Corporate Profile
February 2016

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: 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, 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 Fourth Quarter 2015 Financial Highlights release 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, 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 Fourth Quarter 2015 Financial Highlights release 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
- Volumetric, commodity and various other risks are known and contained

**Financial Discipline**
- Finance long-term assets with long-term capital
- Value ‘A’ grade credit rating
- Corporate structure is simple and understandable

**Three Complementary Businesses Performed Well in 2015**
- 2015 comparable EBITDA and FGFO exceeded 2014

**Visible Growth Through 2018 and Beyond**
- $13 billion of near-term projects
- $45 billion of commercially secured long-term projects

**Dividend Poised to Grow Through 2020**
- 8-10% average annual growth rate expected

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TransCanada Today

**One of North America’s Largest Natural Gas Pipeline Networks**
- 67,000 km (42,000 mi) of pipeline
- 368 Bcf of storage capacity
- 14 Bcf/d or 20% of continental demand

**Premier Liquids Pipeline System**
- 4,250 km (2,600 mi) of pipeline
- 545,000 bbl/d or 20% of Western Canadian exports

**One of the Largest Private Sector Power Generators in Canada**
- 20 power plants, 13,100 MW

**Total Assets ~ $64 billion**
We Have Made Significant Progress Since 2010*

- $20 billion of assets placed into service
- $50 billion of new commercially secured projects
- $10 billion of financing completed, net of maturities
- US$2.5 billion of assets dropped down to TC PipeLines, LP
- $6 billion of dividends paid
- Common shares outstanding largely unchanged
- ‘A’ grade credit rating maintained
- Canadian Mainline, ANR and Ravenswood commercial issues addressed
- Operational efficiencies being identified

* For the five year period ended December 31, 2015

More to the TransCanada Story than Keystone XL

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$20 Billion of Assets Placed In-Service since 2010

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

* TransCanada share in billions of Canadian dollars
Capital Investment Drives Strong Financial Performance

**Significant Growth in Comparable EBITDA and Funds Generated from Operations**

**Long Track Record of Dividend Growth**

**Supported by Industry-Leading Coverage Ratios**
### $13 Billion of Visible Near-Term Growth Projects

<table>
<thead>
<tr>
<th>Project</th>
<th>Capital Cost*</th>
<th>Expected In-Service Date*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ironwood Acquisition</td>
<td>US$0.7</td>
<td>Acquired February 1, 2016</td>
</tr>
<tr>
<td>Houston Lateral &amp; Terminal</td>
<td>US$0.6</td>
<td>2016</td>
</tr>
<tr>
<td>Topolobampo</td>
<td>US$1.0</td>
<td>2016</td>
</tr>
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<td>Mazatlan</td>
<td>US$0.4</td>
<td>2016</td>
</tr>
<tr>
<td>Grand Rapids Phase 1</td>
<td>0.9</td>
<td>2017</td>
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<tr>
<td>Northern Courier</td>
<td>1.0</td>
<td>2017</td>
</tr>
<tr>
<td>Tuxpan-Tula</td>
<td>US$0.5</td>
<td>2017</td>
</tr>
<tr>
<td>Canadian Mainline</td>
<td>0.7</td>
<td>2016-2017</td>
</tr>
<tr>
<td>NGTL System</td>
<td>5.4</td>
<td>2016-2018</td>
</tr>
<tr>
<td>Napanee</td>
<td>1.0</td>
<td>2017 or 2018</td>
</tr>
<tr>
<td>Bruce Power Life Extension</td>
<td>1.2</td>
<td>2016-2020</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>13.4</strong></td>
<td></td>
</tr>
</tbody>
</table>

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

### Capital Program Drives Significant Growth

- **EBITDA Outlook***
  - **~8% CAGR**
  - Other Initiatives Extend and Augment Growth:
    - Advancing $45 billion of long-term projects
    - New investment opportunities
    - Operating efficiencies

