Fourth Quarter 2015 Conference Call

February 11, 2016

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: 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.

Recent Developments

Russ Girling, President & CEO

2015 Highlights

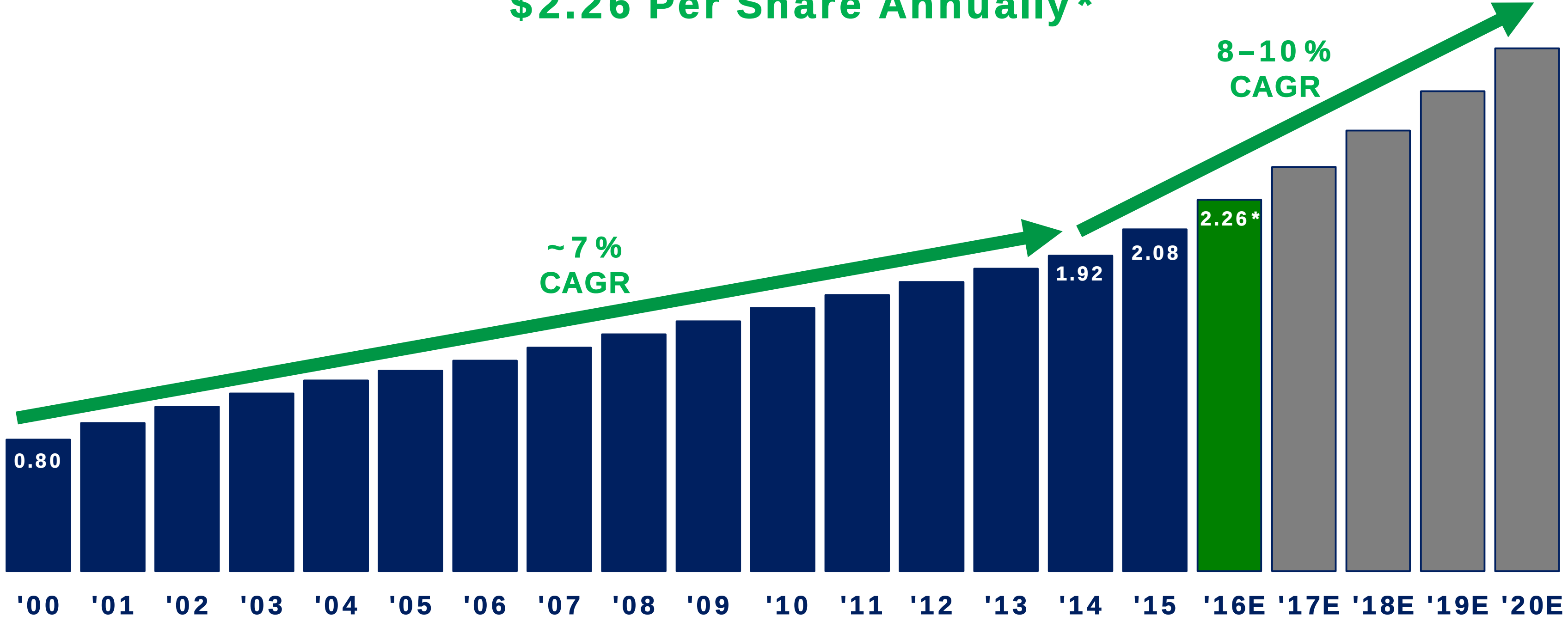
- Our $64 billion portfolio of energy infrastructure assets performed well in a very challenging environment.
- Assets are underpinned by a cost of service regulated model or long-term contracts
- Generate predictable cash flows with minimal commodity or volumetric risk
- Excluding non-recurring items, comparable earnings and funds generated from operations reached record levels
- In 2015 we initiated an organizational restructuring focused on enhancing the efficiency and effectiveness of our base businesses and provide a platform for continued growth
- We remain well positioned to continue growing earnings, dividends and cash flow
- Proceeding with $13 billion of near-term growth opportunities that are expected to be in service by 2018
- $45 billion of commercially secured, large-scale, long-term projects would create additional shareholder value

