



## Management's Discussion & Analysis

## MANAGEMENT'S DISCUSSION AND ANALYSIS

The following management's discussion and analysis ("MD&A") of the financial and operating results of Pembina Pipeline Corporation ("Pembina" or the "Company") is dated February 23, 2017 and is supplementary to, and should be read in conjunction with, Pembina's audited consolidated financial statements for the period ended December 31, 2016 ("Financial Statements"). All dollar amounts contained in this MD&A are expressed in Canadian dollars unless otherwise noted.

Management is responsible for preparing the MD&A. This MD&A has been reviewed and recommended by the Audit Committee of Pembina's Board of Directors and approved by its Board of Directors.

This MD&A contains forward-looking statements (see "Forward-Looking Statements & Information") and refers to financial measures that are not defined by Generally Accepted Accounting Principles ("GAAP"). For more information about the measures which are not defined by GAAP, see "Non-GAAP Measures."

Readers should refer to page 43 for a list of abbreviations that may be used in this MD&A.

### About Pembina

*Calgary-based Pembina Pipeline Corporation is a leading transportation and midstream service provider that has been serving North America's energy industry for over 60 years. Pembina owns and operates an integrated system of pipelines that transport various products derived from natural gas and hydrocarbon liquids produced primarily in western Canada. The Company also owns and operates gas gathering and processing facilities and an oil and natural gas liquids infrastructure and logistics business. Pembina's integrated assets and commercial operations along the majority of the hydrocarbon value chain allow it to offer a full spectrum of midstream and marketing services to the energy sector.*

*Pembina is committed to working with its community and aboriginal neighbours, while providing value for investors in a safe, environmentally-responsible manner. This balanced approach to operating ensures the trust Pembina builds among all of its stakeholders is sustainable over the long term.*

*Pembina's common shares trade on the Toronto and New York stock exchanges under PPL and PBA, respectively. For more information, visit [www.pembina.com](http://www.pembina.com).*

*Pembina's goal is to provide highly competitive and reliable returns to investors through monthly dividends on its common shares while enhancing the long-term value of its securities. To achieve this, Pembina's strategy is to:*

- *Preserve value by providing safe, responsible, cost-effective and reliable services;*
- *Diversify the Company's asset base along the hydrocarbon value chain by providing integrated service offerings which enhance profitability;*
- *Pursue projects or assets that are expected to generate increased cash flow per share and capture long-life, economic hydrocarbon reserves; and*
- *Maintain a strong balance sheet through the application of prudent financial management to all business decisions.*

*Pembina is structured into four businesses: Conventional Pipelines, Oil Sands & Heavy Oil, Gas Services and Midstream, which are described in their respective sections of this MD&A.*

## Financial &amp; Operating Overview

	3 Months Ended December 31 (unaudited)		12 Months Ended December 31	
	2016	2015	2016	2015
<i>(\$ millions, except where noted)</i>				
Conventional Pipelines revenue volumes (mbpd) <sup>(1)</sup>	639	621	650	614
Oil Sands & Heavy Oil contracted capacity (mbpd)	975	880	975	880
Gas Services revenue volumes net to Pembina (mboe/d) <sup>(1)(2)</sup>	163	103	139	110
Midstream NGL sales volumes (mbpd)	164	123	143	116
Total volume (mboe/d)	1,941	1,727	1,907	1,720
Revenue	1,251	1,242	4,265	4,635
Net revenue <sup>(3)</sup>	514	407	1,764	1,507
Operating expenses	123	110	419	426
Realized loss (gain) on commodity-related derivative financial instruments	15	(7)	10	(37)
Operating margin <sup>(3)</sup>	376	304	1,335	1,118
Depreciation and amortization included in operations	73	73	273	249
Unrealized loss (gain) on commodity-related derivative financial instruments	33	(6)	61	3
Gross profit	270	237	1,001	866
General and administrative expenses (excluding depreciation) and other expenses	44	36	175	143
Net finance costs	38	22	153	71
Current tax expense (recovery)	12	(19)	50	41
Deferred tax expense	46	50	139	158
Earnings	131	130	466	406
Earnings per common share – basic (dollars)	0.29	0.32	1.02	1.02
Earnings per common share – diluted (dollars)	0.28	0.32	1.01	1.02
Adjusted EBITDA <sup>(3)</sup>	342	269	1,189	983
Cash flow from operating activities	286	285	1,077	801
Cash flow from operating activities per common share – basic (dollars) <sup>(3)</sup>	0.73	0.79	2.78	2.31
Adjusted cash flow from operating activities <sup>(3)</sup>	292	280	986	878
Adjusted cash flow from operating activities per common share – basic (dollars) <sup>(3)</sup>	0.74	0.77	2.54	2.53
Common share dividends declared	190	168	737	628
Dividends per common share (dollars)	0.48	0.46	1.90	1.80
Preferred share dividends declared	19	13	69	48
Capital expenditures	453	448	1,745	1,811
Acquisition			566	

<sup>(1)</sup> Revenue volumes are equal to contracted and interruptible volumes.

<sup>(2)</sup> Gas Services revenue volumes converted to mboe/d from MMcf/d at 6:1 ratio.

<sup>(3)</sup> Refer to "Non-GAAP Measures."

Pembina generated solid financial and operational results in the fourth quarter of 2016. Revenue in the fourth quarter of 2016 was \$1,251 million compared to \$1,242 million for the same period in 2015. The slight increase in revenue for the quarter is driven by a larger asset base and improvements in NGL market pricing, offset by decreased opportunities in certain areas of the Company's Midstream business. Full-year revenue was \$4.3 billion for 2016 compared to \$4.6 billion for the same period in 2015. Despite increased revenue in the Conventional Pipelines and Gas Services businesses and improved NGL pricing, the decrease in revenue for the full-year of 2016 was due to decreases in marketing opportunities which primarily impacted revenues in the Midstream business. Net revenue (revenue less cost of goods sold including product purchases) was \$514 million for the fourth quarter of 2016 compared to \$407 million in the same period of 2015

and \$1,764 million in 2016 compared to \$1,507 million in 2015. These increases were driven by higher revenue volumes from new assets being placed into service in the Company's Midstream, Gas Services and Conventional Pipelines businesses. Lower costs of goods sold in the current year also contributed to the increase in net revenue.

Operating expenses were \$123 million for the fourth quarter of 2016 compared to \$110 million during the same period of 2015. This was predominantly driven by a larger asset base which resulted in higher integrity, power, and repairs and maintenance expenses. For the twelve months ended December 31, 2016, operating expenses were \$419 million compared to \$426 million in the same period of 2015. This decrease was primarily related to integrity program scheduling refinements and efficiencies during the year, partially offset by increased labour and power costs.

During the fourth quarter of 2016, operating margin increased by 24 percent to \$376 million compared to \$304 million in the fourth quarter of 2015. For the twelve months ended December 31, 2016, operating margin increased by 19 percent to \$1,335 million compared to \$1,118 million for the same period of 2015. These increases were driven by stronger performance across all businesses, including new assets placed into service and the Kakwa River facility acquisition.

Depreciation and amortization included in operations during the fourth quarter of 2016 was \$73 million, consistent with the same period in 2015. For the twelve months ended December 31, 2016, depreciation and amortization included in operations increased to \$273 million compared to \$249 million in 2015. The increase is as a result of the year-over-year growth in Pembina's asset base with the Company's pipeline system expansions and new, in-service gas processing plants and fractionation facilities.

Gross profit for the fourth quarter of 2016 was \$270 million compared to \$237 million during the fourth quarter of 2015. This 14 percent increase was a result of increased operating margin, which was somewhat offset by increased unrealized losses on the market-to-market positions of commodity-related derivative financial instruments which was in a gain position of \$6 million in the fourth quarter of 2015 compared to a loss of \$33 million in the fourth quarter of 2016. For the twelve months ended December 31, 2016, gross profit was \$1.0 billion compared to \$866 million in 2015. This increase was driven by higher operating margin, partially offset by a \$58 million increased loss on the unrealized market-to-market positions on derivative contracts and increased depreciation and amortization included in operations.

For the three-month period ended December 31, 2016, Pembina incurred general and administrative expenses (excluding corporate depreciation and amortization) of \$44 million compared to \$36 million during the comparable period of 2015. This increase was largely due to increases in the Company's incentive plan liabilities as a result of an increase in share price in the current year compared to a decrease in the previous year coupled with additional staff to support the growth in the Company's asset base. For the twelve-month period ended December 31, 2016, Pembina incurred general and administrative expenses (excluding corporate depreciation and amortization) of \$175 million compared to \$143 million in the prior year. This increase is largely due to the same reason described above, as well as higher rent expense as a result of non-cash and non-recurring rental adjustments of \$10 million recognized during 2016.

Net finance costs incurred during the fourth quarter of 2016 were \$38 million compared to \$22 million for the same period in 2015. This increase was primarily due to increased interest expense and fluctuations in the fair value of the convertible debentures conversion feature. For the full twelve months of 2016, net finance costs were \$153 million compared to \$71 million for the twelve months of 2015. This increase is largely attributable to the revaluation of the convertible debentures conversion feature; for the full-year in 2016, the Company recognized a loss of \$40 million on the revaluation of the conversion feature compared to a gain of \$40 million in 2015.

Income tax expense for the fourth quarter of 2016 totaled \$58 million, including current tax of \$12 million and deferred tax of \$46 million, compared to income tax expense of \$31 million in 2015, including a current tax recovery of \$19 million offset by deferred tax expense of \$50 million. Current tax expense for the fourth quarter of 2016 is higher than the

comparable period in 2015 due to greater taxable income flowing from partnerships and an increase in the corporate income tax rate. The decrease in deferred tax expense in the fourth quarter of 2016 resulted from a larger increase in tax pools compared with the increase in accounting pools. Income tax expense was \$189 million for the twelve months ended December 31, 2016, which included current tax of \$50 million and deferred tax of \$139 million, compared to income tax expense of \$199 million in 2015, which included current tax of \$41 million and deferred tax of \$158 million. These variances are due to the same factors noted above.

The Company's earnings were \$131 million (\$0.29 per common share – basic and \$0.28 per common share – diluted) during the fourth quarter of 2016 compared to \$130 million (\$0.32 per common share – basic and diluted) in the same period of 2015. Higher gross profit was partially offset by higher net finance costs and general and administrative expenses. Earnings attributable to common shareholders net of dividends attributable to preferred shareholders during the fourth quarter of 2016 were \$112 million (2015: \$117 million). Earnings were \$466 million (\$1.02 per common share – basic and \$1.01 per common share – diluted) during 2016 compared to \$406 million (\$1.02 per common share – basic and diluted) during the prior year. The increase was due to higher gross profit and lower taxes, partially offset by higher net finance costs and general and administrative expenses. On a full-year basis, earnings attributable to common shareholders net of dividends attributable to preferred shareholders were \$394 million in 2016 (2015: \$355 million) due to the factors described above.

Pembina generated Adjusted EBITDA of \$342 million and \$1,189 million during the fourth quarter and twelve months of 2016 compared to \$269 million and \$983 million for the same periods in 2015. These 27 percent and 21 percent respective increases were due to higher gross profit, partially offset by higher general and administrative expenses, as discussed above.

Cash flow from operating activities for the quarter ended December 31, 2016 was \$286 million (\$0.73 per common share – basic) compared to \$285 million (\$0.79 per common share – basic) during the fourth quarter of 2015. For the twelve months ended December 31, 2016, cash flow from operating activities was \$1,077 million (\$2.78 per common share – basic) compared to \$801 million (\$2.31 per common share – basic) in 2015. These increases were primarily due to higher gross profit and lower cash taxes paid, partially offset by an increase in non-cash working capital.

Adjusted cash flow from operating activities for the fourth quarter of 2016 was \$292 million (\$0.74 per common share – basic) compared to \$280 million (\$0.77 per common share – basic) during the fourth quarter of 2015. Increased cash flow from operating activities (net of changes in non-cash working capital) and reduced tax expense were partially offset by additional preferred share dividends. For the twelve months ended December 31, 2016, adjusted cash flow from operating activities was \$986 million (\$2.54 per common share – basic) compared to \$878 million (\$2.53 per common share – basic) in 2015. This was driven by an increase in cash flow from operations (net of changes in non-cash working capital), offset by higher preferred share dividends, increased tax expense and lower share-based payments.

2016 per common share metrics were also impacted by increased common shares outstanding due to the DRIP and common share offering in the first quarter of 2016 which were issued to partially fund Pembina's capital program and the Kakwa River facility acquisition.

## Operating Results

(\$ millions)	3 Months Ended December 31 (unaudited)				12 Months Ended December 31			
	2016		2015		2016		2015	
	Revenue <sup>(2)</sup>	Operating Margin <sup>(1)</sup>	Revenue <sup>(2)</sup>	Operating Margin <sup>(1)</sup>	Revenue <sup>(2)</sup>	Operating Margin <sup>(1)</sup>	Revenue <sup>(2)</sup>	Operating Margin <sup>(1)</sup>
Conventional Pipelines	184	118	163	109	719	494	628	401
Oil Sands & Heavy Oil	54	37	56	36	202	140	213	139
Gas Services <sup>(2)</sup>	82	60	51	33	271	195	208	144
Midstream <sup>(2)</sup>	194	158	137	123	572	496	458	427
Corporate		3		3		10		7
Total	514	376	407	304	1,764	1,335	1,507	1,118

<sup>(1)</sup> Refer to "Non-GAAP Measures."