* Includes existing assets, non-controlling interests in U.S. Natural Gas Pipelines and $13 billion of commercially assured projects largely expected to be in service by 2018, subject to various conditions including corporate and regulatory approvals.
Dividend Growth Outlook Through 2020

Common Share Dividend Increased Nine Percent to $2.26 Per Share Annually*

Supported by Growth in Earnings, Cash Flow and Strong Distributable Cash Flow Coverage Ratios

* Based on first quarter declaration of $0.565 per share

Stability and Longevity of Core Asset Base + $13 Billion of Visible Growth with Upside

Generated by predictable cost of service and long-term contracted cash flow streams supported by:

- Solid counterparties
- Minimal volumetric risk
- No commodity price risk

* Includes pipeline capacity not under long-term contract, merchant power and unregulated natural gas storage. Assumes no change in EBITDA contribution beyond 2015 for merchant power or gas storage.
$45 Billion of Commercially Secured Long-Term Projects*

*Includes 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

Bruce Power Life Extension Agreement
- Asset Management and Major Component Replacement post-2020 ($5.3 billion)
- Extends operating life of facility to 2064

Disciplined Capital Allocation to Maximize Shareholder Value

- Significant opportunities in our core businesses and geographies, including large-scale projects
- Financial strength to execute at any point of the economic cycle
- Sustainable dividend growth
- Will accelerate return of capital if attractive low-risk investment opportunities do not materialize

Focused on Per Share Economics to Maximize Short- and Long-Term Shareholder Returns

Certain projects are subject to various conditions including corporate and regulatory approvals.
Track Record of Delivering Long-Term Shareholder Value

13% average annual return since 2000

Visible Growth Portfolio
$13 billion through 2018
Additional opportunity set includes $45 billion of long-term projects

Attractive, Growing Dividend
4.5% yield at current rate
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

Key Takeaways

Corporate Profile
February 2016
Natural Gas Pipelines

Our Natural Gas Pipelines Strategy

- Maintain pre-eminent position in WCSB for production and market connections
- Pursue oil sands and West Coast LNG markets using NGTL System
- Capture new demand growth
- Expand Mexico’s gas network
- Seek optimal use of assets
- Adapt to changing gas flow dynamics

Growing Natural Gas Supply and Demand Provides Opportunity

North American Natural Gas Supply/Demand Balance

* Includes fuel used within the LNG process

Source: TransCanada

Supply: Electric Generation, LNG Exports, Industrial*, Commercial, Residential

NGTL System’s Unparalleled Position

- Primary transporter of WCSB supply with NIT hub providing optionality & liquidity
- Averaged ~11 Bcf/d in 2015; peak intra-basin demand of 6.5 Bcf/d
- Significant new firm contracts
- Key connections to Alberta and export markets
- Recently reached 2016/17 Revenue Requirement Agreement with customers
- ROE of 10.1% on 40% deemed common equity

Footprint Uniquely Positioned to Capture Supply & Demand Growth

NGTL Growth to Continue Through 2018

2016-17 Facilities - $4.8 B
2018 Expansion Facilities - $0.6 B

- $5.4 billion of new investments
- Expected in-service between 2016 and 2018
- Includes $1.7 billion North Montney pipeline
- Excludes $1.9 billion Merrick pipeline
- Average investment base expected to increase significantly from $6.7 billion in 2015 to $11.2 billion in 2018
- Growth expected to continue
Canadian Mainline – Critically Important Infrastructure

- NEB approval of 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

Western Leg | Eastern Triangle | Total
---|---|---
2014 Investment Base | $3.1 B | $2.6 B | $5.7 B
Delta | -2.1 | +1.3 | -0.8
2020 Investment Base | $1.0 B | $3.9 B | $4.9 B

Mainline Growth through Expansion within Eastern Triangle

- $0.7 billion of new facility expansion projects required as part of LDC Settlement
- Provides increased access to growing supply of U.S. shale gas
- Expected in-service dates range from 2016 to 2017, subject to regulatory approvals