2015 Highlights

- The Keystone XL *'arbitrary and unjustified'* denial was extremely disappointing
- Keystone XL $2.9 billion after-tax, non-cash impairment charge and certain other specific items resulted in a net loss attributable to common shares of $1.2 billion or $1.75 per share for the year ended December 31, 2015
- Filed a notice of intent in January to initiate a claim under Chapter 11 of the North American Free Trade Agreement in response to the denial; also filed a lawsuit in the U.S. Federal Court
- Excluding the Keystone XL impairment charge and certain other non-recurring items, comparable earnings were $1.8 billion or $2.48 per share
- Comparable EBITDA was $5.9 billion, funds generated from operations were $4.5 billion, and comparable distributable cash flow was $3.5 billion or $5.00 per share
- Raised over $6 billion of debt and subordinated capital in 2015 to fund our capital program; purchased 7.1 million shares to date; maintained 'A grade' credit rating

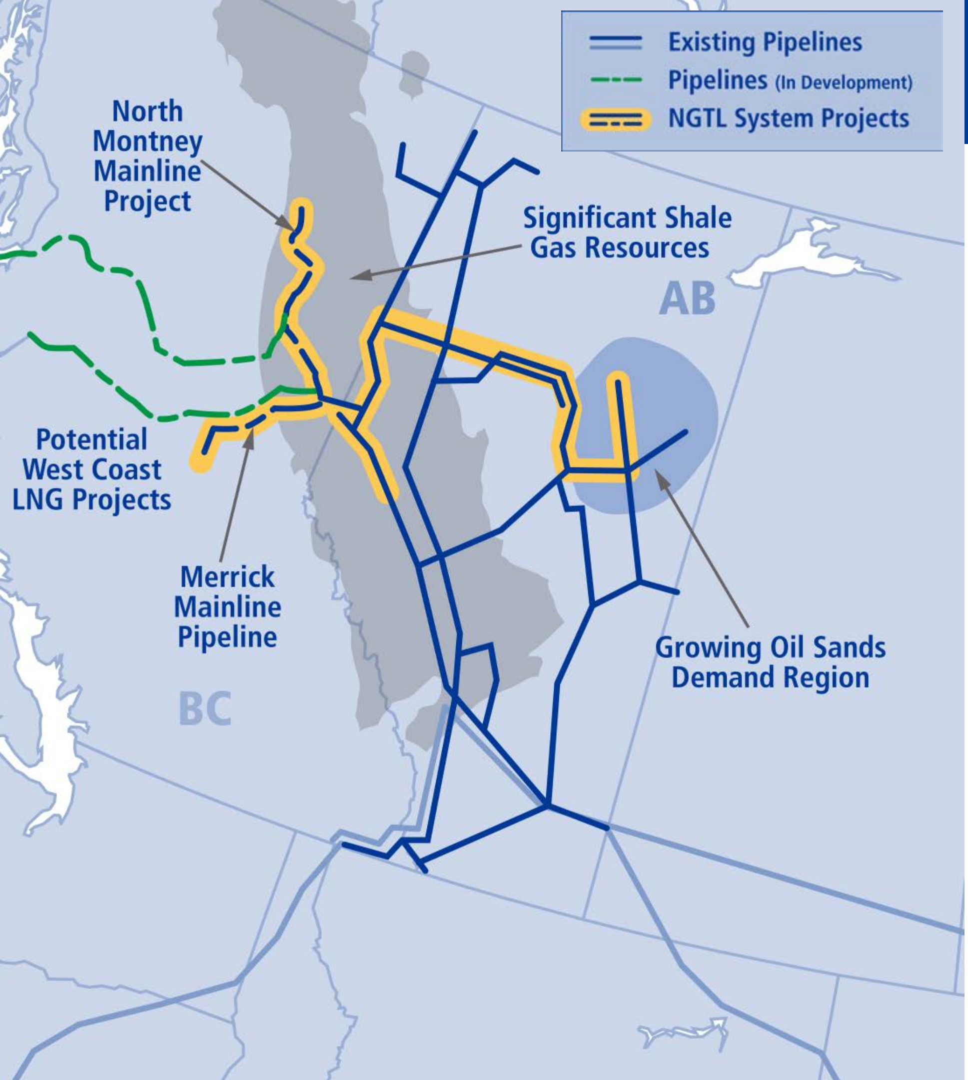
Dividend Growth Outlook Through 2020

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*



NGTL System Expansions

- Last November we announced a $600 million expansion for 2018 that includes multiple NGTL projects
- NGTL System now has $5.4 billion of new supply and demand facilities targeted for completion by 2018
- Also reached a two-year revenue requirement deal with customers for 2016-2017
- Well positioned to capture additional opportunities