<sup>(2)</sup> The amounts presented for Midstream and Gas Services consist of net revenue (revenue less cost of goods sold including product purchases). Refer to "Non-GAAP Measures."

### Conventional Pipelines

(\$ millions, except where noted)	3 Months Ended December 31 (unaudited)		12 Months Ended December 31	
	2016	2015	2016	2015
Revenue volumes (mbpd) <sup>(1)</sup>	639	621	650	614
Revenue	184	163	719	628
Operating expenses	66	52	222	224
Realized loss on commodity-related derivative financial instruments		2	3	3
Operating margin <sup>(2)</sup>	118	109	494	401
Depreciation and amortization included in operations	27	26	103	88
Unrealized gain on commodity-related derivative financial instruments	(1)	(1)	(2)	(1)
Gross profit	92	84	393	314
Capital expenditures	294	227	957	932

<sup>(1)</sup> Revenue volumes are equal to contracted and interruptible volumes.

<sup>(2)</sup> Refer to "Non-GAAP Measures."

### Business Overview

Pembina's Conventional Pipelines business comprises a strategically located pipeline network of approximately 10,000 kilometers, inclusive of expansion projects discussed below that are currently under development. This network transports hydrocarbon liquids and extends across much of Alberta and parts of B.C., Saskatchewan and North Dakota. The primary objectives of this business are to provide safe, responsible, reliable and cost-effective transportation services for customers, pursue opportunities for increased throughput, and maintain and/or grow sustainable operating margin on invested capital by capturing incremental volumes, expanding the Company's pipeline systems, managing revenue and following a disciplined approach to operating expenses.

### Operational Performance

During the fourth quarter of 2016, Conventional Pipelines' revenue volumes averaged 639 mbpd. This represents an increase of three percent compared to the same period of 2015, when revenue volumes were 621 mbpd. Higher volumes resulted from the completion of capacity expansions on Pembina's Peace and Northern pipelines which were placed into service in 2015 and allowed for the receipt of higher revenue volumes at Pembina's existing connections and truck

terminals. Additional volumes from other connections that were commissioned throughout 2015 and 2016 as well as higher revenue volumes on the Vantage pipeline also contributed to the increase. These increases were somewhat offset by a multi-day construction outage in October 2016 on Pembina's Peace and Northern pipelines relating to the company's Phase III pipeline expansion (the "Phase III Expansion"). Revenue volumes averaged 650 mbpd in 2016 compared to 614 mbpd in 2015. The increase in revenue volumes was impacted by the same factors noted above. These increases were also somewhat offset by third-party outages and flooding, which impacted the Company's Western System, and scheduled and unscheduled outages at some of Pembina's gas services assets (see "Gas Services: Operational Performance").

### **Financial Performance**

During the fourth quarter of 2016, Conventional Pipelines generated revenue of \$184 million, 13 percent higher than the \$163 million generated in the same quarter of the previous year. For the full twelve months of 2016, revenue was \$719 million compared to \$628 million in 2015. These increases resulted from: higher revenue volumes associated with the expansions mentioned above; new connections and laterals being placed into service; and increased Vantage pipeline revenues which benefited from a higher U.S. dollar exchange rate. Partially offsetting these increases were the October 2016 Phase III Expansion construction outage, third-party outages and flooding, the discontinuation of the south segment of the Western System and Pembina's gas services outages as noted above.

During the fourth quarter of 2016, operating expenses of \$66 million were higher than the \$52 million recognized in the fourth quarter of 2015. This was predominantly driven by higher integrity costs, as well as higher general repairs and maintenance expenses, increased labour and increased power expenses associated with Pembina's system expansions. For the twelve months ended December 31, 2016, operating expenses were \$222 million compared to \$224 million in 2015. Despite an increased asset base, this decrease was primarily the result of lower integrity and geotechnical spending on Pembina's systems in 2016 driven by integrity management program scheduling refinements and efficiencies. These decreases were mostly offset by higher operating expenses relating to Pembina's system expansions as noted above.

Operating margin was \$118 million in the fourth quarter of 2016 compared to \$109 million for the same period of 2015. This increase was due to higher revenue during the fourth quarter of the current year, partially offset by increased operating expenses. On a full-year basis for 2016, operating margin was \$494 million, \$93 million higher than the \$401 million recorded in 2015. This increase was a result of higher revenues combined with lower operating expenses.

Depreciation and amortization included in operations during the fourth quarter of 2016 was \$27 million, comparable to the \$26 million recognized during the same period of the prior year. Depreciation and amortization included in operations for the twelve months ended December 31, 2016 was \$103 million compared to \$88 million in 2015. The increase in 2016 was due to additional in-service assets relating to Pembina's system expansions.

For the three and twelve months ended December 31, 2016, gross profit was \$92 million and \$393 million, respectively, compared to \$84 million and \$314 million for the same periods of 2015. These increases were due to higher operating margin partially offset by increased depreciation and amortization included in operations.

Capital expenditures for the fourth quarter and twelve months of 2016 totaled \$294 million and \$957 million, respectively, compared to \$227 million and \$932 million for the same periods of 2015. The majority of this spending related to Pembina's ongoing pipeline expansion projects which are described below.

### **New Developments**

Pembina has completed over 60 percent of the overall Phase III Expansion program and construction continues on the Fox Creek to Namao, Alberta, portion of the project. Once complete, the Phase III Expansion is expected to provide a combined initial capacity of approximately 420 mbpd between Fox Creek and Namao. The overall project continues to

track under budget from the initial total capital cost of \$2.4 billion and the Company expects an in-service date in mid-2017.

Pembina is continuing the development of large-scale pipeline infrastructure in northeast B.C. (the "NEBC Expansion") to support the growing liquids-rich Montney resource play, which has an expected capital cost of \$235 million. During the quarter, Pembina received regulatory approval from the B.C. Oil and Gas Commission. Engineering is complete and construction has been initiated. Pembina expects to bring the pipeline into service in late 2017.

Pembina is also advancing a \$70 million pipeline lateral in the Altares area of B.C. (the "Altares Lateral") which will connect into the Company's NEBC Expansion. Subject to environmental and regulatory approvals, the Altares Lateral is expected to have an in-service date of late 2017.

## Oil Sands & Heavy Oil

	3 Months Ended		12 Months Ended	
	December 31 (unaudited)		December 31	
	2016	2015	2016	2015
<i>(\$ millions, except where noted)</i>				
Contracted capacity (mbpd)	975	880	975	880
Revenue	54	56	202	213
Operating expenses	17	20	62	74
Operating margin <sup>(1)</sup>	37	36	140	139
Depreciation and amortization included in operations	4	4	17	17
Gross profit	33	32	123	122
Capital expenditures	5	16	124	28

<sup>(1)</sup> Refer to "Non-GAAP Measures."

## Business Overview

Pembina plays an important role in supporting Alberta's oil sands and heavy oil industry. Pembina is the sole transporter of synthetic crude oil for Syncrude Canada Ltd. (via the Syncrude Pipeline) and Canadian Natural Resources Limited's Horizon Oil Sands operation (via the Horizon Pipeline) to delivery points near Edmonton, Alberta. Pembina also owns and operates the Nipisi and Mitsue pipelines, which provide transportation for producers operating in the Pelican Lake and Peace River heavy oil regions of Alberta, and the Cheecham Lateral, which transports synthetic crude to oil sands producers operating southeast of Fort McMurray, Alberta. The Oil Sands & Heavy Oil business operates approximately 1,650 km of pipeline and has approximately 975 mbpd of contracted capacity, under long-term, extendible contracts, which provide for the flow-through of eligible operating expenses to customers. As a result, operating margin from this business is primarily driven by the amount of capital invested and is typically not significantly sensitive to fluctuations in operating expenses or actual throughput.

## Financial Performance

The Oil Sands & Heavy Oil business realized revenue of \$54 million in the fourth quarter of 2016 compared to \$56 million in the fourth quarter of 2015. Revenue in 2016 was \$202 million compared to \$213 million in 2015. Operating expenses are eligible to be recovered under Pembina's contractual arrangements with its customers and therefore the reduction in operating expenses from the comparable periods, as discussed below, directly impacted revenue. In addition to the variance in operating expenses, lower revenue reflects lower interruptible volumes on the Nipisi system, partially offset by increased revenue as a result of the completion of the expansion of the Company's existing Horizon Pipeline System (the "Horizon Expansion") during the third quarter of 2016 (as described below).

Operating expenses were \$17 million for the three months ended December 31, 2016 compared to \$20 million for the same period in 2015. This decrease is primarily due to reduced integrity and geotechnical activities driven by integrity management program scheduling refinements and efficiencies, partially offset by higher power costs and other repairs and maintenance. For the year ended 2016, operating expenses were \$62 million compared to \$74 million for the prior year. The year-over-year reduction is predominantly attributable to reduced integrity and geotechnical expenses driven by integrity management program scheduling refinements and efficiencies, as well as lower power expenses.

Operating margin was \$37 million for the three months ended December 31, 2016 and \$140 million for the full year, consistent with \$36 million and \$139 million for the comparable periods in 2015 due to the factors discussed above.

Depreciation and amortization included in operations for the fourth quarter and twelve months of 2016 remained comparable to the same periods in 2015 at \$4 million and \$17 million, respectively.

For the three and twelve months ended December 31, 2016, gross profit was \$33 million and \$123 million, consistent with \$32 million and \$122 million achieved during the three and twelve months ended December 31, 2015. The slight increases are due to the same factors that impacted operating margin.

Capital expenditures for the three and twelve months ended December 31, 2016 were \$5 million and \$124 million, respectively, compared to \$16 million and \$28 million for the same periods in 2015. The spending in 2016 and 2015 related to the expansion of the Horizon Pipeline as well as an expansion of the Cheecham Lateral.

### New Developments

In 2016, Pembina completed the Horizon Expansion, which was declared in-service on July 1 and increased the pipeline's capacity to 250 mbpd through upgrading mainline pump stations and other facility modifications. In addition, an expansion of the Cheecham Lateral was placed into service in September 2016, increasing the contracted capacity from 136 mbpd to 230 mbpd.

### Gas Services

	3 Months Ended		12 Months Ended	
	December 31 (unaudited)	2015	December 31	2015
<i>(\$ millions, except where noted)</i>	<b>2016</b>	2015	<b>2016</b>	2015
Revenue volumes net to Pembina (MMcf/d) <sup>(1)(2)</sup>	<b>976</b>	606	<b>836</b>	656
Revenue volumes net to Pembina (mboe/d) <sup>(1)(3)</sup>	<b>163</b>	103	<b>139</b>	110
Revenue	<b>86</b>	52	<b>283</b>	209
Cost of goods sold, including product purchases	<b>4</b>	1	<b>12</b>	1
Net revenue <sup>(4)</sup>	<b>82</b>	51	<b>271</b>	208
Operating expenses	<b>22</b>	18	<b>76</b>	64
Operating margin <sup>(4)</sup>	<b>60</b>	33	<b>195</b>	144
Depreciation and amortization included in operations	<b>15</b>	9	<b>52</b>	33
Gross profit	<b>45</b>	24	<b>143</b>	111
Capital expenditures	<b>38</b>	33	<b>146</b>	242
Acquisition			<b>566</b>	

<sup>(1)</sup> Revenue volumes are equal to contracted and interruptible volumes.

<sup>(2)</sup> Volumes at the Musreau Gas Plant exclude deep cut processing as those volumes are counted when they are processed through the shallow cut portion of the plant.

<sup>(3)</sup> Revenue volumes converted to mboe/d from MMcf/d at a 6:1 ratio.

<sup>(4)</sup> Refer to "Non-GAAP Measures."

## Business Overview

Pembina's operations include a natural gas gathering and processing business, which is strategically positioned in an active condensate and NGL-rich area of western Canada and is integrated with Pembina's other businesses. Gas Services provides gas gathering, compression, condensate stabilization, shallow cut processing and both sweet and sour deep cut processing services for its customers, primarily on a fee-for-service basis under long-term contracts. The condensate and NGL extracted through the facilities in this business are transported by Pembina's Conventional Pipelines business on its Peace and Vantage pipeline systems. A portion of the volumes are further processed at Pembina's fractionation facilities. Operating assets within Gas Services include:

- Pembina's Cutbank Complex (the "Cutbank Complex") – located near Grande Prairie, Alberta, this facility includes six shallow cut processing plants (the Cutbank Gas Plant, Musreau I, Musreau II, Musreau III, the Kakwa Gas Plant) and one deep cut gas processing plant (the Musreau Deep Cut facility) as well as the Kakwa River Facility, which is comprised of a 200 MMcf/d raw to deep cut sour gas processing facility and a 50 MMcf/d shallow cut sweet gas processing facility. In total, the Cutbank Complex has 675 MMcf/d of shallow cut sweet gas processing capacity (618 MMcf/d net to Pembina), 205 MMcf/d of sweet deep cut extraction capacity and 200 MMcf/d of deep cut sour gas processing capacity. The Cutbank Complex also includes approximately 450 km of gathering pipelines and nine field compression stations.
- Pembina's Saturn complex (the "Saturn Complex") – located near Hinton, Alberta; includes two identical 200 MMcf/d deep cut sweet gas processing plants (the "Saturn I" and "Saturn II" facilities) for a total of 400 MMcf/d of deep cut processing capacity, as well as 25 km of gathering pipelines.
- Pembina's Resthaven facility ("Resthaven") – located near Grande Cache, Alberta; includes 300 MMcf/d (gross) of deep cut sweet gas processing capacity, as well as 30 km of gathering pipelines.
- Pembina's Saskatchewan Ethane Extraction Plant ("SEEP") – located to service the southeast Saskatchewan Bakken region; has deep cut sweet gas processing capacity of 60 MMcf/d, ethane fractionation capabilities of up to 4.5 mbpd and a 104 km ethane delivery pipeline.