- $2.0 billion Eastern Mainline Project (EMP) ensures existing and new firm transportation commitments are met
- Reached agreement with LDCs that resolves their issues with Energy East and the EMP
- Target in-service in 2019, subject to regulatory approvals
U.S. Gas Pipelines – Producing Strong Results

- Majority of portfolio highly contracted over the long-term
- Positioned in key geographic areas with access to multiple supply basins and large market centres
- Strong results in 2015, a 13% increase in EBITDA year-over-year
- In January 2016, filed a rate case requesting an increase to ANR’s maximum transportation rates; last rate case filing was more than 20 years ago

TC PipeLines, LP (NYSE: TCP) – Disciplined Growth Continues

- US$5.0 billion enterprise value
  - 8.1% yield as at February 19, 2016
- Solid financial position with interest in seven interstate natural gas pipelines
- Long track record of disciplined growth
  - Closed dropdown of 49.9% interest in Portland on January 1, 2016
  - Acquired final 30% interest in GTN on April 1, 2015
  - Increased quarterly distribution by 6% in July, 2015
  - Expect annual increase at this rate again this year
  - Dropdowns from TransCanada could provide future growth opportunities
- TransCanada
  - Operates assets, owns general partner and 28% interest
  - Current 25% GP/LP IDR split; high split max of 25%

<table>
<thead>
<tr>
<th>Asset</th>
<th>TransCanada Effective Ownership (%)</th>
<th>TC PipeLines, LP Ownership (%)</th>
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<tbody>
<tr>
<td>ANR</td>
<td>100</td>
<td>0</td>
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<tr>
<td>Great Lakes</td>
<td>67</td>
<td>46</td>
</tr>
<tr>
<td>Portland</td>
<td>26</td>
<td>50</td>
</tr>
<tr>
<td>Iroquois</td>
<td>45</td>
<td>0</td>
</tr>
<tr>
<td>GTN</td>
<td>28</td>
<td>100</td>
</tr>
<tr>
<td>Tuscarora</td>
<td>28</td>
<td>100</td>
</tr>
<tr>
<td>North Baja</td>
<td>28</td>
<td>100</td>
</tr>
<tr>
<td>Bison</td>
<td>28</td>
<td>100</td>
</tr>
<tr>
<td>Northern Border</td>
<td>14</td>
<td>50</td>
</tr>
</tbody>
</table>

*Ownership in GTN, Great Lakes, Northern Border, Tuscarora, North Baja, Bison and Portland includes ownership through TransCanada’s 28% ownership in TC PipeLines, LP.
Mexico – Solid Position and Growing

Potential CFE Pipeline Projects

1. Tula – Villa de Reyes
2. Villa de Reyes – Aguascalientes-Guadalajara
3. La Laguna – Aguascalientes
4. Nueces - Brownsville
5. Sur de Texas

- Awarded US$500 million Tuxpan-Tula Pipeline to be completed in 2017
- Asset base will increase to US$3.1 billion by the end of 2017
- Opportunities for future growth

Positioned to Benefit from West Coast LNG

- Two significant projects underpinned by long-term contracts
  - $5 billion Prince Rupert Gas Transmission (PRGT) project
  - $4.8 billion Coastal GasLink project
- In June 2015, Pacific NorthWest LNG announced a positive Final Investment Decision on PRGT, subject to one outstanding condition
- Final Investment Decision on Coastal GasLink expected in late 2016
- Advancing project agreements with First Nations along pipeline routes
- No development cost risk and minimal capital cost risk
Liquids Pipelines

Liquids Pipelines Strategy

- Leverage existing infrastructure
- Connect growing WCSB and U.S. shale oil supply to key refining markets
- Capture Alberta and U.S. regional liquids opportunities
- Value chain participation expansion

Source: CAPP 2015, IHS, EIA, Statistics Canada
Keystone - A Premier Crude Oil Pipeline System

- Critical crude oil system that transports ~20% of Western Canadian exports to key U.S. refinery markets
- 545,000 bbl/d of long-haul, take or pay contracts
- 15-year average remaining contract length
- Predictably generates ~US$1 billion of EBITDA annually

