

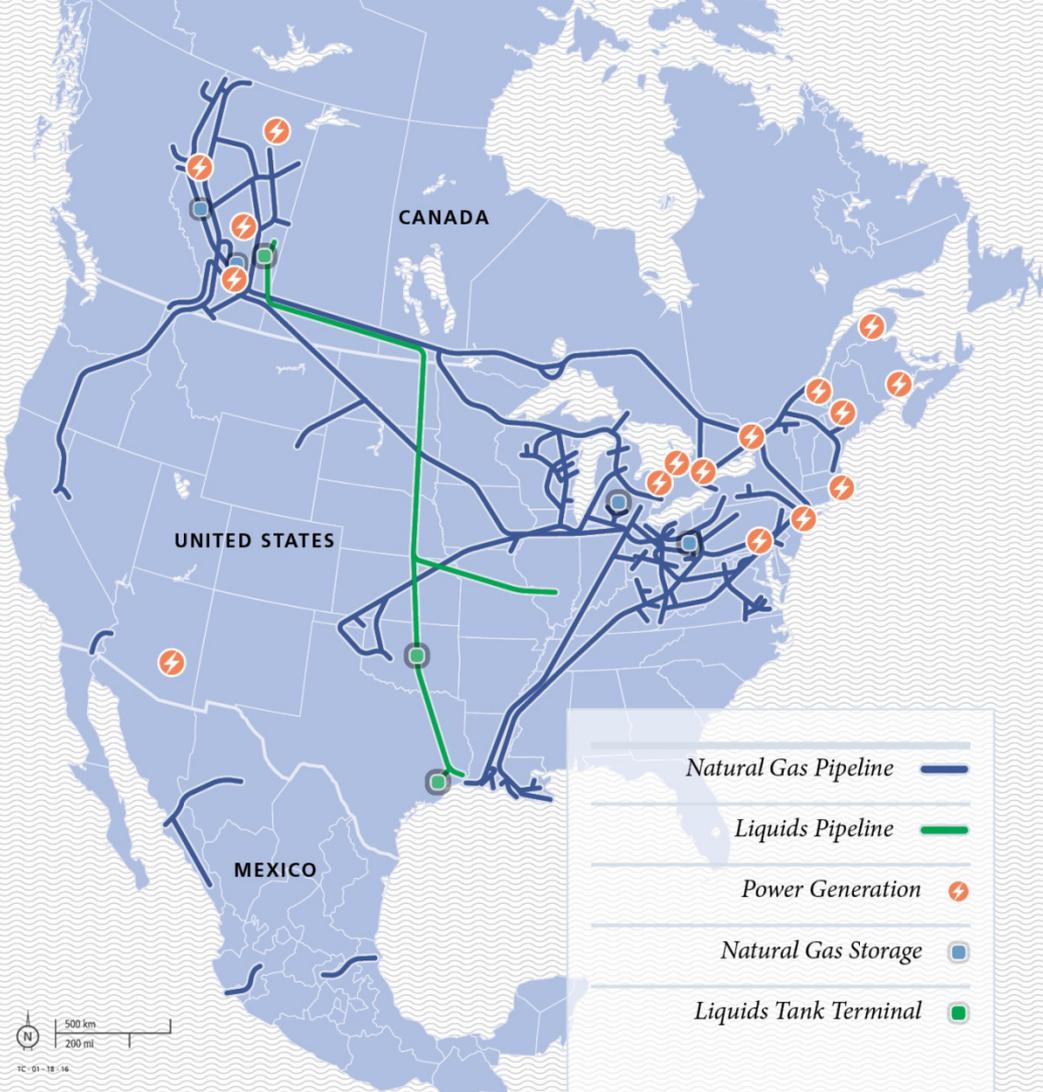


Our Priorities



- **Safety**
- **Maximize the Value of Our Existing Businesses**
- **Complete Construction**
- **Deliver New Opportunities**
- **Maintain Financial Strength**

TransCanada Today



- **One of North America's Largest Natural Gas Pipeline Networks**

- 91,500 km (56,900 mi) of pipeline
- 23 bcf/d; ~25% of continental demand

- **Premier Liquids Pipeline System**

- 4,300 km (2,700 mi) of pipeline
- 545,000 bbl/d; ~20% of Western Canadian exports

- **One of the Largest Private Sector Power Generators in Canada**

- 16 power plants, 10,100 MW*

- **Total Assets ~\$89 billion**

- **Enterprise Value ~\$100 billion**

* Includes U.S. Northeast Power assets held for sale



Total Investments of ~\$70 Billion since 2000

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, the completion of the transactions contemplated by our agreements to sell our U.S. Northeast power assets, the future growth of our Mexico natural gas pipeline business and our successful integration of Columbia.