## Operational Performance

Within the Gas Services business, revenue volumes, net to Pembina, were a record 976 MMcf/d during the fourth quarter of 2016, higher than the 606 MMcf/d recorded during the fourth quarter of 2015. Revenue volumes were positively impacted by the acquisition of the Kakwa River Facility in the second quarter of 2016 and the completion of Musreau III and the Resthaven Expansion which came into service in April 2016. In addition, revenue volumes were higher at the Resthaven facility in the fourth quarter of 2016, as the fourth quarter of the prior year was impacted by an unscheduled integrity outage. On a full-year basis in 2016, volumes increased 27 percent to 836 MMcf/d compared to 656 MMcf/d in 2015. This increase was due to the same factors noted above as well as the addition of the SEEP facility in August of 2015 and new assets that went into service in the third quarter of 2015 at the Saturn Complex. Partially offsetting these increases was a decline in volumes at the Saturn Complex due to a fire incident which took 200 MMcf/d of the total capacity of 400 MMcf/d out of service from May 17, 2016 to August 8, 2016. Insurance claims are pending for the insurable portion of the lost revenue.

## Financial Performance

Gas Services contributed \$82 million in net revenue during the fourth quarter of 2016 compared to \$51 million in the fourth quarter of 2015. On a full-year basis, net revenue for 2016 was \$271 million compared to \$208 million in 2015. These 61 percent and 30 percent increases in net revenue are primarily a result of the acquisition of the Kakwa River Facility, the new assets that went into service at the Saturn Complex and the SEEP facility, as well as the completion of Musreau III and the expansion of Resthaven. Partially offsetting these factors were outages at the Resthaven facility and the Saturn Complex.

During the fourth quarter of 2016, Gas Services incurred operating expenses of \$22 million compared to \$18 million in the fourth quarter of 2015. This increase was due to higher operating costs at the Cutbank Complex due to higher overall throughput and the addition of the Kakwa River Facility. Full-year operating expenses were \$76 million in 2016 compared to \$64 million in the same period of 2015. This increase is due to additional operating costs associated with new assets, including the Kakwa River Facility, Saturn II, SEEP, Musreau III and the Resthaven expansion, partially offset by decreased power costs in 2016.

Gas Services realized operating margin of \$60 million in the fourth quarter and \$195 million for the full-year in 2016 compared to \$33 million and \$144 million during the same periods of the prior year. These increases are a result of higher revenue partially offset by the increase in operating expenses.

Depreciation and amortization included in operations during the fourth quarter and twelve months of 2016 was \$15 million and \$52 million, respectively, compared to \$9 million and \$33 million during the same periods of the prior year. These increases were primarily attributable to the addition of new assets.

For the three months ended December 31, 2016, gross profit was \$45 million compared to \$24 million in the same period of 2015. On a full-year basis, gross profit was \$143 million compared to \$111 million during the twelve months of the prior year. These increases were due to higher operating margin partially offset by increased depreciation expense.

Capital expenditures, not including acquisitions, for the fourth quarter and twelve months of 2016 were \$38 million and \$146 million, respectively, compared to \$33 million and \$242 million for the same periods of 2015. Capital spending in 2016 was largely to advance and substantially complete construction at Musreau III and the Resthaven expansion as well as to progress the development of Duvernay I (defined below in "New Developments"). In 2015, capital spending was primarily to finalize construction at SEEP and Saturn II, as well as to advance construction at Musreau III and the Resthaven expansion.

## New Developments

Pembina continues to progress development of its 100 MMcf/d (gross) (75 MMcf/d net) shallow cut gas plant ("Duvernay I") at an expected capital cost of \$125 million (\$97 million net to Pembina). Engineering is 85 percent complete, all major equipment has been ordered and site grading and piling is complete. The Company anticipates bringing Duvernay I into service late in the fourth quarter of 2017. Pembina is also advancing preliminary engineering on a replica Duvernay II facility in the same area.

Development continues on supporting infrastructure for Duvernay I (the "Field Hub"). Pembina has received all Alberta Energy Regulator approvals for both the facilities and pipelines. The capital cost of the Field Hub and associated pipelines is expected to be \$145 million. Engineering is 55 percent complete with all major equipment ordered for the facility and the civil work and access road completed. To align with the in-service date of Duvernay I, Pembina anticipates bringing the Field Hub into service late in the fourth quarter of 2017.

Subsequent to quarter end, Pembina entered into a 20-year infrastructure development and service agreement (the "Agreement") with Chevron Canada Limited ("Chevron"). The Agreement includes an area of dedication by Chevron, in excess of 10 gross operated townships (over 230,000 acres), concentrated in the prolific, liquids-rich Kaybob region of the Duvernay resource play near Fox Creek, Alberta. Under the Agreement and subject to Chevron sanctioning development in the region, Chevron has the right to require Pembina to construct, own and operate gas gathering pipelines and processing facilities, liquids stabilization facilities and other supporting infrastructure for the area of dedication, together with Pembina providing long-term service for Chevron on its pipelines and at its fractionation facilities. In aggregate, and subject to internal Chevron and regulatory approvals, the infrastructure developed over the term of this Agreement has the potential to represent a multi-billion dollar investment by Pembina. While this agreement and respective obligations of the parties are binding, infrastructure development remains contingent upon Chevron sanctioning, as well as necessary environmental and regulatory approvals.

## Midstream

	3 Months Ended December 31 <sup>(1)</sup> (unaudited)		12 Months Ended December 31 <sup>(1)</sup>	
	2016	2015	2016	2015
<i>(\$ millions, except where noted)</i>				
NGL sales volumes (mbpd)	164	123	143	116
Revenue	954	1,000	3,183	3,690
Cost of goods sold	760	863	2,611	3,232
Net revenue <sup>(2)</sup>	194	137	572	458
Operating expenses	21	23	69	71
Realized loss (gain) on commodity-related derivative financial instruments	15	(9)	7	(40)
Operating margin <sup>(2)</sup>	158	123	496	427
Depreciation and amortization included in operations	27	31	101	107
Unrealized loss (gain) on commodity-related derivative financial instruments	34	(5)	63	4
Gross profit	97	97	332	316
Capital expenditures	112	169	504	566

<sup>(1)</sup> Share of profit or loss of investment in equity accounted investees not included in these results.

<sup>(2)</sup> Refer to "Non-GAAP Measures."

## Business Overview

Pembina offers customers a comprehensive suite of midstream products and services through its Midstream business as follows:

- Crude oil Midstream assets include:
  - 14 truck terminals providing pipeline and market access for crude oil and condensate production that are not pipeline connected;
  - Pembina Nexus Terminal which includes an area where 21 inbound pipeline connections and 13 outbound pipeline connections converge providing access to approximately 1.2 mmbpd of crude oil and condensate supply connected to the terminal;
  - Edmonton North Terminal ("ENT") which includes approximately 900 mbbls of above ground storage having access to crude oil, synthetic crude oil and condensate supply transported on Pembina's operated pipelines and products from various third-party operated pipelines; and

- Canadian Diluent Hub, which is under development and will include 500 mbbbls of above ground storage and will provide direct connectivity for growing domestic condensate volumes to the oil sands via downstream third-party pipelines.
- NGL midstream includes two vertically integrated NGL operating systems – Redwater West and Empress East (as defined below).
  - The Redwater West NGL system ("Redwater West") includes the 750 MMcf/d (322.5 MMcf/d net to Pembina) Younger extraction and fractionation facility in B.C.; two 73 mbpd NGL fractionators ("RFS I" and "RFS II") and 8.3 mmbbls of finished product cavern storage at Redwater, Alberta; and third-party fractionation capacity in Fort Saskatchewan, Alberta. Redwater West purchases NGL mix from various natural gas and NGL producers and fractionates it into finished products for further distribution and sale. Also located at the Redwater site is Pembina's rail-based terminal which services Pembina's proprietary and customer needs for importing and exporting NGL products.
  - The Empress East NGL system ("Empress East") includes 2.1 bcf/d of capacity in the straddle plants at Empress, Alberta; 20 mbpd of fractionation capacity and 1.1 mmbbls of cavern storage in Sarnia, Ontario; and 7.1 mmbbls of hydrocarbon storage at Corunna, Ontario. Empress East extracts NGL mix from natural gas at the Empress straddle plants and purchases NGL mix from other producers/suppliers. Ethane and condensate are generally fractionated out of the NGL mix at Empress and sold into Alberta markets. The remaining NGL mix is transported by pipeline to Sarnia, Ontario for further fractionation, distribution and sale. Storage and terminalling services are also provided to customers at the Corunna site.

The financial performance of Pembina's Midstream business can be affected by seasonal demands for products and other market factors. In NGL midstream, propane inventory generally builds over the second and third quarters of the year and is sold in the fourth quarter and the first quarter of the following year during the winter heating season. Condensate, butane and ethane are generally sold rateably throughout the year. See "Risk Factors" for more information.

### **Operational & Financial Performance**

In the Midstream business, revenue was \$954 million and \$3.2 billion during the fourth quarter and full year of 2016, respectively, compared to \$1.0 billion and \$3.7 billion for the same periods in 2015. Despite the start-up of RFS II, increased storage revenue and increases in NGL pricing, the decreases in revenue for the quarter and full-year are due to decreases in certain marketing opportunities. Pembina's Midstream business generated net revenue of \$194 million during the fourth quarter of 2016 compared to \$137 million during the fourth quarter of 2015. This increase was largely the result of the start-up of RFS II as well as a stable-to-improving commodity price environment within the current year and higher realized storage revenue during the current period. Full-year net revenue was \$572 million in 2016 compared to \$458 million in 2015. This increase was due to the same factors noted above, partially offset by a decrease in net revenue for crude oil midstream which was impacted by tighter crude oil price differentials in the current year.

Operating expenses during the fourth quarter of 2016 were \$21 million compared to \$23 million in the fourth quarter of 2015. Operating expenses for the full-year were \$69 million in 2016 compared to \$71 million in 2015. These decreases were due to a crude-by-rail marketing contract expiry and disposition of interests in two full-service truck terminal joint ventures, partially offset by increased expenses associated with the start-up of RFS II.

Operating margin was \$158 million during the fourth quarter of 2016 and \$496 million during the full twelve months of the year compared to \$123 million and \$427 million in the comparable periods of 2015. These increases were primarily due to the same factors affecting net revenue and operating expenses as discussed above.

The Company's crude oil midstream operating margin was \$46 million in the fourth quarter of 2016 compared to \$37 million for the same period in 2015. This increase is due to increased storage revenue in the current period. For the full twelve months of the year, crude oil midstream operating margin was \$162 million compared to \$170 million during the prior year. This decrease is because of lower commodity-related margins as a result of tighter price differentials and the disposition of interests in two full-service truck terminal joint ventures, partially offset by increased storage revenue.

Operating margin for Pembina's NGL midstream activities was \$112 million for the fourth quarter of 2016 compared to \$86 million for the fourth quarter of 2015. For the twelve months ended December 31, 2016, operating margin was \$334 million compared to \$257 million for the same period in 2015. These increases were primarily due to the start-up of RFS II, as well as product margin increases for propane and butane, offset by increased realized losses on commodity-related derivatives.

Depreciation and amortization included in operations for Pembina's Midstream business was \$27 million and \$101 million in the fourth quarter and full twelve months of 2016, respectively, compared to \$31 million and \$107 million for the same periods of 2015. These decreases are due to certain useful life adjustments.

For the three months ended December 31, 2016, gross profit in this business was \$97 million, consistent with the comparative period in the prior year. In the fourth quarter of 2016, gross profit was impacted by an unrealized loss on commodity-related derivatives of \$34 million compared to a gain of \$5 million in the fourth quarter of 2016. For the twelve months ended December 31, 2016, gross profit was \$332 million compared to \$316 million in 2015. The year-over-year increase was due to the same factors discussed above in respect of operating margin in addition to an unrealized loss on commodity-related derivatives of \$63 million in the current year compared to a loss of \$4 million in the prior year. In the current year, the number of commodity-related derivatives the Company has in place has increased due to incremental propane hedges to secure margin through the completion of the Company's heavy capital program.

Capital expenditures for the fourth quarter and full twelve months of 2016 totaled \$112 million and \$504 million compared to \$169 million and \$566 million for the same periods of 2015. Capital spending in this business in 2016 was primarily directed towards the ongoing construction of RFS III and further development of the projects outlined in the "New Developments" section below, as well as the completion of above ground storage tanks at ENT and progressing construction of CDH. Capital spending in this business in 2015 was primarily directed towards the development of RFS II, RFS III and NGL storage caverns and associated infrastructure. Capital was also deployed to progress above ground storage at ENT and the preliminary work for the CDH.

### **New Developments**

As previously announced, Pembina has been evaluating a combined propane dehydrogenation ("PDH") and polypropylene ("PP") production facility (the "PDH/PP Facility") in Alberta's Industrial Heartland. The feasibility study, which was completed late in 2016, yielded encouraging results, demonstrating the economic merits for value-add processing for Alberta propane. The project was also conditionally awarded \$300 million in royalty credits from the Alberta Government's Petrochemicals Diversification Program. Subject to conclusion of commercial negotiations with Pembina's partner, and other required approvals, a final investment decision with respect to the PDH/PP Facility is expected to be made in the second quarter of 2018.