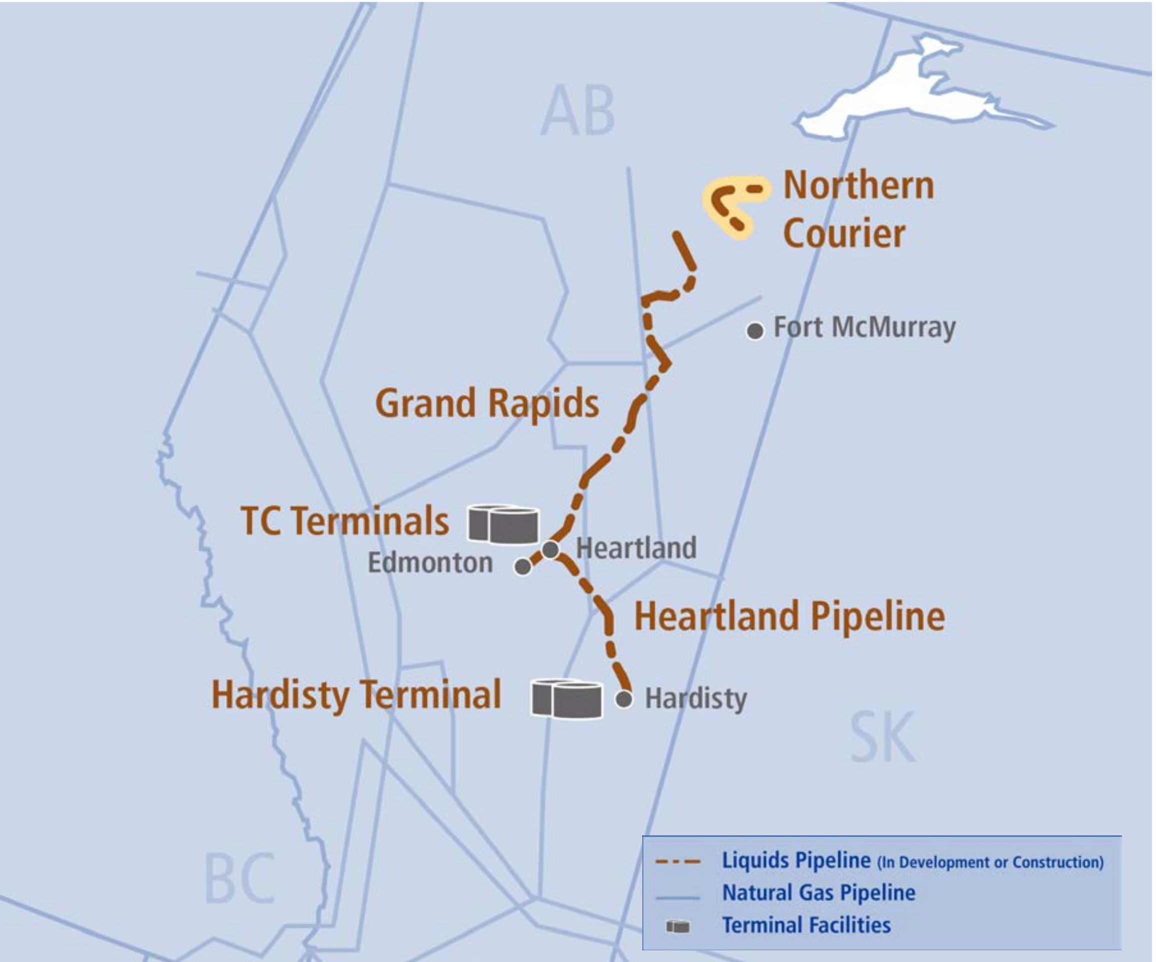
Mexico Natural Gas Pipelines

- In November 2015 awarded contract to build, own and operate US$500 million Tuxpan-Tula pipeline
- Construction expected to begin in 2016, pipeline should be operational in Q4 2017
- US$1 billion Topolobampo pipeline and US$400 million Mazatlan natural gas pipeline are in the final stages of construction
- Both expected to be operational in late 2016