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 initiatives and whether they will yield the expected benefits including the expected benefits of the acquisition of Columbia and the expected growth of our Mexico natural gas pipeline business, timing and completion 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, inflation and foreign exchange rates, weather, cyber security and technological developments. You can read more about these risks and others in our First Quarter 2017 Report to Shareholders and 2016 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 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 share. Reconciliations to the most closely related GAAP measures are included in our First Quarter 2017 Report to Shareholders filed with Canadian securities regulators and the SEC and available at www.transcanada.com.



2016 – A Transformational Year

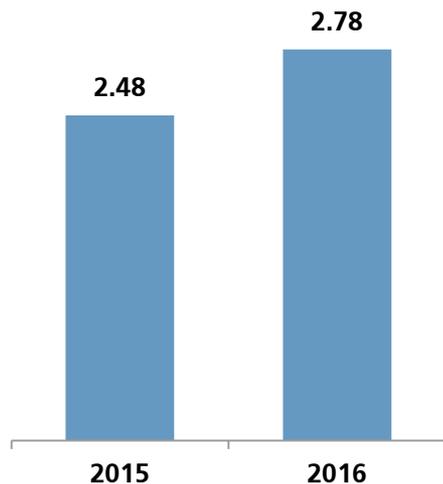
- **Acquired Columbia Pipeline Group and Columbia Pipeline Partners LP for approximately US\$14 Billion**
 - Created one of North America’s largest natural gas transmission businesses
- **Added \$13 Billion of New Projects to Near-Term Growth Portfolio**
 - Projects are across our geographies
- **Agreed to Sell U.S. Northeast Power Business**
 - Remaining power business largely contracted over long term
- **Maintained Our Financial Strength and Flexibility**
 - Issued \$11 billion of subordinated capital

 **Actions Expected to be Accretive to Earnings and Cash Flow Per Share and Support Dividend Growth**

2016 Financial Highlights

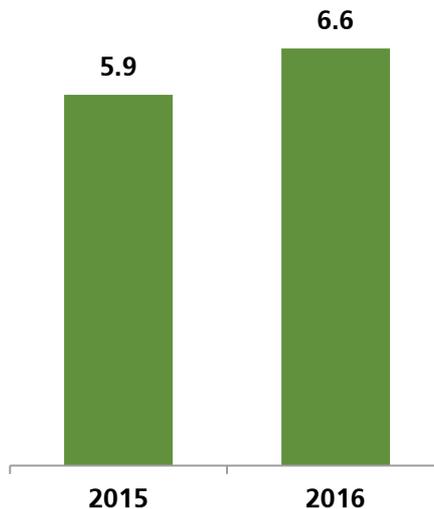
Comparable Earnings per Share* (Dollars)

12% Increase



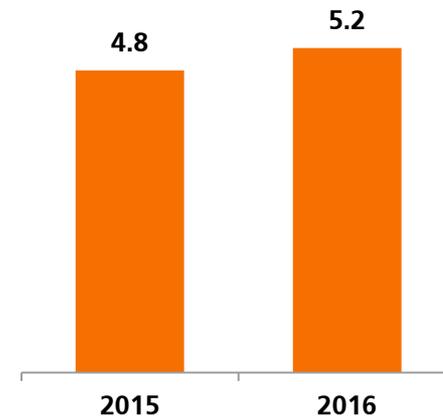
Comparable EBITDA* (\$Billions)