Pembina has substantially advanced construction of RFS III, its 55 mbpd propane-plus third fractionator at Redwater, which continues to trend on-budget. Overall construction progress is at 90 percent and will be effectively complete by early in the second quarter of 2017, which will be followed by commissioning activities. The Company expects to be able to bring the project into service early in the third quarter of 2017.

Pembina continues to advance construction of infrastructure in support of North West Redwater Partnership's ("North West") planned refinery. Overall, the project is 70 percent complete, engineering and procurement activities are over 90 percent finished and nearly all materials and equipment are on site. By late-2017, all phases of the project will be placed into service.

Pembina is also progressing construction of CDH, with civil work in support of above ground storage construction over 90 percent complete and engineering over 95 percent complete. Pipeline connectivity between Pembina's Conventional Pipelines' infrastructure and existing third-party diluent pipeline connectivity at the Company's Redwater site is complete and volumes are flowing to third-party delivery connections. The full project has a targeted in-service date of mid-2017 to align with the in-service date of the Phase III Expansion and is trending under budget.

Pembina is also pursuing several new initiatives to further support operations at ENT. One of the major initiatives will be to develop a new delivery system from ENT into large-scale regional third-party infrastructure. Pembina will also be investing to improve delivery access for new commodities into ENT. These initiatives are expected to enhance Pembina's customer service offering and better position the Company's midstream infrastructure to accommodate increased volumes from the Phase III Expansion. The program will be developed in a number of different phases and will be placed into service throughout 2017.

## Other Non-Operating Expenses

### Pension Liability

Pembina maintains a defined contribution plan and non-contributory defined benefit pension plans covering employees and retirees. The defined benefit plans include a funded registered plan for all qualified employees and an unfunded supplemental retirement plan for those employees affected by the Canada Revenue Agency maximum pension limits. At the end of 2016, the pension plans carried a net obligation of \$26 million compared to a net obligation of \$22 million at the end of 2015. At December 31, 2016, plan obligations amounted to \$190 million (2015: \$168 million) compared to plan assets of \$164 million (2015: \$146 million). In 2016, the pension plans' expense was \$11 million (2015: \$11 million). Pembina's contributions to the pension plans totaled \$15 million in 2016 (2015: \$9 million).

### Financing Activity

On January 15, 2016, Pembina closed a \$170 million offering of 6.8 million cumulative redeemable minimum rate reset class A preferred shares, Series 11 (the "Series 11 Preferred Shares") at a price of \$25.00 per share. The Series 11 Preferred Shares began trading on the Toronto Stock Exchange on January 15, 2016 under the symbol PPL.PR.K.

On March 29, 2016, Pembina closed a bought deal offering of 10.1 million common shares at a price of \$34.00 per share for aggregate gross proceeds of approximately \$345 million to fund the Kakwa River acquisition.

On April 27, 2016, Pembina closed a \$250 million offering of 10 million cumulative redeemable minimum rate reset class A preferred shares, Series 13 (the "Series 13 Preferred Shares") at a price of \$25.00 per share. The Series 13 Preferred Shares began trading on the Toronto Stock Exchange on April 27, 2016 under the symbol PPL.PR.M.

On August 11, 2016, Pembina closed an offering of \$500 million of senior unsecured Series 7 medium-term notes (the "Series 7 Notes"). The Series 7 Notes have a fixed coupon of 3.71 percent per annum, paid semi-annually, and mature on August 11, 2026.

Subsequent to the year-end, on January 20, 2017, Pembina closed an offering of \$300 million of senior unsecured Series 8 medium-term notes (the "Series 8 Notes"). The Series 8 Notes have a fixed coupon of 2.99 percent per annum, paid semi-annually, and mature on January 22, 2024. Simultaneously, Pembina closed an offering of \$300 million of senior unsecured

Series 9 medium-term notes (the "Series 9 Notes"). The Series 9 Notes have a fixed coupon of 4.74 percent per annum, paid semi-annually, and mature on January 21, 2047.

## Liquidity & Capital Resources

<i>(\$ millions)</i>	December 31, 2016	December 31, 2015
Working capital <sup>(1)</sup>	<b>(109)</b>	37
Variable rate debt <sup>(2)</sup>		
Bank debt	<b>353</b>	25
Total variable rate debt outstanding (average of 1.9%)	<b>353</b>	25
Fixed rate debt <sup>(2)</sup>		
Senior unsecured notes	<b>467</b>	467
Senior unsecured medium-term notes	<b>3,200</b>	2,700
Total fixed rate debt outstanding (average of 4.4%)	<b>3,667</b>	3,167
Convertible debentures <sup>(2)</sup>	<b>147</b>	149
Finance lease liability	<b>13</b>	12
Total debt and debentures outstanding	<b>4,180</b>	3,353
Cash and unutilized debt facilities	<b>2,211</b>	2,031

<sup>(1)</sup> As at December 31, 2016, working capital includes \$6 million (December 31, 2015: \$5 million) associated with the current portion of loans and borrowings.

<sup>(2)</sup> Face value.

Pembina anticipates its cash flow from operating activities, the majority of which is derived from fee-for-service contracts, will be more than sufficient to meet its short-term operating obligations and fund its targeted dividend level. In the short term, Pembina expects to source funds required for capital projects from cash and cash equivalents, its credit facility, the DRIP and by accessing the debt and equity capital markets, as required. Based on its successful access to financing in the debt and equity markets over the past several years and recently, Pembina believes it should continue to have access to funds. Refer to "Risk Factors – Additional Financing and Capital Resources" in this MD&A and "Counterparty Credit Risk" in note 24 to Pembina's Financial Statements for more information. Management remains satisfied that the leverage employed in Pembina's capital structure, of which a significant portion is used to fund assets under construction which will not contribute to the results until they come into service, is sufficient and appropriate given the characteristics and operations of the underlying asset base.

Pembina continues to closely monitor and reassess the creditworthiness of its counterparties, which has resulted in the Company reducing or mitigating its exposure to certain counterparties where it was deemed warranted and permitted under contractual terms. Financial assurances may include guarantees, letters of credit and cash. Letters of credit totaling \$115 million (December 31, 2015: \$68 million) are held primarily in respect of customer trade receivables.

Management may make adjustments to Pembina's capital structure as a result of changes in economic conditions or the risk characteristics of the underlying assets. To maintain or modify Pembina's capital structure in the future, Pembina may renegotiate new debt terms, repay existing debt, seek new borrowing and/or issue additional equity.

Pembina's credit facilities consist of an unsecured \$2.5 billion (December 31, 2015: \$2.0 billion) revolving credit facility which includes a \$250 million accordion feature, which matures in May 2020, and an operating facility of \$30 million (December 31, 2015: \$30 million) due in May 2017, which is typically renewed on an annual basis. Borrowings on the revolving credit facility and the operating facility bear interest at prime lending rates plus nil to 1.25 percent (December 31, 2015: nil to 1.25 percent) or Bankers' Acceptances and LIBOR rates plus 1.00 percent to 2.25 percent (December 31, 2015: 1.00 to 2.25 percent). Margins on the credit facilities are based on the credit rating of Pembina's senior unsecured debt. There are no repayments due over the term of these facilities. As at December 31, 2016, Pembina

had \$2.2 billion (December 31, 2015: \$2.0 billion) of cash and unutilized debt facilities. At December 31, 2016, Pembina had loans and borrowings (excluding amortization, letters of credit and finance lease liabilities) of \$4.0 billion (December 31, 2015: \$3.2 billion). Pembina also had an additional \$30 million (December 31, 2015: \$23 million) in letters of credit issued pursuant to a separate credit facility. Pembina is required to meet certain specific and customary affirmative and negative financial covenants under its senior unsecured notes, medium-term notes and revolving credit and operating facilities, including a requirement to maintain certain financial ratios. Pembina is also subject to customary restrictions on its operations and activities under its notes and credit facilities, including restrictions on the granting of security, incurring indebtedness and the sale of its assets. Pembina's financial covenants include the following:

<b>Debt Instrument</b>	<b>Financial Covenant<sup>(1)</sup></b>	<b>Ratio</b>	<b>Ratio at December 31, 2016</b>
Senior unsecured medium-term notes	Funded Debt to Capitalization	Maximum 0.70	0.33
Revolving unsecured credit facility	Debt to Capital	Maximum 0.65	0.33
	EBITDA to senior interest coverage	Minimum 2.5:1.0	7.2:1.0

<sup>(1)</sup> Terms as defined in relevant agreements.

In addition to the table above, Pembina has additional customary covenants on its other senior unsecured notes. Pembina was in compliance with all covenants under its notes and credit facilities as at the year ended December 31, 2016 (December 31, 2015 – in compliance) and, as of this date, is not at material risk of breaching its covenants.

### **Credit Ratings**

The following information with respect to Pembina's credit ratings is provided as it relates to Pembina's financing costs and liquidity. Specifically, credit ratings affect Pembina's ability to obtain short-term and long-term financing and the cost of such financing. A reduction in the current ratings on Pembina's debt by its rating agencies, particularly a downgrade below investment-grade ratings, could adversely affect Pembina's cost of financing and its access to sources of liquidity and capital. In addition, changes in credit ratings may affect Pembina's ability, and the associated costs, to enter into normal course derivative or hedging transactions. Credit ratings are intended to provide investors with an independent measure of credit quality of any issues of securities. The credit ratings assigned by the rating agencies are not recommendations to purchase, hold or sell the securities nor do the ratings comment on market price or suitability for a particular investor. Any rating may not remain in effect for a given period of time or may be revised or withdrawn entirely by a rating agency in the future if, in its judgment, circumstances so warrant.

DBRS rates Pembina's senior unsecured notes and senior unsecured medium-term notes 'BBB' and Class A Preferred Shares Pfd-3. S&P's long-term corporate credit rating on Pembina is 'BBB' and its rating of the Class A preferred shares is P-3 (High).

## Capital Expenditures

(\$ millions)	3 Months Ended December 31 (unaudited)		12 Months Ended December 31	
	2016	2015	2016	2015
Development capital				
Conventional Pipelines	294	227	957	932
Oil Sands & Heavy Oil	5	16	124	28
Gas Services	38	33	146	242
Midstream	112	169	504	566
Corporate/other projects	4	3	14	43
Total development capital	453	448	1,745	1,811
Acquisition			566	

For the three months ended December 31, 2016, capital expenditures were \$453 million compared to \$448 million during the same three-month period of 2015. For the year ended December 31, 2016, capital expenditures, excluding acquisitions, were \$1,745 million compared to \$1,811 million during the year ended December 31, 2015. Conventional Pipelines' capital expenditures were primarily incurred to progress ongoing pipeline expansion projects. Oil Sands & Heavy Oil's capital expenditures were largely in relation to the expansion of the Horizon Pipeline as well as an expansion of the Cheecham Lateral. Gas Services' capital was deployed to complete the Musreau III Facility, complete the Resthaven expansion as well as progress the development of Duvernay I. Midstream's capital expenditures were primarily directed towards completing the above ground storage at ENT as well as the ongoing construction of RFS II, RFS III, CDH and the infrastructure for North West.

## Contractual Obligations at December 31, 2016

(\$ millions)	Payments Due By Period				
	Total	Less than 1 year	1 – 3 years	3 – 5 years	After 5 years
Leases and Other <sup>(1)</sup>	863	108	214	195	346
Loans and borrowings <sup>(2)</sup>	6,147	162	589	1,084	4,312
Convertible debentures <sup>(2)</sup>	167	10	157		
Construction commitments <sup>(3)</sup>	2,196	1,794	70	16	316
Total contractual obligations <sup>(2)(4)</sup>	9,373	2,074	1,030	1,295	4,974

<sup>(1)</sup> Includes office space, vehicles and over 3,500 rail car leases supporting future propane transportation in the Midstream business. The Company has sublet office space and rail cars up to 2027 and has contracted sub-lease payments for a potential of \$100 million over the term.

<sup>(2)</sup> Excluding deferred financing costs. Including interest payments on senior unsecured notes.

<sup>(3)</sup> Excluding significant projects that are awaiting regulatory approval at December 31, 2016 and for which Pembina is not committed to construct.

<sup>(4)</sup> Pembina enters into product purchase agreements and power purchase agreements to secure supply for future operations. Purchase prices of both NGL and power are dependent on current market prices. Volumes and prices for NGL and power contracts cannot be reasonably determined and therefore an amount has not been included in the contractual obligations schedule. Product purchase agreements range from one to ten years and involve the purchase of NGL products from producers. Assuming product is available, Pembina has secured between 51 and 72 mtpd each year up to and including 2025. Power purchase agreements range from one to 25 years and involve the purchase of power from electrical service providers. The Company has secured between 4 and 29 MW/d each year up to and including 2041.

Pembina is, subject to certain conditions, contractually committed to the construction and operation of the Phase III Expansion, RFS III, the NEBC Expansion, infrastructure for North West, Duvernay I, as well as certain pipeline connections and laterals and select caverns at the Company's Redwater site. Additional commitments exist in relation to assets recently brought into service and other corporate infrastructure. See "Forward-Looking Statements & Information" and "Liquidity & Capital Resources."