ANR Pipeline

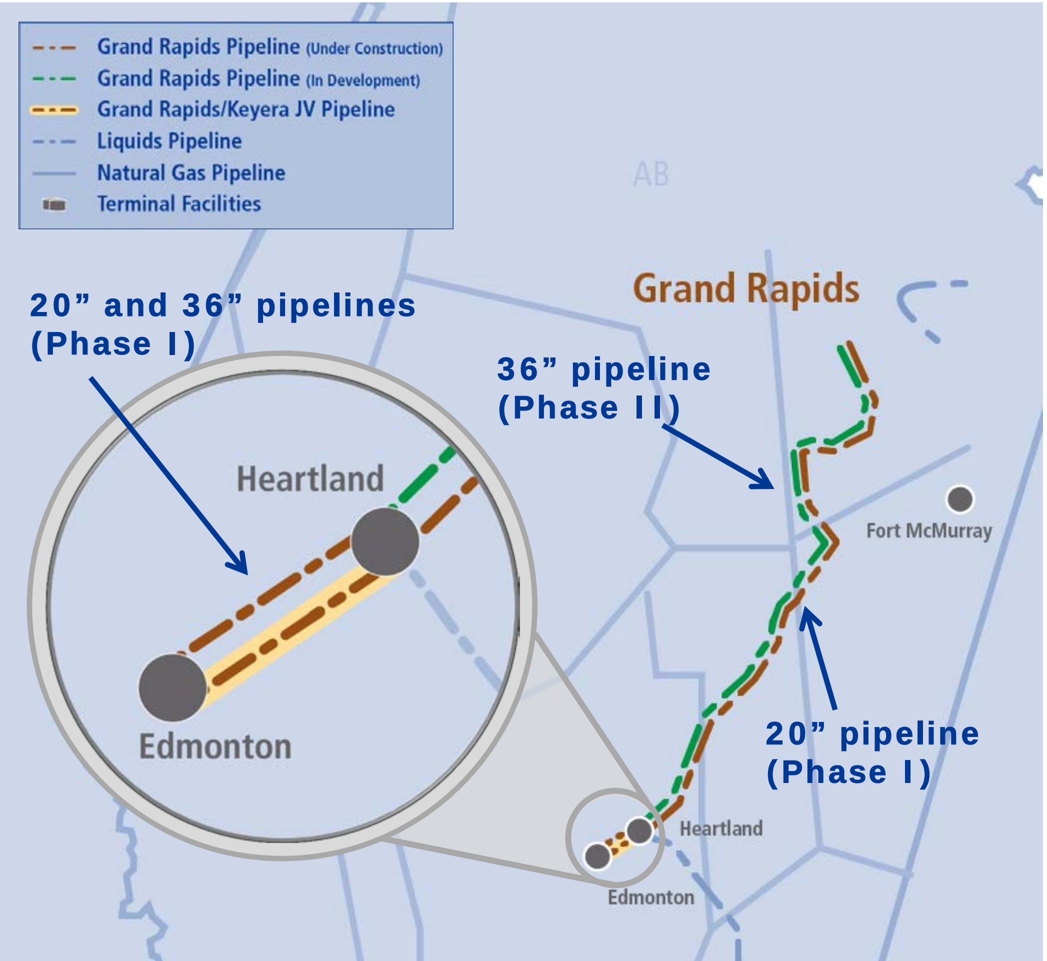
- ANR filed a Section 4 Rate Case in late January that requests an increase to maximum transportation rates
- Changes to ANR's traditional supply sources and markets, operational changes, needed infrastructure updates and evolving regulatory requirements are driving a need to invest in the pipeline system
- Current tariff rates would not provide a reasonable return on investment
- We will pursue a collaborative process to negotiate a mutually beneficial outcome with our customers
- New rates expected to go into effect August 1, 2016, subject to refund

Northern Courier Pipeline



- Construction of the Northern Courier project continues
- The $1 billion project consists of a 24-inch bitumen pipeline and a 12-inch diluent pipeline that will run between the Fort Hills Mine and Suncor’s tank farm
- 100 per cent of capacity subscribed
- We expect the project to be ready for service in 2017

Grand Rapids Pipeline



- Construction progressing on the Grand Rapids Pipeline Project
- Joint partnership with Brion Energy with each party owning 50 per cent of the pipeline
- Phase I ($900 million) is expected to be in-service in 2017
- Continue to assess Phase II ($700 million) of the project, the in-service date will depend on market demand