13% Increase



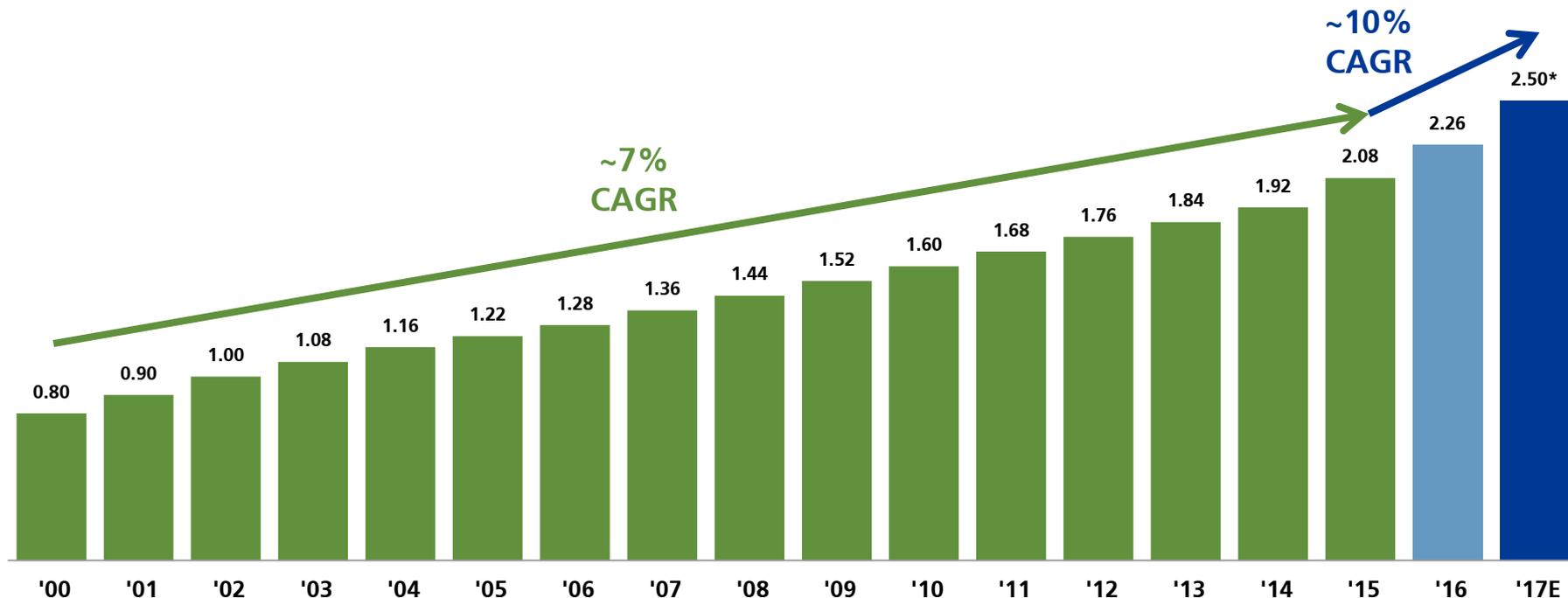
Comparable Funds Generated from Operations* (\$Billions)

7% Increase



*Comparable Earnings per Share, Comparable EBITDA and Comparable Funds Generated from Operations are non-GAAP measures. See the Forward-looking Information and non-GAAP measures slide at the front of this presentation for more information.