## Dividends

### Common Share Dividends

Common share dividends are payable if, as, and when declared by Pembina's Board of Directors. The amount and frequency of dividends declared and payable is at the discretion of the Board of Directors, which considers earnings, cash flow, capital requirements, the financial condition of Pembina and other relevant factors when making its dividend determination.

### Preferred Share Dividends

The holders of Pembina's class A preferred shares are entitled to receive fixed cumulative dividends payable quarterly on the 1st day of March, June, September and December, if, as and when declared by the Board of Directors of Pembina, for the initial fixed-rate period for each series of preferred share.

### DRIP

Eligible Pembina shareholders have the opportunity to receive, by reinvesting the cash dividends declared payable by Pembina on their common shares, either (i) additional common shares at a discounted subscription price of 97 percent of the Average Market Price (as defined in the DRIP), pursuant to the "Dividend Reinvestment Component" of the DRIP, or (ii) a premium cash payment equal to 101 percent of the amount of reinvested dividends (the "Premium Dividend™"), pursuant to the "Premium Dividend™ Component" of the DRIP.

Participation in the DRIP for the fourth quarter and twelve months of 2016 was 58 percent and 61 percent (2015: 61 percent and 60 percent) of common shares outstanding. Proceeds for the fourth quarter of 2016 were \$110 million and \$449 million during the full year compared to \$99 million and \$373 million for the same periods of 2015.

## Related Party Transactions

For the twelve months ended December 31, 2016, Pembina had no transactions with related parties as defined in International Accounting Standard 24 – *Related Party Disclosures*, except those pertaining to contributions to Pembina's defined benefit pension plan and transactions with key management personnel in the ordinary course of their employment or directorship agreements.

## Critical Accounting Judgments and Estimates

The preparation of the Consolidated Financial Statements in conformity with IFRS requires management to make judgments, estimates and assumptions that are based on the circumstances and estimates at the date of the financial statements and affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses. Actual results may differ from these estimates.

Judgments, estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected.

The following judgment and estimation uncertainties are those management considers material to the Company's financial statements:

### Judgments

- (i) Business combinations

Business combinations are accounted for using the acquisition method of accounting. The determination of fair value often requires management to make judgments about future possible events. The assumptions with respect to

determining the fair value of property, plant and equipment and intangible assets acquired generally require the most judgment.

(ii) Depreciation and amortization

Depreciation and amortization of property, plant and equipment and intangible assets are based on management's judgment of the most appropriate method to reflect the pattern of an asset's future economic benefit expected to be consumed by the Company. Among other factors, these judgments are based on industry standards and historical experience.

(iii) Impairment

Assessment of impairment is based on management's judgment of whether there are internal and external factors that would indicate that an asset, or cash generating unit ("CGU") is impaired. The determination of a CGU is also based on management's judgment and is an assessment of the smallest group of assets that generate cash inflows independently of other assets. The asset composition of a CGU can directly impact the recoverability of the assets included therein. In assessing the recoverability, each CGU's carrying value is compared to its recoverable amount, defined as the greater of fair value less costs to sell and value in use.

**Estimates**

(i) Business Combinations

Estimates of future cash flows, forecast prices, interest rates and discount rates are made in determining the fair value of assets acquired and liabilities assumed. Changes in any of the assumptions or estimates used in determining the fair value of acquired assets and liabilities could impact the amounts assigned to assets, liabilities, intangible assets and goodwill in the purchase price equation. Future earnings can be affected as a result of changes in future depreciation and amortization, asset or goodwill impairment.

(ii) Provisions and contingencies

Provisions recognized are based on management's judgment about assessing contingent assets and liabilities and timing, scope and amount of assets and liabilities. Management uses judgment in determining the likelihood of realization of contingent assets and liabilities to determine the outcome of contingencies.

Based on the long-term nature of the decommissioning provision, the most significant uncertainties in estimating the provision are the discount rates used, the costs that will be incurred and the timing of when these costs will occur.

(iii) Deferred taxes

The calculation of the deferred tax asset or liability is based on assumptions about the timing of many taxable events and the enacted or substantively enacted rates anticipated to be applicable to income in the years in which temporary differences are expected to be realized or reversed.

(iv) Depreciation and amortization

Estimated useful lives of property, plant and equipment and intangible assets are based on management's assumptions and estimates of the physical useful lives of the assets, the economic lives, which may be associated with the reserve lives and commodity type of the production area, in addition to the estimated residual value.

(v) Impairment tests

Impairment tests include management's best estimates of future cash flows and discount rates.

## Changes in Accounting Policies

### New standards adopted in 2016

There were no new standards or amendments issued by the International Accounting Standards Board ("IASB") that were adopted by Pembina as of January 1, 2016.

### New standards and interpretations not yet adopted

Certain new standards, interpretations, amendments and improvements to existing standards were issued by the IASB or IFRS Interpretation Committee ("IFRIC") and are effective for accounting periods beginning after January 1, 2017. These standards have not been applied in preparing these Financial Statements. Those which may be relevant to Pembina are described below:

#### IFRS 9 Financial Instruments (2014)

IFRS 9 *Financial Instruments* (2014) has a mandatory effective date of January 1, 2018 and is available for early adoption. The new standard introduces new requirements for the classification and measurement of financial assets, amends the impairment model, and includes a new general hedge accounting standard which aligns hedge accounting more closely with risk management.

The Company intends to adopt IFRS 9 Financial Instruments (2014) effective January 1, 2017. The Company does not expect the standard to have a material impact on the financial statements.

#### IFRS 15 Revenue from Contracts with Customers

In May 2014, the IASB issued IFRS 15 *Revenue from contracts with customers*, which supersedes existing revenue guidance, effective for periods beginning on or after January 1, 2018. IFRS 15 contains a single model that applies to contracts with customers and two approaches to recognizing revenue: at a point in time or over time. The model outlines a five step analysis to assess contracts which involves identifying the contract, identifying the performance obligations, determining the transaction price, allocating the transaction price to the performance obligations and recognizing revenue when or as the entity satisfies a performance obligation. Detailed guidance is also provided on a number of areas for which there was not previously guidance, including contract costs and contract modifications. In April 2016, the IASB issued Clarifications to IFRS 15, *Revenue from contracts with customers*, which is effective at the same time as IFRS 15, and provides additional guidance on the five step analysis and transition.

The Company intends to adopt IFRS 15 and the Clarifications on the January 1, 2018 effective date. The Company has completed a detailed implementation plan, identified revenue streams, and major contracts types. The Company is in the process of evaluating the impact that the standard will have on its financial statements and disclosure, however, the extent of the impact has not yet been determined. The Company expects to report more detailed information on the impact of the new standard as it is determined.

#### IFRS 16 Leases

IFRS 16 *Leases* is effective for annual periods beginning on or after January 1, 2019. The new standard results in substantially all lessee leases being recorded on the statement of financial position.

The Company intends to adopt IFRS 16 for the annual period beginning on January 1, 2019. The Company is currently evaluating the impact that the standard will have on its results of operations and financial position.

## Controls and Procedures

### Disclosure Controls and Procedures

Pembina maintains disclosure controls and procedures designed to provide reasonable assurance that information required to be disclosed in Pembina's filings is reviewed, recognized and disclosed accurately and in the appropriate time period.

An evaluation, as of December 31, 2016, of the effectiveness of the design and operation of Pembina's disclosure controls and procedures, as defined in Rule 13a - 15(e) and 15d - 15(e) under the United States Securities Exchange Act of 1934, as amended (the "Exchange Act") and National Instrument 52-109 Certification of Disclosure in Issuer's Annual and Interim Filings ("NI 52-109"), was carried out by management, including the Chief Executive Officer ("CEO") and the Chief Financial Officer ("CFO"). Based on that evaluation, the CEO and CFO have concluded that the design and operation of Pembina's disclosure controls and procedures were effective as at December 31, 2016 to ensure that material information relating to the Company is made known to the CEO and CFO by others, particularly during the period during which the annual filings are being prepared.

It should be noted that while the CEO and CFO believe that Pembina's disclosure controls and procedures provide a reasonable level of assurance that they are effective, they do not expect that Pembina's disclosure controls and procedures will prevent all errors or fraud. A control system, no matter how well conceived or operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met.

### Internal Control over Financial Reporting

Pembina maintains internal control over financial reporting which is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with IFRS.

Management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rules 13a - 15(f) and 15d - 15(f) under the Exchange Act and under NI 52-109.

Management, including the CEO and the CFO, has conducted an evaluation of Pembina's internal control over financial reporting based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

Based on management's assessment as at December 31, 2016, the CEO and CFO have concluded that Pembina's internal control over financial reporting is effective.

Further, there has been no change in the Company's internal control over financial reporting that occurred during the year covered by this Annual Report that has materially affected, or are reasonably likely to materially affect, Pembina's internal control over financial reporting.

The effectiveness of internal control over financial reporting as of December 31, 2016 was audited by KPMG LLP, an independent registered public accounting firm, as stated in their Report of Independent Registered Public Accounting Firm, which is included in this 2016 Annual Report to shareholders.

Due to its inherent limitations, internal control over financial reporting is not intended to provide absolute assurance that a misstatement of Pembina's financial statements would be prevented or detected. Further, the evaluation of the effectiveness of internal control over financial reporting was made as of a specific date, and continued effectiveness in future periods is subject to the risks that controls may become inadequate.

## Risk Factors

Pembina's value proposition is based on balancing economic benefits against risk. Where appropriate, Pembina will reduce risk. In addition to an objective of contractually eliminating its business risk by contracting long-term firm-service commitments, Pembina has a formal Risk Management Program including policies, procedures and systems designed to mitigate any residual risks. The risks that may affect the business and operation of Pembina and its operating subsidiaries are described at a high level within this MD&A and more fully within Pembina's Annual Information Form ("AIF"), an electronic copy of which is available at [www.pembina.com](http://www.pembina.com) or on Pembina's SEDAR profile at [www.sedar.com](http://www.sedar.com) and which is filed under Form 40-F on Pembina's EDGAR profile at [www.sec.gov](http://www.sec.gov). Further, additional discussion about counterparty risk, market risk, liquidity risk and additional information on financial risk management can be found in Note 24.

Shareholders and prospective investors should carefully consider these risk factors before investing in Pembina's securities, as each of these risks may negatively affect the trading price of Pembina's securities, the amount of dividends paid to shareholders and the ability of Pembina to fund its debt obligations, including debt obligations under its outstanding convertible debentures and any other debt securities that Pembina may issue from time to time.

### *Operational Risks*

Operational risks include: pipeline leaks; the breakdown or failure of equipment, pipelines and facilities, information systems or processes; the compromise of information and control systems; the performance of equipment at levels below those originally intended (whether due to misuse, unexpected degradation or design, construction or manufacturing defects); spills at truck terminals and hubs; spills associated with the loading and unloading of harmful substances onto rail cars and trucks; failure to maintain adequate supplies of spare parts; operator error; labour disputes; disputes with interconnected facilities and carriers; operational disruptions or apportionment on third-party systems or refineries which may prevent the full utilization of Pembina's facilities and pipelines; and catastrophic events including but not limited to natural disasters, fires, floods, explosions, train derailments, earthquakes, acts of terrorists and saboteurs, and other similar events, many of which are beyond the control of Pembina. Pembina may also be exposed from time to time, to additional operational risks not stated in the immediately preceding sentences. The occurrence or continuance of any of these events could increase the cost of operating Pembina's assets or reduce revenue, thereby impacting earnings. Additionally, Pembina's facilities and pipelines are reliant on electrical power for their operations. A failure or disruption within the local or regional electrical power supply or distribution or transmission systems could significantly affect ongoing operations. Further, a significant increase in the cost of power or fuel could have a materially negative effect on the level of profit realized in cases where the relevant contracts do not provide for recovery of such costs.

Pembina is committed to preserving customer and shareholder value by proactively managing operational risk through safe and reliable operations. Senior managers are responsible for the daily supervision of operational risk by ensuring appropriate policies, procedures and systems are in place within their business units and internal controls are operating efficiently. Pembina also has an extensive program to manage system integrity, which includes the development and use of in-line inspection tools and various other leak detection technologies. Pembina's maintenance, excavation and repair programs are focused on risk mitigation and, as such, resources are directed to the areas of greatest benefit and infrastructure is replaced or repaired as required. Pembina carries insurance coverage with respect to some, but not all, casualty occurrences in amounts customary for similar business operations, which coverage may not be sufficient to compensate for all casualty occurrences. In addition, Pembina has a comprehensive Corporate Security Management Program designed to reduce security-related risks.

### *Commodity Price Risk*

Pembina's Midstream business includes activities related to product storage, terminalling, and hub services. These activities expose Pembina to certain risks including that Pembina may experience volatility in revenue, and impairments related to the book value of stored product, due to fluctuations in commodity prices. Primarily, Pembina enters into contracts to purchase and sell crude oil and NGL at floating market prices. The prices of products that are marketed by Pembina are subject to volatility as a result of such factors as seasonal demand changes, extreme weather conditions, market inventory levels, general economic conditions, changes in crude oil markets and other factors. Pembina manages its risk exposure by balancing purchases and sales to lock-in margins. Notwithstanding Pembina's management of price and quality risk, marketing margins for commodities can vary and have varied significantly from period to period. This variability could have an adverse effect on the results of Pembina's commercial Midstream business and its overall results of operations. To assist in effectively smoothing that variability inherent in this business, Midstream is investing in assets that have a fee-based revenue component, and is looking to expand this area going forward.