* *TransCanada share*

Bruce Power

- Agreement reached between Bruce Power and the Ontario Independent Electricity System Operator to extend the life of the facility to 2064
- Our estimated investment: $2.5 billion in the asset management program, $4 billion in major component replacement work over the life of the agreement (2014 dollars)
- TransCanada also exercised its option to acquire an additional 14.89 per cent interest in Bruce B for $236 million from the Ontario Municipal Employees Retirement System
- Bruce A and B merged into one entity; we now hold a 48.5 per cent interest in merged entity

Ironwood Power Plant

- On February 1 we completed the acquisition of the 778 MW Ironwood power plant in Lebanon, Pennsylvania for US$657 million
- The acquisition is expected to be immediately accretive to earnings and cash flow and generate approximately US$90-$110 million in EBITDA annually
- The Ironwood power plant delivers energy into the PJM power market
- Opportunistic acquisition at an attractive price that complements our U.S. Northeast operations

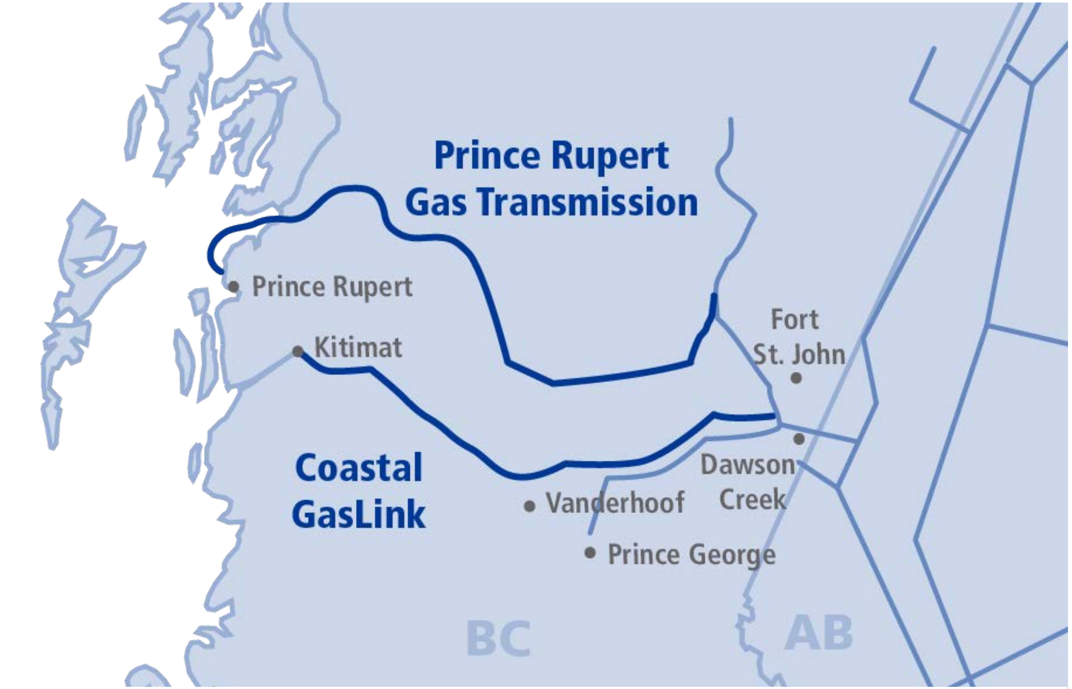
Napanee Generating Station

- Construction of the $1 billion, 900 MW combined-cycle, gas-fired plant in eastern Ontario now 24 per cent complete
- Facility will provide clean energy under a 20-year supply contract with the IESO
- In-service 2017 or 2018

Energy East Pipeline Project

- Filed project amendment in December 2015 with NEB that adjusts proposed pipeline route, scope and capital cost of Energy East to $15.7 billion
- Also updated $2 billion Eastern Mainline Project (EMP) information, highlighting agreement with eastern local gas distribution companies that resolved their issues with EMP and Energy East
- Pipelines remain the safest way of transporting oil to Canadian refineries
- Energy East has the capacity to displace the equivalent of 1,570 rail cars of crude oil per day to Eastern Canada
- We are in the process of assessing impacts as a result of the Federal Government’s announced changes to the regulatory review process for pipelines. TransCanada remains committed to the 2020 in service.