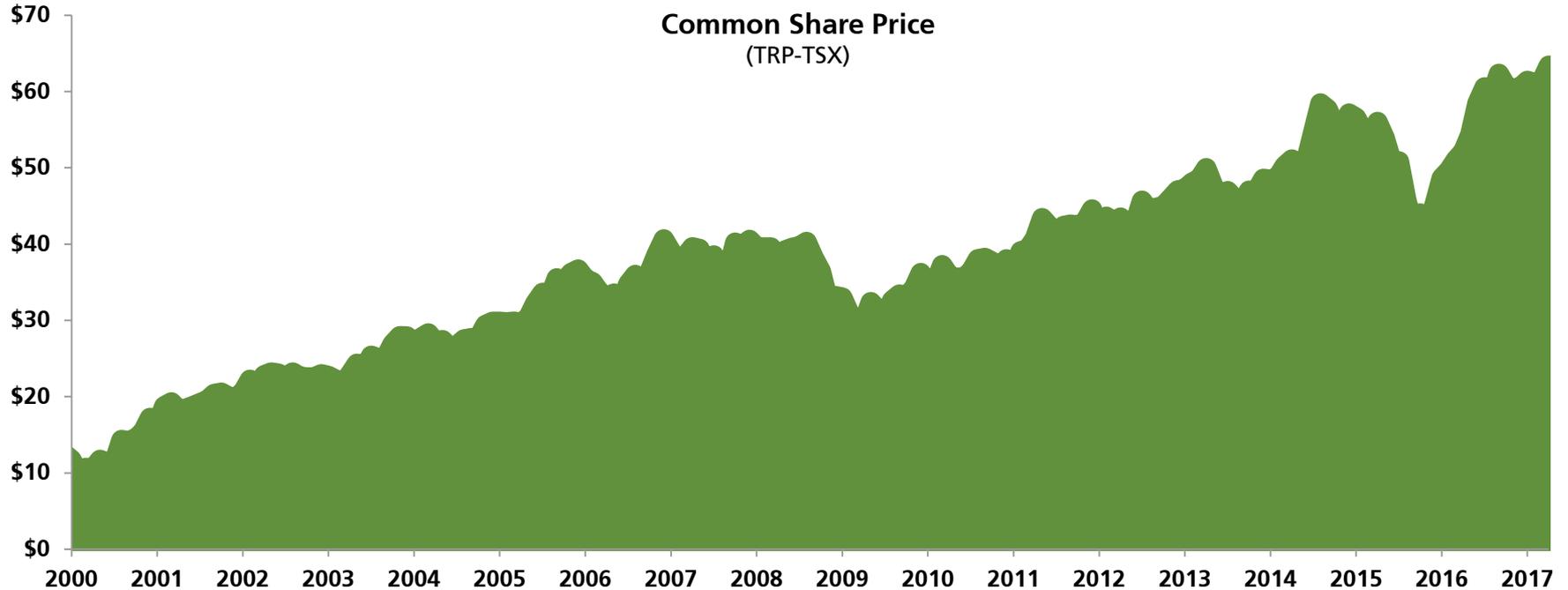
Common Share Dividend Increased 10.6% in February 2017



*Annualized based on second quarter declaration. CAGR is compound average annual growth rate

→ Seventeenth Consecutive Annual Dividend Increase

Strong Track Record of Delivering Shareholder Value

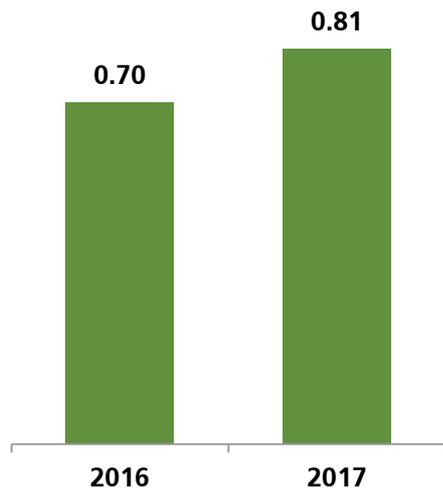


➔ 14% Average Annual Total Shareholder Return Since 2000

First Quarter 2017 Financial Highlights

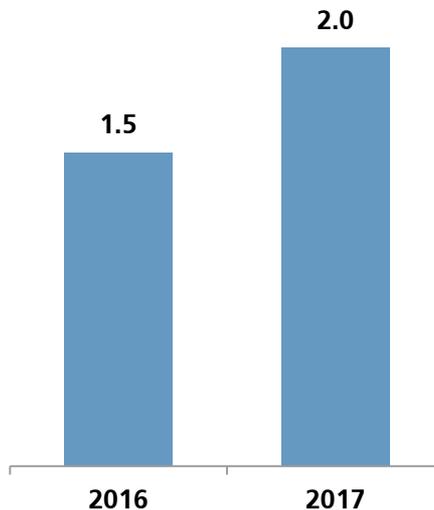
Comparable Earnings per Share* (Dollars)

16% Increase



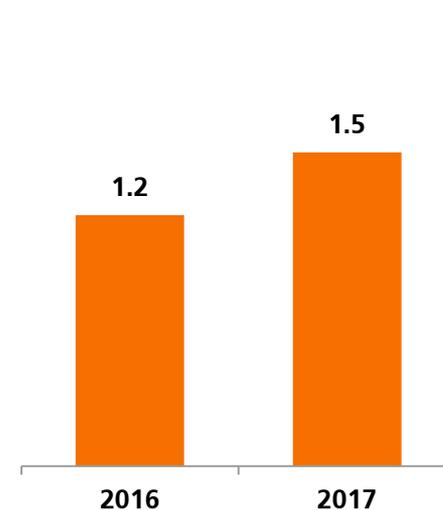
Comparable EBITDA* (\$Billions)