The Midstream business is also exposed to possible price declines between the time Pembina purchases NGL feedstock and sells NGL products, and to decreasing frac spreads. Frac spread is the difference between the sale prices of NGL products and the cost of NGL sourced from natural gas and acquired at natural gas-related prices. Frac spreads can change significantly from period to period depending on the relationship between NGL and natural gas prices (the "frac spread ratio"), absolute commodity prices, and changes in the Canadian to U.S. dollar foreign exchange rate. There is also a differential between NGL product prices and crude oil prices which can change margins realized for midstream products separate from frac spread ratio changes. The amount of profit or loss made on the extraction portion of the NGL midstream business will generally increase or decrease with frac spreads. This exposure could result in variability of cash flow generated by the NGL midstream business, which could affect Pembina and the cash dividends that Pembina is able to distribute.

Pembina responds to commodity price risk by using an active Risk Management Program to fix revenues to pay for a minimum of 50 percent of the fixed committed term natural gas supply costs. Pembina's fixed committed plus discretionary natural gas supply can vary from year to year based on industry dynamics. Additionally, Pembina's Midstream business is also exposed to variability in quality, time and location differentials. The Company may also utilize commodity-related derivative instruments as part of its overall risk management strategy to assist in managing the exposure to commodity prices, as well as interest rates, cost of power and foreign exchange risk. The Company does not trade financial instruments for speculative purposes. Commodity price fluctuations and volatility can also impact producer activity and throughput in Pembina's infrastructure, as set out below.

For more information with respect to Pembina's financial instruments and financial risk management program, see Note 24 to Pembina's Financial Statements, which note is incorporated by reference herein.

### *Reserve Replacement, Throughput and Product Demand*

Pembina's Conventional Pipeline tariff revenue is based upon a variety of tolling arrangements, including fee-for-service, cost-of-service agreements and market-based tolls. As a result, certain pipeline tariff revenue is heavily dependent upon throughput levels of crude oil, NGL and condensate. Future throughput on Pembina's crude oil and NGL pipelines and replacement of oil and gas reserves in the service areas will be dependent upon the activities of producers operating in those areas as they relate to exploiting their existing reserve bases and exploring for and developing additional reserves, and technological improvements leading to increased recovery rates. Similarly, the volumes of natural gas processed through Pembina's gas processing assets depends on production of natural gas in the areas serviced by the gas processing business and associated pipelines. Without reserve additions, or expansion of the service areas, volumes on such pipelines

and in such facilities would decline over time as reserves are depleted. As oil and gas reserves are depleted, production costs may increase relative to the value of the remaining reserves in place, causing producers to shut-in production or seek out lower cost alternatives for transportation. If the level of tariffs collected by Pembina decreases as a result, cash flow available for dividends to shareholders and to service obligations under Pembina's debt securities and Pembina's other debt obligations could be adversely affected.

Over the long-term, the ability and willingness of shippers to continue production, and as a consequence, Pembina's business, will also depend, in part, on the level of demand and prices for crude oil, condensate, NGL and natural gas in the markets served by the crude oil and NGL pipelines and gas processing and gathering infrastructure in which Pembina has an interest. Producers may shut-in production at lower product prices or higher production costs.

Global economic events may continue to have a substantial impact on the prices of such products. Pembina cannot predict the impact of future supply/demand or economic conditions, fuel conservation measures, alternative fuel requirements, governmental regulation or technological advances in fuel economy and energy generation devices on the energy and petrochemical industries or future demand for and prices of natural gas, crude oil, condensate and NGL. A lower commodity price environment will generally reduce drilling activity, and as a result the supply growth that has been fuelling the growth in midstream infrastructure could slow down. Producers in the areas serviced by the business may not be successful in exploring for and developing additional reserves or achieving technological improvements to increase recovery rates and production costs given lower commodity prices, and the gas plants and the pipelines may not be able to maintain existing volumes of throughput. These factors could negatively affect pipeline and processing capacity value as transportation and processing capacity becomes more abundant. Future prices of these products are determined by supply and demand factors, including weather and general economic conditions as well as economic, political and other conditions in other oil and natural gas regions, all of which are beyond Pembina's control. Lower production volumes will also increase the competition for natural gas supply at gas processing plants which could result in higher shrinkage premiums being paid to natural gas producers.

The rate and timing of production from proven natural gas reserves tied into the gas plants is at the discretion of the producers and is subject to regulatory constraints. The producers have no obligation to produce natural gas from these lands. Pembina's gas processing assets are connected to various third-party trunk line systems. Operational disruptions or apportionment on those third-party systems may prevent the full utilization of the business.

#### *Customer Contracts*

Throughput on Pembina's pipelines is or will be governed by transportation contracts or tolling arrangements with various producers of petroleum products. In addition, Pembina is party to numerous contracts of varying durations in respect of its gas gathering, processing and fractionation facilities as well as terminalling and storage services. Any default by counterparties under such contracts or any expiration of such contracts or tolling arrangements without renewal or replacement may have an adverse effect on Pembina's business. Further, some of the contracts associated with the services described above are comprised of a mixture of firm and non-firm contracts and the revenue that Pembina earns on contracts which are based on non-firm or firm without take-or-pay service is dependent on the volume of natural gas, NGL, crude oil and condensate produced by producers in the relevant geographic areas. Accordingly, lower than historical production volumes in these areas (for reasons such as low commodity prices) may have an adverse effect on Pembina's revenue.

### *Reputation*

Reputational risk is the potential market or company specific events that could result in the deterioration of Pembina's reputation with key stakeholders. The potential for harming Pembina's corporate reputation exists in every business decision and all risks can have an impact on reputation, which in turn can negatively impact Pembina's business and its securities. Reputational risk cannot be managed in isolation from other forms of risk. Credit, market, operational, insurance, liquidity, regulatory and legal, technology risks, among others, must all be managed effectively to safeguard Pembina's reputation. Pembina's reputation could also be impacted by the actions and activities of other companies operating in the energy industry, particularly other energy infrastructure providers, over which it has no control. In particular, Pembina's reputation could be impacted by negative publicity related to pipeline incidents, unpopular expansion plans or new projects, and due to opposition from organizations opposed to energy, oil sands and pipeline development and particularly with shipment of production from oil sands regions. Negative impacts from a compromised reputation could include revenue loss, reduction in customer base, delays in obtaining regulatory approvals with respect to growth projects, and decreased value of Pembina's securities.

### *Environmental Costs and Liabilities*

Pembina's operations, facilities and petroleum product shipments are subject to extensive national, regional and local environmental, health and safety laws and regulations governing, among other things, discharges to air, land and water, the handling and storage of petroleum products and hazardous materials, waste disposal, the protection of employee health, safety and the environment, and the investigation and remediation of contamination. Pembina's facilities could experience incidents, malfunctions or other unplanned events that result in spills or emissions in excess of permitted levels and result in personal injury, fines, penalties or other sanctions and property damage. Pembina could also incur liability in the future for environmental contamination associated with past and present activities and properties. The facilities and pipelines must maintain a number of environmental and other permits from various governmental authorities in order to operate, and these facilities are subject to inspection from time to time. Failure to maintain compliance with these requirements could result in operational interruptions, fines or penalties, or the need to install additional pollution control technology. Licenses and permits must be renewed from time to time and there is no guarantee that a license or permit will be renewed on the same or similar conditions. There can be no assurance that Pembina will be able to obtain all of the licenses, permits, registrations, approvals and authorizations that may be required to conduct operations that it may wish to undertake. Further, if at any time regulatory authorities deem any one of Pembina's pipelines or facilities unsafe or not in compliance with applicable laws, they may order it to be shut down. Certain significant environmental legislative initiatives that may materially impact Pembina's business and financial results and conditions are outlined below.

In 2016, the Canadian federal government announced that its initial proposed pan-Canadian carbon tax will be \$10 per tonne commencing in 2018 and will escalate to \$50 per tonne by 2022. In Alberta, the provincial government launched consultation on three separate initiatives under the *Climate Change Act* that are part of the Alberta Climate Leadership Plan. These recommendations included a new carbon levy on all carbon emissions commencing on January 1, 2017, revisions to the current larger facility emitters program and a proposed framework for the reduction of methane from fugitive and vented gas emissions. All Pembina business entities within Alberta have obtained exemption certification from the carbon levy for the majority of its business activities, which will limit Pembina's exposure to the levy until those exemptions expire in 2023. Where applicable, business entities have also obtained licences under the carbon levy regulations for the buying and selling of regulated fuels without the need to recover and remit the carbon levy on those fuel transactions. Nevertheless, until the government develops regulations for the additional initiatives under the Climate Change Leadership Plan, the impact to Pembina's business cannot be fully assessed and such impact could be material to

Pembina's operations and financial results and conditions. Through active participation with industry associations and direct engagement with regulatory bodies, Pembina will continue to monitor and assess for material impacts to Pembina's business as regulations and policies are developed.

In 2015, the Government of Alberta also advised that it would renew and update Alberta's Specific Gas Emitter Regulation ("SGER") which currently governs carbon emissions from large emitter facilities. As a result, by 2017 the SGER will require large emitters to reduce their emissions by 20 percent up from the previous 12 percent base levels, and will result in an increase in the price of carbon offset from \$15/tonne of CO<sub>2</sub>e to \$20/tonne of CO<sub>2</sub>e in 2016 and \$30/tonne of CO<sub>2</sub>e in 2017. Pembina currently has one facility participating in the SGER program and the regulation may trigger additional facilities in the future due to recent expansions that are now becoming operational. Currently, the impacts of SGER to Pembina are minimal. The Alberta Government is assessing the current SGER program which expires at the end of 2017 and is proposing to replace SGER with a revised regulatory framework at the time of expiration. Pembina is actively monitoring and assessing for impacts to Pembina's business as regulations and policies are developed, and such impacts could be material to Pembina's operations and financial results.

Additionally, oil sands facilities are currently charged a SGER levy based on each individual facility's historical emissions, irrespective of how intense (e.g. tonnes of greenhouse gases ("GHG") per barrel produced) or efficient that operation has been. The Government of Alberta, in its climate change legislation and guidelines, is also transitioning oil sands facilities from SGER to an output-based allocation approach for the carbon price and will legislate an overall limit to oil sands GHG emissions. The legislated emissions limit on oil sands operations will be a maximum 100 megatonnes in any year; currently oil sands operations emit roughly 70 megatonnes per year. This legislated change may limit oil sands production growth in the future.

Similar policy reviews on climate change are underway in B.C. and Ontario. In 2016, Ontario introduced two regulations under the *Ontario Climate Change Act*, the *Cap and Trade Program Regulations* ("Cap-and-Trade Regulations"), which took effect on July 1, 2016, and the *Quantification, Reporting and Verification of Greenhouse Gas Emissions Regulations* ("Emissions Regulation"), which took effect on January 1, 2017. As a product supplier of propane, Pembina is required to offset the carbon emissions from the product sold to market. Pembina is fully registered under the Cap-and-Trade Regulations and the Emissions Regulation, and the product pricing adjustments have been initiated for transactions starting on January 1, 2017 to recover/offset our anticipated compliance costs.

While Pembina believes its current operations are in compliance with all applicable significant environmental and safety regulations, there can be no assurance that substantial costs or liabilities will not be incurred. Moreover, it is possible that other developments, such as changes in environmental and safety laws, regulations and enforcement policies thereunder, claims for damages to persons or property resulting from Pembina's operations, and the discovery of any new pre-existing environmental liabilities in relation to any of Pembina's existing or future properties or operations, could result in significant costs and liabilities to Pembina. If Pembina is not able to recover the resulting costs or increased costs through insurance or increased tariffs, cash flow available to pay dividends to shareholders and to service obligations under Pembina's debt securities and Pembina's other debt obligations could be adversely affected.

Changes in environmental and safety regulations and legislation are also likely to impact Pembina's customers and could result in development and production becoming uneconomical, which would impact throughput and revenue on Pembina's systems and in its facilities.

While Pembina maintains insurance in respect of damage caused by seepage or pollution in an amount it considers prudent and in accordance with industry standards, certain provisions of such insurance may limit the availability thereof in respect of certain occurrences unless they are discovered within fixed time periods, which typically range from 72 hours

to 30 days. Although Pembina believes it has adequate pipeline monitoring systems in place to monitor for a significant spill of product, if Pembina is unaware of a problem or is unable to locate the problem within the relevant time period, insurance coverage may lapse and not be available.

#### *Regulation and Legislation*

Legislation in Alberta and B.C. exists to ensure that producers have fair and reasonable opportunities to produce, process and market their reserves. In Alberta, the Alberta Energy Regulator (the "AER") and in B.C., the British Columbia Utilities Commission (the "BCUC"), may, on application and following a hearing (and in Alberta with the approval of the Lieutenant Governor in Council), declare the operator of a pipeline a common carrier of oil or NGL and, as such, must not discriminate between producers who seek access to the pipeline. Producers and shippers may also apply to the regulatory authorities for a review of tariffs, and such tariffs may then be regulated if it is proven that the tariffs are not just and reasonable. Applications by producers to have a pipeline operator declared a common carrier are usually accompanied by a request to have the regulatory authorities establish the conditions under which the carrier must accept and carry product, including the tolls that may be charged by the common carrier. The extent to which regulatory authorities in such instances can override existing transportation or processing contracts has not been fully decided. The potential for direct regulation of tolls, other than for the majority of Pembina's provincially regulated B.C. Pipelines, while considered remote by Pembina, could result in toll levels that are less advantageous to Pembina and could impair the economic operation of such regulated pipeline systems.