West Coast LNG Projects



- **Prince Rupert Gas Transmission**
  - $5 billion project
  - Have all primary regulatory permits from BC Oil and Gas Commission and BC Environmental Assessment Office
  - Pacific Northwest LNG waiting for positive regulatory decision related to environmental assessment
- **Coastal GasLink**
  - $4.8 billion project
  - Signed five more project agreements with northern BC First Nations, total now 11
  - Received eight of 10 BC Oil and Gas Commission Permits, anticipate receiving remaining two permits in Q1 2016
  - Have environmental permits from BC Environmental Assessment Office

Business Transformation

- The restructuring and business transformation initiatives we have been implementing since last fall continue
- Greater accountability and emphasis placed with our business unit leaders for decisions that impact their areas of responsibility
- Restructuring will provide a clearer focus on safety management, generating operations efficiencies, streamline decision making and maximize the value of each business unit
- Changes will result in lower costs for our customers and TransCanada

Key Takeaways

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

4.7% 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

Fourth Quarter 2015 Financial Results

Don Marchand, EVP, Corporate Development & CFO

Consolidated Results of Operations
(unaudited) (millions of dollars, except per share amounts)

	millions of dollars		per share		millions of dollars		per share	
	Three months ended Dec 31		Three months ended Dec 31		**Twelve months ended Dec 31**		Twelve months ended Dec 31	
	2015	**2014**	2015	2014	**2015**	**2014**	2015	2014
Net (Loss)/Income Attributable to Common Shares	**(2,458)**	**458**	($3.47)	$0.65	**(1,240)**	**1,743**	($1.75)	$2.46
Specific items (net of tax):								
Keystone XL impairment charge	**2,891**	**-**	4.08	-	**2,891**	**-**	4.08	-
TC Offshore loss on sale	**86**	**-**	0.12	-	**86**	**-**	0.12	-
Restructuring costs	**60**	**-**	0.08	-	**74**	**-**	0.10	-
Turbine equipment impairment charge	**43**	**-**	0.06	-	**43**	**-**	0.06	-
Alberta corporate income tax rate increase	**-**	**-**	-	-	**34**	**-**	0.05	-
Bruce Power merger - debt retirement charge	**27**	**-**	0.04	-	**27**	**-**	0.04	-
Non-controlling interests (TC PipeLines, LP - Great Lakes impairment)	**(199)**	**-**	(0.28)	-	**(199)**	**-**	(0.28)	-
Cancarb gain on sale	**-**	**-**	-	-	**-**	**(99)**	-	(0.14)
Niska contract termination	**-**	**-**	-	-	**-**	**32**	-	0.04
Gas Pacifico/ INNERGY gain on sale	**-**	**(8)**	-	(0.01)	**-**	**(8)**	-	(0.01)
Risk management activities	**3**	**61**	0.01	0.08	**39**	**47**	0.06	0.07
Comparable Earnings[(1)]	**453**	**511**	$0.64	$0.72	**1,755**	**1,715**	$2.48	$2.42
Average Common Shares Outstanding (millions)			708	709			709	708

(1) Non-GAAP measure. For additional information on these items see the February 11, 2016 Fourth Quarter News Release

Business Segment Results
(unaudited) (millions of dollars)

	Three months ended Dec 31		Twelve months ended Dec 31	
	2015	2014	2015	2014
Natural Gas Pipelines				
Canadian Pipelines	645	646	2,298	2,318
U.S. and International Pipelines	347	249	1,231	940
Business Development	(8)	(11)	(52)	(17)
Natural Gas Pipelines Comparable EBITDA[1]	984	884	3,477	3,241
Liquids Pipelines				
Keystone Pipeline System	348	294	1,345	1,073
Business Development	(6)	(6)	(23)	(14)
Liquids Pipelines Comparable EBITDA[1]	342	288	1,322	1,059
Energy				
Canadian Power	167	285	751	916
U.S. Power	108	96	534	414
Natural Gas Storage and other	7	12	15	44
Business Development	(7)	(8)	(20)	(26)
Energy Comparable EBITDA[1]	275	385	1,280	1,348
Corporate Comparable EBITDA[1]	(74)	(36)	(171)	(127)
Comparable EBITDA[1]	1,527	1,521	5,908	5,521

(1) Non-GAAP measure. For additional information on these items see the February 11, 2016 Fourth Quarter News Release