32% Increase



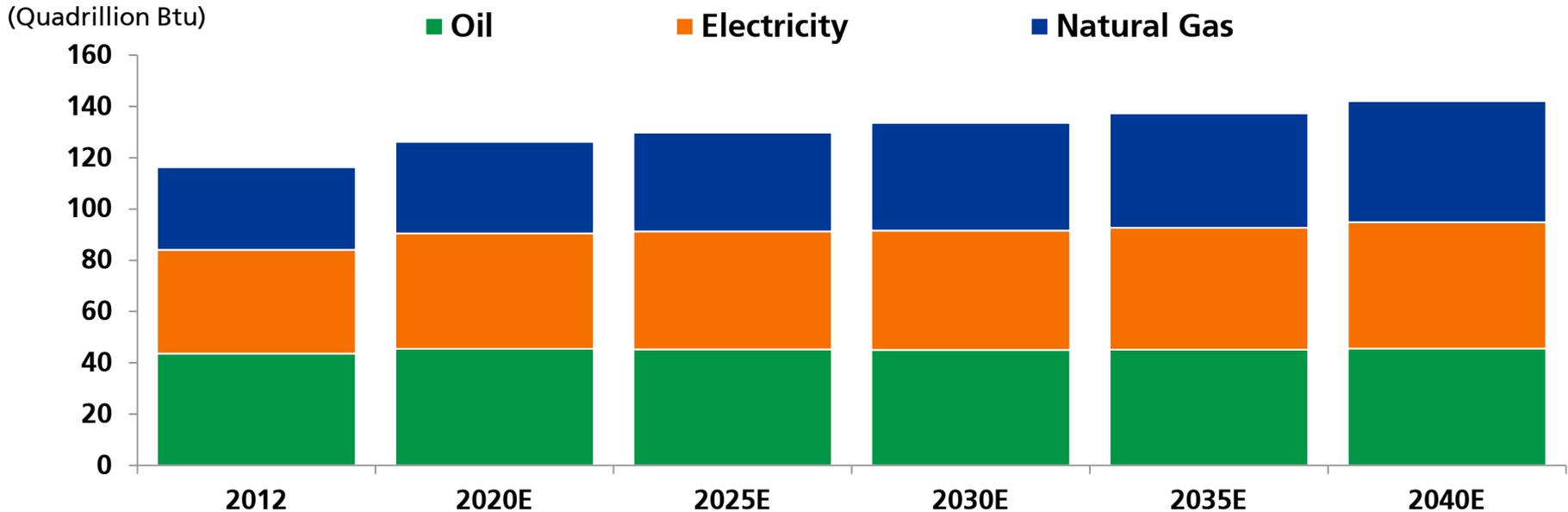
Comparable Funds Generated from Operations* (\$Billions)

21% Increase



*Comparable Earnings per Share, Comparable EBITDA and Comparable Funds Generated from Operations are non-GAAP measures. See the Forward-looking Information and non-GAAP measures slide at the front of this presentation for more information.

Demand for North American Energy Continues to Grow



Source: U.S. Energy Information Administration, International Energy Outlook 2016

Notes: Mexico energy demand forecast based on pro rata 2012 consumption. Natural gas demand includes continental gas available for export.