Since 2014, the AER is the primary regulatory body that Pembina deals with related to Alberta-issued energy permits, with some minor exceptions. In 2017, Pembina will continue to monitor for legislative or procedural changes that could impose an administrative or financial burden on the Company as a result of a single regulator. Additionally, certain of Pembina's subsidiaries own pipelines in B.C., which are regulated by the BCUC, and pipelines that cross provincial or international boundaries, which are regulated by the National Energy Board (the "NEB"). Certain of Pembina's operations and expansion projects are subject to additional regulations, and as Pembina's operations expand throughout Canada and North American, Pembina may be required to comply with the requirements of additional regulators and legislative bodies, including the Canadian Environmental Assessment Agency ("CEAA"), the British Columbia Environmental Assessment Office ("BCEAO"), the Ontario Ministry of Natural Resources, the Saskatchewan Ministry of Economy, and The Petroleum Branch of Manitoba Mineral Resources. In the U.S., tolls on pipelines are regulated by and reported to the Federal Energy Regulatory Commission ("FERC") and pipeline operations are governed by the Pipeline and Hazardous Materials Safety Administration ("PHMSA"), which sets standards for the design, construction, pressure testing, operation and maintenance, corrosion control, training and qualification of personnel, accident reporting and record keeping. The Office of Pipeline Safety, within PHMSA, inspects and enforces the pipeline safety regulations across the U.S. All regulations and environmental compliance obligations are subject to change at the initiative of the governing body. Pembina continually monitors existing and changing regulations in all jurisdictions in which it currently operates or into which it may expand in the future, and their implications to its operations. However, Pembina cannot predict future regulatory changes, and any such compliance and regulatory changes in any one or multiple jurisdictions could have a material adverse impact on Pembina, its financial results and its shareholders.

In 2015, the Government of Canada issued 30 federal mandate letters. The mandate letter for Minister McKenna was to set up an expert panel to review the environmental and regulatory processes associated with the CEAA. The mandate letter to Minister Carr is for the assessment of a broad range of issues related to the purpose, mandate, structure and role of the NEB. The mandate letter to Minister LeBlanc is to assess whether the changes made to the *Fisheries Act* in 2012 should be reversed. The mandate letter to Minister Garneau is to assess the changes made to the *Navigation Protection Act* in 2012 and whether they should be reversed. Pembina continues to actively monitor these and other regulatory

initiatives but cannot predict the outcome of these and similar reviews under way under the new political regime in Canada. Resulting changes to the regulatory processes could materially impact Pembina's business and financial results, directly as well as indirectly, by impacting the financial condition of its customers and, ultimately, production levels and throughput on Pembina's pipelines and in its facilities.

Recent political events in the U.S. have led to uncertainty regarding ongoing trade relationships, in particular in relation to the North American Free Trade Agreement ("NAFTA"). While the current U.S. administration has indicated its intention to renegotiate or withdraw from NAFTA, there have been no formal steps taken in this regard to date. As such, at this time Pembina is unable to predict what impact any such renegotiation or withdrawal may have; however, in the event that such impacts the exports of energy resources to the U.S. or Mexico this could have a material adverse effect on Pembina's business and financial condition, directly as well as indirectly by negatively impacting Pembina's customers' cash flow and production levels.

Pembina's business and financial condition could also be influenced by federal and foreign legislation affecting, in particular, foreign investment, through legislation such as the *Competition Act* (Canada) and the *Investment Canada Act* (Canada), and their equivalents in foreign jurisdictions.

There can be no assurance that income tax laws, regulatory and environmental laws or policies and government incentive programs relating to the pipeline or oil and natural gas industry, will not be changed in a manner which adversely affects Pembina or its shareholders or other security holders.

#### *Abandonment Costs*

Pembina is responsible for compliance with all applicable laws and regulations regarding the dismantling, decommissioning and site disturbance remediation activities and abandonment of its pipeline systems and other assets at the end of their economic life and these abandonment costs may be substantial. An accounting provision is made for the estimated cost of site restoration and capitalized in the relevant asset category. A provision is recognized if, as a result of a past event, Pembina has a present legal or constructive obligation that can be estimated reliably and it is probable that an outflow of economic benefits will be required to settle the obligation. Pembina's estimates as to the costs of such abandonment or decommissioning could be materially different than the actual costs incurred.

For more information with respect to Pembina's estimated net present value of decommissioning obligations, see Note 15 to Pembina's Financial Statements for the year ended December 31, 2016, which note is incorporated by reference herein. Electronic copies of this document can be found on Pembina's profile on the SEDAR website at [www.sedar.com](http://www.sedar.com) and the EDGAR website at [www.sec.gov](http://www.sec.gov).

The proceeds of the disposition of certain assets, including in respect of certain pipeline systems and line fill, may be available to offset abandonment costs. While Pembina estimates future abandonment costs, actual costs may differ. Pembina may, in the future, determine it prudent or be required by applicable laws or regulations to establish and fund additional reclamation funds to provide for payment of future abandonment costs. Such reserves could decrease cash flow available for dividends to shareholders and to service obligations under Pembina's debt securities and Pembina's other debt obligations.

Pembina has complied with the NEB requirements on its NEB-regulated pipelines for the creation of abandonment funds and has completed the compliance-based filings that are required under the applicable NEB rules and regulations regarding the abandonment of its pipeline systems and assets. Pembina also has a 50 percent ownership in an NEB-regulated pipeline lateral which is operated by a joint venture partner and has paid its share of required abandonment funds into trust. The joint venture partner is responsible for the submission of the NEB-compliance based filings for this

asset. Pembina will continue to monitor any regulatory changes prior to the next five-year review and will complete the annual reporting as required by the NEB. Pembina owned and/or operated rate-regulated pipelines account for approximately 872.5 km of the total infrastructure in the Conventional Pipelines business.

#### *Completion and Timing of Expansion Projects*

The successful completion of Pembina's growth and expansion projects is dependent on a number of factors outside of Pembina's control, including the impact of general economic, business and market conditions, availability of capital at attractive rates, receipt of regulatory approvals, reaching long-term commercial arrangements with customers in respect of certain portions of the expansions, construction schedules and costs that may change depending on supply, demand and/or inflation, labour, materials and equipment availability, contractor non-performance, weather conditions, and cost of engineering services. There is no certainty, nor can Pembina provide any assurance, that necessary regulatory approvals will be received on terms that maintain the expected return on investment associated with a specific projects, or at all, or that satisfactory commercial arrangements with customers will be reached where needed on a timely basis or at all, or that third parties will comply with contractual obligations in a timely manner. Factors such as special interest group opposition, Aboriginal, landowner and other stakeholder consultation requirements, changes in shipper support over time, and changes to the legislative or regulatory framework could all have an impact on contractual and regulatory milestones being accomplished. As a result, the cost estimates and completion dates for Pembina's major projects can change during different stages of the project. Early stage projects face additional challenges including securing leases, easements, rights-of-way, permits and/or licenses from landowners or governmental authorities allowing access for such purposes, as well as Aboriginal consultation requirements. Accordingly, actual costs and timing estimates may vary from initial estimates and these differences can be significant, and certain projects may not proceed as planned, or at all. Further, there is a risk that maintenance will be required more often than currently planned or that significant maintenance capital projects could arise that were not previously anticipated.

Under most of Pembina's construction and operation agreements, the Company is obligated to construct the facilities regardless of delays and cost increases and Pembina bears the risk for any cost overruns and future agreements with customers entered into with respect to expansions may contain similar conditions. While Pembina is not currently aware of any significant undisclosed cost overruns at the date hereof, any such cost overruns in the future may adversely affect the economics of particular projects, as well as Pembina's business operations and financial results, and could reduce Pembina's expected return on investment which, in turn, could reduce the level of cash available for dividends and to service obligations under Pembina's debt securities and other debt obligations.

#### *Operating and Capital Costs*

Operating and capital costs of Pembina's business may vary considerably from current and forecast values and rates and represent significant components of the cost of providing service. In general, as equipment ages, costs associated with such equipment may increase over time. Dividends may be reduced if significant increases in operating or capital costs are incurred and this may also impact the ability of Pembina to service obligations under its debt securities and other debt obligations.

Although operating costs are to be recaptured through the tariffs charged on natural gas volumes processed and oil and NGL transported, respectively, to the extent such charges escalate, producers may seek lower cost alternatives or stop production of their natural gas and/or crude oil.

### *Competition*

Pembina competes with other pipelines, midstream, marketing and gas processing and handling services providers in its service areas as well as other transporters of crude oil and NGL. The introduction of competing transportation alternatives into Pembina's service areas could potentially have the impact of limiting Pembina's ability to adjust tolls as it may deem necessary and result in the reduction of throughput in Pembina's pipelines. Additionally, potential pricing differentials on the components of NGL may result in these components being transported by competing gas pipelines. Pembina believes it is prepared for and determined to meet these existing and potential competitive pressures. Pembina also competes with other businesses for growth and business opportunities, which could impact its ability to grow through acquisitions.

### *Reliance on Principal Customers and Operators*

Pembina relies on several significant customers to purchase product from the Midstream business. If for any reason these parties were unable to perform their obligations under the various agreements with Pembina, the revenue and dividends of the Company and the operations of the Midstream business could be negatively impacted. See "General Risk Factors – Credit Risk" in Pembina's 2016 AIF.

### *Additional Financing and Capital Resources*

The timing and amount of Pembina's capital expenditures, and the ability of the Company to repay or refinance existing debt as it becomes due, directly affects the amount of cash dividends that Pembina pays. Future acquisitions, expansions of Pembina's assets, and other capital expenditures and the repayment or refinancing of existing debt as it becomes due will be financed from sources such as cash generated from operations, the issuance of additional shares or other securities (including debt securities) of Pembina and borrowings. Dividends may be reduced, or even eliminated, at times when significant capital or other expenditures are made. There can be no assurance that sufficient capital will be available on terms acceptable to Pembina, or at all, to make additional investments, fund future expansions or make other required capital expenditures. As a result of the ongoing weakness in the global economy, and in particular the commodity-related industry sectors, Pembina may experience restricted access to capital and increased borrowing costs. Although Pembina's business and asset base have not changed materially, the ability of Pembina to raise capital is dependent upon, among other factors, the overall state of capital markets and investor demand for investments in the energy industry and Pembina's securities in particular. To the extent that external sources of capital, including the issuance of additional shares or other securities or the availability of additional credit facilities, become limited or unavailable on favourable terms or at all due to credit market conditions or otherwise, the ability of Pembina to make the necessary capital investments to maintain or expand its operations, to repay outstanding debt and to invest in assets, as the case may be, may be impaired. To the extent Pembina is required to use cash flow to finance capital expenditures or acquisitions or to repay existing debt as it becomes due, the level of dividends payable may be reduced.

### *Debt Service*

At the end of 2016, Pembina had exposure to floating interest rates on \$353 million in debt. Floating rate debt exposure is, in part, managed by using derivative financial instruments.

Variations in interest rates and scheduled principal repayments, if required under the terms of Pembina's banking agreements could result in significant changes in the amounts required to be applied to debt service before payment of any dividends. Certain covenants in the Company's agreements with its lenders may also limit payments and dividends paid by Pembina.

Pembina and its subsidiaries are permitted to borrow funds to finance the purchase of pipelines and other energy infrastructure assets, to fund capital expenditures and other financial obligations or expenditures in respect of those

assets and for working capital purposes. Amounts paid in respect of interest and principal on debt incurred in respect of those assets reduce the amount of cash flow available for common share dividends. Variations in interest rates and scheduled principal repayments for which Pembina may not be able to refinance at favourable rates or at all, could result in significant changes in the amount required to be applied to service debt, which could have detrimental effects on the amount of cash available for common share dividends. Pembina, on a consolidated basis, is also required to meet certain financial covenants under the credit facilities and is subject to customary restrictions on its operations and activities, including restrictions on the granting of security, incurring indebtedness and the sale of its assets.

The lenders under Pembina's unsecured credit facilities have also been provided with guarantees and subordination agreements. If Pembina becomes unable to pay its debt service charges or otherwise commits an event of default such as bankruptcy, payments to all of the lenders will rank in priority to dividends and payments to holders of Series F Convertible Debentures.

Although Pembina believes the existing credit facilities are sufficient for immediate requirements, there can be no assurance that the amount will be adequate for the future financial obligations of Pembina or that additional funds will be able to be obtained on terms favourable to Pembina or at all.

#### *Credit Ratings*

Rating agencies regularly evaluate Pembina, basing their ratings of its long-term and short-term debt on a number of factors. This includes Pembina's financial strength as well as factors not entirely within its control, including conditions affecting the industry in which Pembina operates generally and the wider state of the economy. There can be no assurance that one or more of Pembina's credit ratings will not be downgraded.

Pembina's borrowing costs and ability to raise funds are directly impacted by its credit ratings. Credit ratings may be important to suppliers or counterparties when they seek to engage in certain transactions. A credit rating downgrade could potentially impair Pembina's ability to enter into arrangements with suppliers or counterparties, to engage in certain transactions and could limit Pembina's access to private and public credit markets and increase the costs of borrowing under its existing credit facilities. A downgrade could also limit Pembina's access to debt and preferred share markets and increase its cost of borrowing.

The occurrence of a downgrade in Pembina's credit ratings could adversely affect its ability to execute portions of its business strategy and could have a material adverse effect on its liquidity, results of operations and capital position.