Extending Keystone System’s U.S. Gulf Coast Market Reach

- U.S. Gulf Coast is largest refining centre in North America (~8 Mbbl/d of capacity)
- Extending system’s reach to over 4.5 Mbbl/d of regional Gulf Coast refinery centres:
  - Port Arthur
  - Houston / Texas City
  - Lake Charles
- Expected to enhance volumes on Keystone System
- Platform for growth and regional infrastructure expansion

Houston/Texas City 2.25 Mbbl/d
Port Arthur 1.5 Mbbl/d
Lake Charles 0.8 Mbbl/d
**Northern Courier - Visible Liquids Pipeline Growth**

- $1 billion capital investment
- 25-year contract with Fort Hills Partnership
- Transports bitumen and diluent between the Fort Hills mine site and Suncor’s terminal
- In-service in 2017

**Grand Rapids Pipeline – Bringing Supply to Market**

- $3.2 billion, 50/50 joint venture investment with Brion Energy, a subsidiary of PetroChina
- Long-term contract with Brion Energy
- Transports crude oil and diluent between northern Alberta and the Edmonton/Heartland region
- Keyera joint venture between Edmonton and Heartland enhances diluent supply
- Construction progressing on 20-inch pipeline
- Phase I ($900 million*) expected in-service in late 2016
- Phase II ($700 million*) aligned with market demand

*TransCanada share*
Energy East – Critical to Reach Eastern Refineries and Tidewater

- $15.7 billion investment
- 1.1 million bbl/d of capacity with approximately 1 million bbl/d of long-term, take-or-pay contracts
- Serves Montréal, Québec City and Saint John refineries
- Tidewater access
- Targeted in-service in late 2020, subject to regulatory approvals

Québec 400 kbbl/d
Atlantic Canada 415 kbbl/d

Keystone XL – Maintaining a Valuable Option

- Commenced legal actions following U.S. Administration’s decision to deny a Presidential Permit. Actions include:
  - Claim under NAFTA and
  - Lawsuit in U.S. Federal Court
- Recorded $2.9 billion after-tax write-down in fourth quarter 2015 as a result of the denial

Remains a Competitive Transportation Solution to U.S. Gulf Coast
Energy

Our Energy Strategy

Maximize and Grow our Diverse Portfolio in the Midst of a Transition to a Lower Carbon Footprint

- Maximize Value of Existing Assets
- Organic Growth of Existing Footprint
- Alberta Opportunities: Transition from Coal
- Bruce Refurbishment
- Overall Shift to Gas-fired & Renewable Generation
- Entry Into Large PJM Market
- Mexican Power Opportunities

North American Power Production

Source: TransCanada, EIA, StatsCan, SENER, Others
Bruce Power

- TransCanada owns 48.5% interest in Bruce Power
- World’s largest operating nuclear facility
- 6,300 MW facility capable of generating ~30% of Ontario’s power needs
  - Bruce A Units 1 – 4 (3,000 MW)
  - Bruce B Units 5 – 8 (3,300 MW)
- Power sold under long term contract with the Ontario Independent Electricity System Operator (IESO)
- All 8 reactors operating
- Achieved top nuclear operator status in 2015

Bruce Power Life Extension Agreement

- Amended agreement with the Ontario IESO effective January 1, 2016 through December 31, 2064
- Secures the future of Bruce Power
- Near-term investment in Asset Management (AM) life extension activities for Units 3 – 8
- Major Component Replacement (MCR) investment begins in 2020
- Capital estimates are finalized over time and affect power price over time
- Accretive to earnings and cash flow over the short and long-term
Napanee Generating Station – Construction on Time, on Budget

- $1.0 billion, 900 MW combined-cycle gas-fired plant
- 20-year PPA with the Ontario IESO
- Construction commenced in January 2015
- In-service Q4 2017 or Q1 2018