Driving the need for new energy infrastructure across our businesses

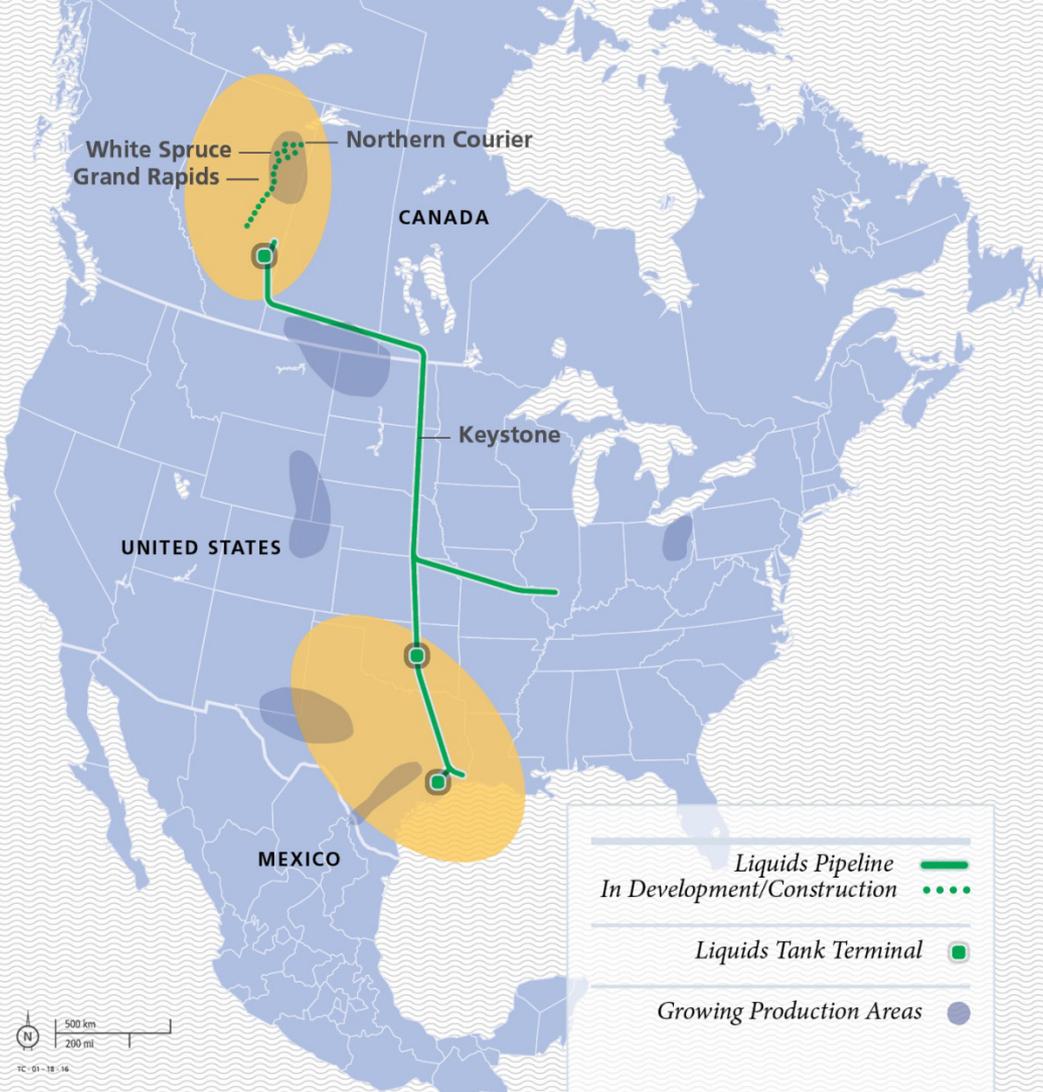
An Integrated Natural Gas Pipeline Network



- **Current position:**
 - Strong, competitive position across North America
- **Near-term:**
 - Advancing \$18.2 billion* of projects in Canada, the U.S. and Mexico
- **Longer-term:**
 - Additional investment expected to connect growing supply to markets

*TransCanada share in Canadian dollars

A Premier Liquids Pipeline Business



- **Current position:**

- Keystone has safely and reliably transported over 1.5 billion barrels of oil

- **Near-term:**

- Advancing \$2.1 billion* of projects to create a regional liquids pipeline system in Alberta

- **Longer-term:**

- Additional investment expected to connect growing supply to markets

*TransCanada share in Canadian dollars

Well Established Energy Platform



- **Current position:**

- 6,200 MW portfolio of long-term contracted assets (following sale of U.S. Northeast Power assets)

- **Near-term:**

- Advancing \$2.2 billion* of projects to grow and extend the life of our assets

- **Longer-term:**

- Complete Bruce Power refurbishment
- Pursue contracted growth opportunities in our core geographies

*TransCanada share in Canadian dollars

\$23 Billion Near-term Capital Program



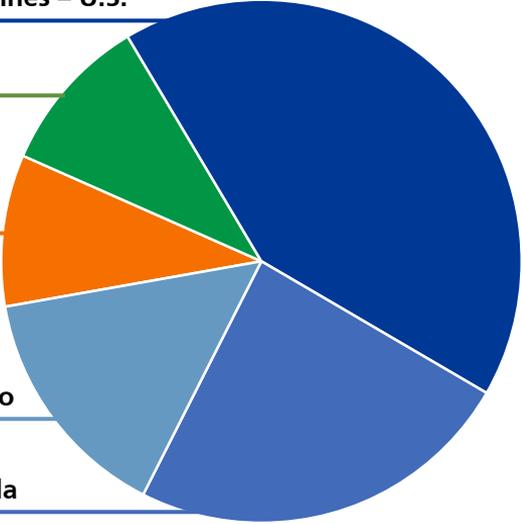
Natural Gas Pipelines – U.S.