Other Income Statement Items
(unaudited) (millions of dollars)

	Three months ended Dec 31		Twelve months ended Dec 31	
	2015	2014	2015	2014
Comparable EBIT[1]	**1,075**	**1,105**	**4,143**	**3,910**
Comparable interest expense[1]	(380)	(323)	(1,370)	(1,198)
Comparable interest income and other[1]	76	40	184	112
Comparable income tax expense[1]	(235)	(243)	(903)	(859)
Comparable net income attributable to non-controlling interests[1]	(60)	(43)	(205)	(153)
Preferred share dividends	(23)	(25)	(94)	(97)
Comparable Earnings[1]	**453**	**511**	**1,755**	**1,715**
Specific items (net of tax)	(2,911)	(53)	(2,995)	28
Net (Loss)/Income Attributable to Common Shares	**(2,458)**	**458**	**(1,240)**	**1,743**

(1) Non-GAAP measure. For additional information on these items see the February 11, 2016 Fourth Quarter News Release

Comparable Distributable Cash Flow

(unaudited) (millions of dollars, except per share amounts)

	Three months ended Dec 31		Twelve months ended Dec 31	
	2015	2014	2015	2014
Funds Generated From Operations[1]	1,159	1,178	4,513	4,268
Distributions in excess of equity earnings	5	10	226	159
Preferred share dividends paid	(23)	(25)	(92)	(94)
Distributions paid to non-controlling interests	(56)	(44)	(224)	(178)
Capital maintenance expenditures including equity investments	(353)	(333)	(937)	(781)
Distributable Cash Flow[1]	732	786	3,486	3,374
Specific items impacting distributable cash flow (net of tax)	46	-	60	32
Comparable Distributable Cash Flow[1]	778	786	3,546	3,406
Per Common Share[1]	$ 1.10	$ 1.11	$ 5.00	$ 4.81

(1) Non-GAAP measure. For additional information on these items see the February 11, 2016 Fourth Quarter News Release

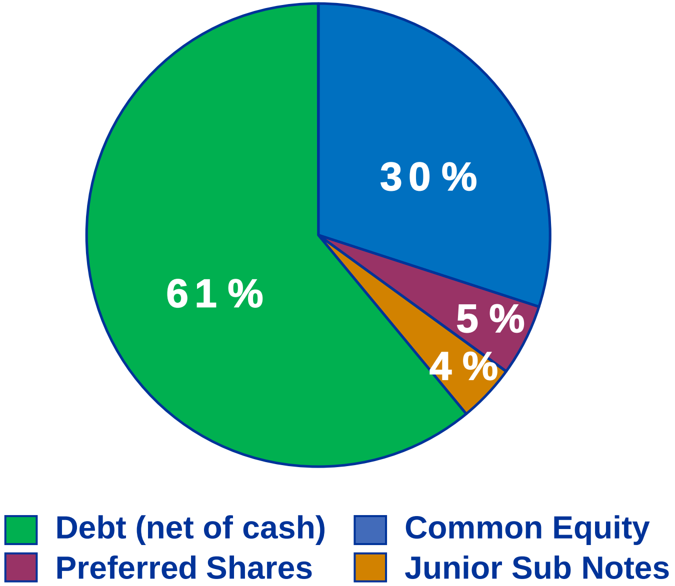
Investing Activities
(unaudited) (millions of dollars)

	Three months ended Dec 31		Twelve months ended Dec 31	
	2015	2014	2015	2014
Investing Activities				
Capital spending	1,216	1,452	4,429	4,337
Contributions to equity investments	190	61	493	256
Acquisitions	236	60	236	241
Proceeds from sale of assets, net of transaction costs	-	9	-	196

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.

2016 Earnings Outlook

2016 comparable earnings expected to be higher than 2015

	2016E vs 2015A
Natural Gas Pipelines	
Canadian Mainline	↓
NGTL System	↑
U.S. and International	↑
Liquids Pipelines	
Keystone System	↓
Energy	
Western Power	—
Eastern Power	↓
Bruce Power	—
U.S. Power	↑
Natural Gas Storage	↑
Capital Spending and equity investment outlook	**~$6 Billion**

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

Question & Answer Period

Russ Girling

Don Marchand

Alex Pourbaix

Karl Johannson

Paul Miller

Bill Taylor

Glenn Menuz

David Moneta

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