Mazatlan pipelines (to be completed late 2016)
  - US$500 million Tuxpan-Tula Pipeline (2017)
  - US$550 million Tula-Villa de Reyes Pipeline (2018)
  - US$1.3 billion* Sur de Texas-Tuxpan Pipeline joint venture with IEnova (2018)
- **Opportunities for future growth**

* *TransCanada share*

Key Takeaways



Track Record of Delivering Long-Term Shareholder Value

15% average annual return since 2000

Visible Growth Portfolio

$25 billion to 2020
Additional opportunity set includes over $45 billion of long-term projects

Attractive, Growing Dividend

3.8% yield at current price
8-10% CAGR through 2020

Strong Financial Position

'A' grade credit rating
Numerous levers available to fund growth

Attractive Valuation Relative to North American Peers

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