Liquids Pipelines

Energy

Natural Gas Pipelines – Mexico

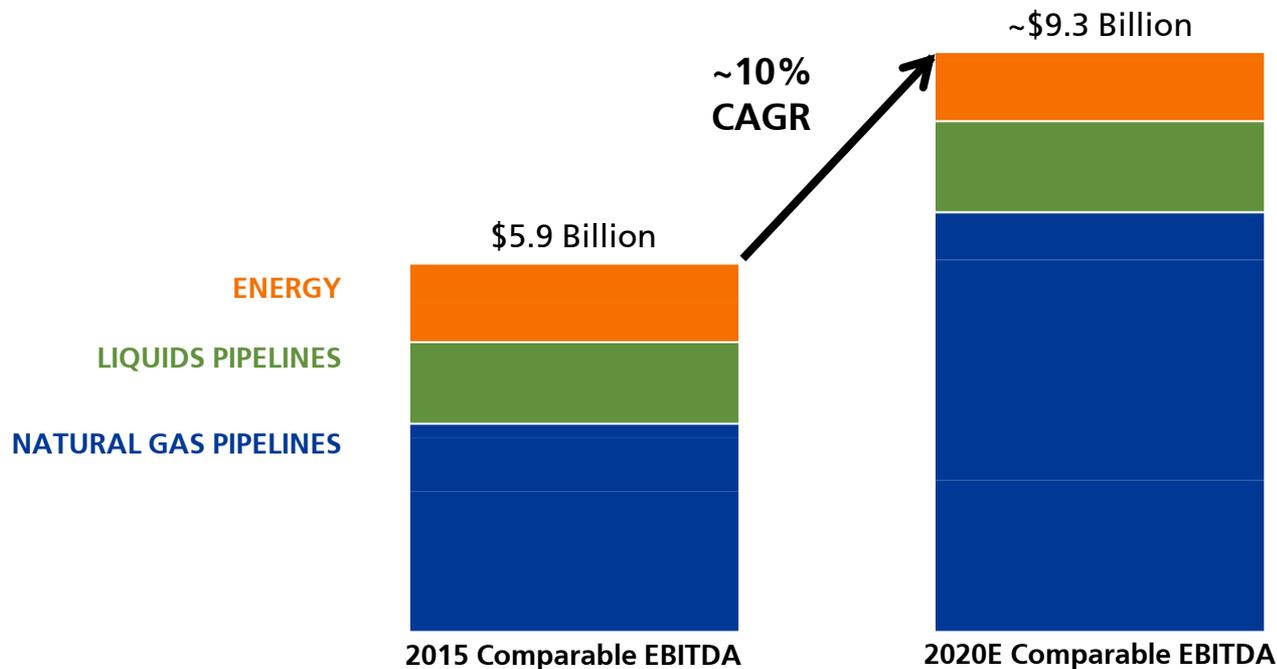
Natural Gas Pipelines – Canada



*TransCanada share in Canadian Dollars

➔ Underpinned by Long-Term Contracts or Cost-of-Service Regulation

Columbia Acquisition and Near-term Capital Program Driving Significant Growth

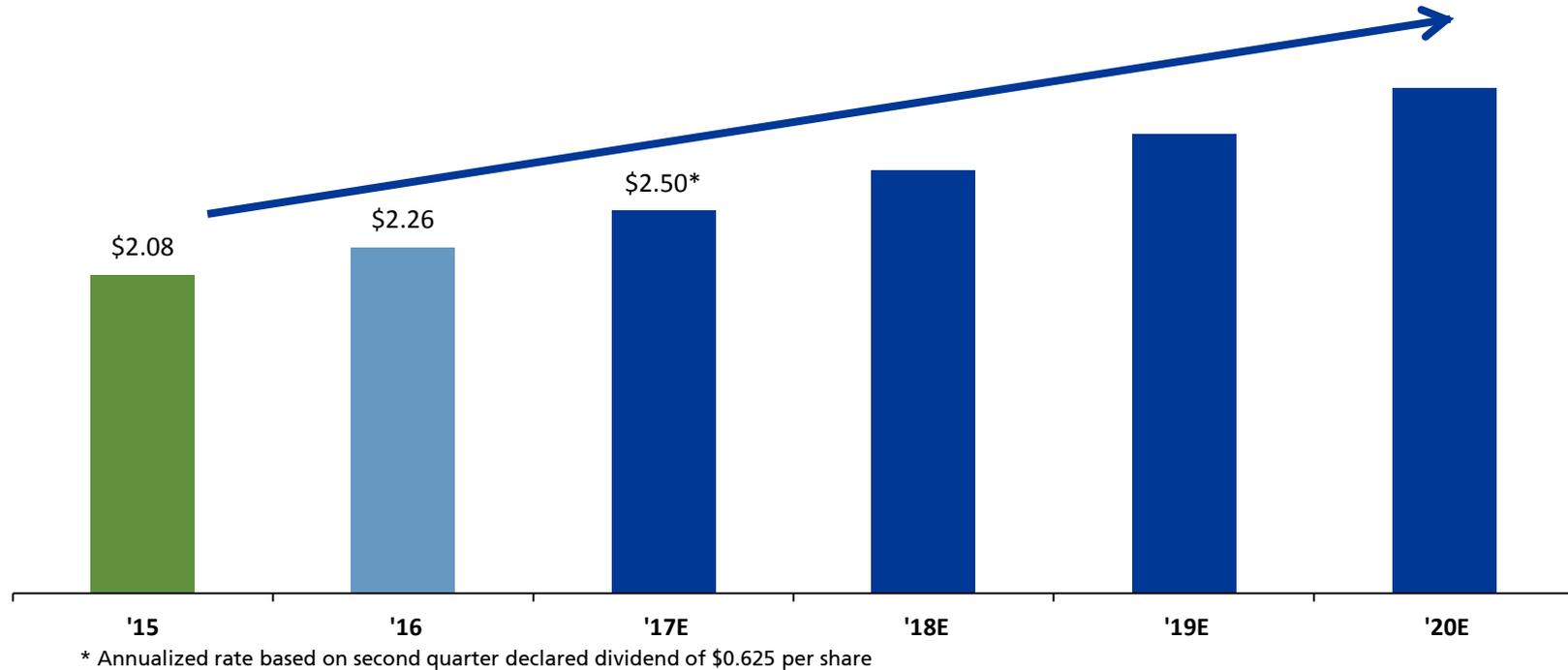


*Comparable EBITDA is a non-GAAP measure. See the Forward-looking Information and non-GAAP measures slide at the front of this presentation for more information.



Over 95% of Comparable EBITDA derived from regulated or long-term contracted assets

Dividend Growth Outlook Through 2020



Expect Annual Dividend Growth at the Upper End of 8 to 10% Range

\$45 Billion+ of Long-term Growth Opportunities*



- **Bruce Power Life Extension (\$5.3 billion post 2020)**
- **Four transformational projects**
 - Prince Rupert Gas Transmission (\$5 billion)
 - Coastal GasLink (\$4.8 billion)
 - Energy East (\$15.7 billion) and related Eastern Mainline Project (\$2.0 billion)
 - Keystone XL (US\$8 billion)

* TransCanada share in billions of dollars



These or Other Projects Could Augment or Extend Dividend Growth



Key Takeaways

- **Diversified Asset Base Provides Multiple Growth Platforms**
 - Five operating businesses, in three core geographies
 - Over 95% of Comparable EBITDA derived from regulated or long-term contracted assets
- **Visible Growth Portfolio**
 - \$23 billion to 2020
 - Additional opportunities include organic growth across our businesses as well as over \$45 billion of longer-term projects
- **Attractive, Growing Dividend**
 - Expected annual dividend growth at the upper end of 8 to 10% range through 2020
- **Strong Financial Position**
 - 'A' grade credit rating
 - Numerous levers available to fund growth

Thanks For Your Support