Ironwood Acquisition – Extending into Large, Liquid Market

- Completed the acquisition of Ironwood on February 1, 2016, a 778 MW natural gas-fired power generation facility
- PJM is the largest and most liquid energy market in North America
- Access to competitively priced natural gas from Marcellus shale gas play
- Market mandate to retire coal facilities and replace with more energy-efficient plants
- Expect to run as a baseload to intermediate load facility
- Complementary to U.S. northeast wholesale marketing business
- US$90-$110 million of EBITDA annually based on combination of capacity and energy sales

Measured and Deliberate Growth
Alberta Power Market - Near-term Challenges

- Alberta market well supplied in near-term
  - Recent capacity additions (~ 900 MW)
  - Soft demand growth
  - Low natural gas prices
- All contributing to current low power price environment
- Market nearing a crossroad
  - Policy shift to reduce greenhouse gas emissions will impact the electricity sector

Fundamentally Attractive Market Despite Current Weakness

Alberta Power Pool Price

- Daily Average Pool Price
- Quarterly Average Pool Price

Source: AESO

Proven Track Record of Success

- Diverse asset portfolio delivering a stable range of results through various market conditions
- Underpinned by substantial portfolio of long-term contracted assets
- Low-cost merchant position provides ability to capture “upside”
  - Baseload and capacity payments reduce volatility

- Contracted under PPAs
- Low-cost Merchant
- Natural Gas Storage
Finance

Financial Strategy

- Invest in low-risk assets that generate predictable and sustainable growth in earnings, cash flow and dividends
- Finance long-term assets with long-term capital
- Maintain financial strength and flexibility
- Value ‘A’ grade credit rating
- Effectively manage foreign exchange, interest rate and counterparty exposures
- Disciplined cost and capital management
- Simplicity and understandability of corporate structure

Built For All Parts of the Economic Cycle
Financial Position Remains Strong

Consolidated Capital Structure*
(at December 31, 2015)

- Significant financial flexibility
- 'A' grade credit ratings with 'stable' outlook
- $850 million cash on hand
- $7 billion of undrawn committed credit lines and three well supported commercial paper programs
- Recently issued US$1.25 billion of three- and ten-year senior notes on compelling terms
- Over 50% of 2016 funding requirements complete
- Well positioned to finance our capital program with multiple attractive funding options available

* Common equity includes non-controlling interests in TC PipeLines, LP and Portland.

Funding Program for Near-Term Growth Portfolio

2016 – 2018 Outlook
- Growth projects and maintenance capital largely funded with:
  - Internally generated cash flow
  - Combination of senior debt, mezzanine capital, and dropdowns
  - Other options include portfolio management and common equity through Dividend Reinvestment Plan
- Does not include post-development capital or cash recoveries for large-scale projects
  - Highly financeable, credit supportive annuity streams
  - Development cost risk minimized

Funding Program Very Manageable
Risks are Known and Contained

- **Volumetric**
  - Spot movements on southern portion of Keystone System and on Great Lakes
  - Availability at Bruce Power
- **Commodity**
  - Alberta and Northeast U.S. Power; unregulated natural gas storage
  - Mitigated by low-cost supply characteristics, capacity markets, hedging activity and wholesale marketing
- **Counterparty**
  - Blue-chip counterparties on contracted assets
  - Cost-of-service regulated business
- **Interest Rates**
  - Largely fixed-rate debt financed (~90%) with long duration
  - 16-year average term at 5.4% coupon rate
- **Foreign Exchange**
  - U.S. dollar assets and income streams predominately hedged with U.S. dollar-denominated debt
  - Strengthening U.S. dollar creates tailwind

TransCanada Key Takeaways

- Resilient business model and blue-chip portfolio produced strong comparable fourth quarter and full-year financial results
- Quarterly common share dividend increased nine per cent
- Well positioned to fund $13 billion of near-term projects and advance $45 billion of longer-term projects underpinned by enduring financial strength and ‘A’ grade credit rating
- Expect to continue to grow earnings and cash flow supporting 8 to 10 per cent dividend growth through 2020