#### *Foreign Exchange Risk*

Pembina's commodity-related transactions, rail car leases, Vantage pipeline tariff cash flows and some of its capital expenditure commitments may be subject to currency risk, primarily arising from the denomination of specific earnings, cash flows and expenditure commitments in U.S. dollars. Pembina partially mitigates this risk using an active Risk Management Program to exchange foreign currency for domestic currency at a fixed rate.

#### *Interest Rate Risk*

Pembina has floating interest rate debt which subjects the Company to interest rate risk. Pembina responds to this risk under the active Risk Management Program by entering into financial derivative contracts to fix interest rates.

#### *Cyber Security*

Pembina's infrastructure, technologies and data are becoming increasingly integrated, which creates a risk that failure of one system could lead to failure of another system. The risk of a cyber-attack targeting the industry is also increasing. A breach in the security or failure of the Company's information technology could result in operational outages, delays,

damage to assets or the environment, reputational harm, lost profits, lost data and other adverse outcomes. The Company's security strategy focuses on information technology security risk management which includes continuous monitoring, threat detection and an incident response protocol.

### Selected Quarterly Operating Information

<i>(mbpd unless stated otherwise)</i>	2016				2015			
	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
Average volume								
Conventional Pipelines revenue volumes <sup>(1)</sup>	639	643	648	670	621	600	603	633
Oil Sands & Heavy Oil contracted capacity	975	975	880	880	880	880	880	880
Gas Services average volumes <i>(mboe/d)</i> net to Pembina <sup>(1)(2)</sup>	163	149	133	113	103	115	108	113
Midstream NGL sales volumes	164	136	132	141	123	109	104	129
<b>Total</b>	<b>1,941</b>	<b>1,903</b>	<b>1,793</b>	<b>1,804</b>	<b>1,727</b>	<b>1,704</b>	<b>1,695</b>	<b>1,755</b>

<sup>(1)</sup> Revenue volumes are equal to contracted and interruptible volumes.

<sup>(2)</sup> Gas Services revenue volumes converted to mboe/d from MMcf/d at 6:1 ratio.

## Selected Quarterly Financial Information

(\$ millions, except where noted)	2016				2015			
	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
Revenue	1,251	970	1,027	1,017	1,242	1,026	1,213	1,154
Operating expenses	123	109	93	94	110	111	96	109
Cost of goods sold, including product purchases	737	543	598	623	835	652	862	779
Realized loss (gain) on commodity-related derivative financial instruments	15	1	9	(15)	(7)	(8)	(4)	(18)
Operating margin <sup>(1)</sup>	376	317	327	315	304	271	259	284
Depreciation and amortization included in operations	73	72	66	62	73	67	55	54
Unrealized loss (gain) on commodity-related derivative financial instruments	33	(1)	13	16	(6)	3	4	2
Gross profit	270	246	248	237	237	201	200	228
Adjusted EBITDA <sup>(1)</sup>	342	287	291	269	269	245	228	241
Cash flow from operating activities	286	247	273	271	285	187	209	120
Cash flow from operating activities per common share – basic (dollars) <sup>(1)</sup>	0.73	0.63	0.70	0.72	0.79	0.54	0.62	0.35
Adjusted cash flow from operating activities <sup>(1)</sup>	292	250	235	209	280	209	176	213
Adjusted cash flow from operating activities per common share – basic <sup>(1)</sup> (dollars)	0.74	0.64	0.60	0.56	0.77	0.60	0.51	0.63
Earnings for the period	131	120	113	102	130	113	43	120
Earnings per common share – basic (dollars)	0.29	0.25	0.25	0.23	0.32	0.29	0.09	0.32
Earnings per common share – diluted (dollars)	0.28	0.25	0.25	0.23	0.32	0.29	0.09	0.32
Common shares outstanding (millions):								
Weighted average – basic	395	392	389	376	363	345	342	339
Weighted average – diluted	397	393	390	376	363	345	343	340
End of period	397	394	391	387	373	350	343	340
Common share dividends declared	190	188	187	172	168	158	154	148
Common share dividends declared per share (dollars)	0.4800	0.4800	0.4800	0.4575	0.4575	0.4575	0.4500	0.4350
Preferred share dividends declared	19	20	16	14	13	14	11	10

<sup>(1)</sup> Refer to "Non-GAAP Measures."

During the periods in the prior table, Pembina's results were impacted by the following factors and trends:

- Increased production in key operating areas and resource plays within the WCSB (Deep Basin, Montney and Duvernay) which has supported increased revenue volumes on Pembina's existing Conventional Pipelines, Gas Services and NGL Midstream infrastructure as well as supported the development of large-scale expansions across these businesses;
- New large-scale growth projects across Pembina's business being placed into service and the acquisitions of the Vantage pipeline and SEEP (October 2014) and the Kakwa River Facility (April 2016);
- Pre-financed portions of capital for projects under construction;

- Significantly weaker commodity market (especially the weaker propane and butane market) during the majority of 2015 and the early part of 2016;
- Increased common shares outstanding and common share dividends due to: the DRIP, debenture conversions, common share issuance, increasing the common share dividend rate, the acquisition of the Vantage pipeline and SEEP; and
- Increased preferred share dividends due to additional preferred shares issued.

## Selected Annual Financial Information

<i>(\$ millions, except where noted)</i>	2016	2015	2014
Revenue	4,265	4,635	6,069
Earnings	466	406	383
Per common share – basic <i>(dollars)</i>	1.02	1.02	1.07
Per common share – diluted <i>(dollars)</i>	1.01	1.02	1.06
Total assets	15,017	12,902	11,262
Long-term financial liabilities <sup>(1)</sup>	4,825	3,908	3,428
Declared dividends per common share <i>(\$ per share)</i>	1.90	1.80	1.72
Preferred share dividends declared	69	48	31

<sup>(1)</sup> Includes loans and borrowings, convertible debentures, long-term derivative financial instruments, deferred revenue, provisions and employee benefits, share-based payments and other.

## Additional Information

Additional information about Pembina filed with Canadian and U.S. securities commissions, including quarterly and annual reports, AIFs (filed with the U.S. Securities and Exchange Commission under Form 40-F), Management Information Circulars and financial statements can be found online at [www.sedar.com](http://www.sedar.com), [www.sec.gov](http://www.sec.gov) and through Pembina's website at [www.pembina.com](http://www.pembina.com). Information contained in or otherwise accessible through Pembina's website or other websites, though referenced herein, is not incorporated by reference herein unless otherwise specifically indicated.

## Non-GAAP Measures

Throughout this MD&A, Pembina has used the following terms that are not defined by GAAP but are used by management to evaluate the performance of Pembina and its businesses. Since non-GAAP measures do not have a standardized meaning prescribed by IFRS and are therefore unlikely to be comparable to similar measures presented by other companies, securities regulations require that non-GAAP measures are clearly defined, qualified and reconciled to their nearest GAAP measure. Except as otherwise indicated, these non-GAAP measures are calculated and disclosed on a consistent basis from period to period. Specific adjusting items may only be relevant in certain periods.

The intent of non-GAAP measures is to provide additional useful information with respect to Pembina's operational and financial performance to investors and analysts though the measures do not have any standardized meaning under IFRS. The measures should not, therefore, be considered in isolation or used in substitute for measures of performance prepared in accordance with IFRS. Other issuers may calculate these non-GAAP measures differently.

Investors should be cautioned that net revenue, Adjusted EBITDA, adjusted cash flow from operating activities, cash flow from operating activities per common share, adjusted cash flow from operating activities per common share, operating margin and total enterprise value should not be construed as alternatives to revenue, earnings, cash flow from operating activities, gross profit or other measures of financial results determined in accordance with GAAP as indicators of Pembina's performance.

**Net revenue**

Net revenue is a non-GAAP financial measure which is defined as total revenue less cost of goods sold including product purchases. Management believes that net revenue provides investors with a single measure to indicate the margin on sales before non-product operating expenses that is comparable between periods. Management utilizes net revenue to compare consecutive results, particularly in the Midstream business, to aggregate revenue generated by each of the Company's businesses and to set comparable objectives.

	3 Months Ended December 31 (unaudited)		12 Months Ended December 31	
	2016	2015	2016	2015
<i>(\$ millions)</i>				
Revenue	1,251	1,242	4,265	4,635
Cost of goods sold, including product purchases	737	835	2,501	3,128
Net revenue	514	407	1,764	1,507

**Adjusted earnings before interest, taxes, depreciation and amortization ("Adjusted EBITDA")**

Adjusted EBITDA is a non-GAAP measure and is calculated as earnings for the year plus share of profit (loss) from equity accounted investees (before tax, depreciation and amortization) plus net finance costs, income taxes, depreciation and amortization (included in operations and general and administrative expense) and unrealized gains or losses on commodity-related derivative financial instruments. The exclusion of unrealized gains or losses on commodity-related derivative financial instruments eliminates the non-cash impact of such gains or losses.

Adjusted EBITDA also includes adjustments for loss (gain) on disposal of assets, transaction costs incurred in respect of acquisitions, impairment charges or reversals and write-downs in respect of goodwill, intangible assets and property plant and equipment, and non-cash provisions. These additional adjustments are made to exclude various non-cash and other items that are not reflective of ongoing operations. Management believes that Adjusted EBITDA provides useful information to investors as it is an important indicator of an issuer's ability to generate liquidity through cash flow from operating activities. Adjusted EBITDA is also used by investors and analysts for assessing financial performance and for the purpose of valuing an issuer, including calculating financial and leverage ratios. Management utilizes Adjusted EBITDA to set objectives and as a key performance indicator of the Company's success. Pembina presents Adjusted EBITDA as management believes it is a measure frequently used by analysts, investors and other stakeholders in evaluating the Company's financial performance.

	3 Months Ended December 31 (unaudited)		12 Months Ended December 31	
<i>(\$ millions, except per share amounts)</i>	2016	2015	2016	2015
Earnings attributable to shareholders	131	130	466	406
Share of profit from equity accounted investees (before tax, depreciation and amortization) and other	4	4	15	15
Net finance costs	38	22	153	71
Income tax expense	58	31	189	199
Depreciation and amortization	78	79	293	263
Unrealized loss (gain) on commodity-related derivative financial instruments	33	(6)	61	3
Impairment charges or reversals and write-downs in respect of goodwill, intangible assets and property, plant and equipment, and non-cash provisions		9	11	26
Transaction costs incurred in respect of acquisitions			1	
Adjusted EBITDA	342	269	1,189	983
Adjusted EBITDA per common share – basic ( <i>dollars</i> )	0.87	0.74	3.06	2.83

**Adjusted cash flow from operating activities, cash flow from operating activities per common share and adjusted cash flow from operating activities per common share**

Adjusted cash flow from operating activities is a non-GAAP measure which is defined as cash flow from operating activities plus the change in non-cash operating working capital, adjusting for current tax and share-based payment expenses, and deducting preferred share dividends declared. Adjusted cash flow from operating activities excludes preferred share dividends because they are not attributable to common shareholders. The calculation has been modified to include current tax and share-based payment expense as it allows management to better assess the obligations discussed below. Management believes that adjusted cash flow from operating activities provides comparable information to investors for assessing financial performance during each reporting period. Management utilizes adjusted cash flow from operating activities to set objectives and as a key performance indicator of the Company's ability to meet interest obligations, dividend payments and other commitments. Per common share amounts are calculated by dividing cash flow from operating activities, or adjusted cash flow from operating activities, as applicable, by the weighted average number of common shares outstanding.

	3 Months Ended December 31 (unaudited)		12 Months Ended December 31	
<i>(\$ millions, except per share amounts)</i>	2016	2015	2016	2015
Cash flow from operating activities	286	285	1,077	801
Cash flow from operating activities per common share – basic ( <i>dollars</i> )	0.73	0.79	2.78	2.31
Add (deduct):				
Change in non-cash operating working capital	39	(16)	36	11
Current tax (expenses) recoveries	(12)	19	(50)	(41)
Taxes paid	4	7	3	137
Accrued share-based payments	(6)	(2)	(31)	(10)
Share-based payments			20	28
Preferred share dividends declared	(19)	(13)	(69)	(48)
Adjusted cash flow from operating activities	292	280	986	878
Adjusted cash flow from operating activities per common share – basic ( <i>dollars</i> )	0.74	0.77	2.54	2.53

### Operating margin

Operating margin is a non-GAAP measure which is defined as gross profit before depreciation and amortization included in operations and unrealized gain/loss on commodity-related derivative financial instruments. Management believes that operating margin provides useful information to investors for assessing the financial performance of the Company's operations. Management utilizes operating margin in setting objectives and views it as a key performance indicator of the Company's success.

Reconciliation of operating margin to gross profit:

(\$ millions)	3 Months Ended December 31 (unaudited)		12 Months Ended December 31	
	2016	2015	2016	2015
Revenue	1,251	1,242	4,265	4,635
Cost of sales (excluding depreciation and amortization included in operations)				
Operating expenses	123	110	419	426
Cost of goods sold, including product purchases	737	835	2,501	3,128
Realized loss (gain) on commodity-related derivative financial instruments	15	(7)	10	(37)
Operating margin	376	304	1,335	1,118
Depreciation and amortization included in operations	73	73	273	249
Unrealized loss (gain) on commodity-related derivative financial instruments	33	(6)	61	3
Gross profit	270	237	1,001	866

### Total enterprise value

Total enterprise value is a non-GAAP measure which is calculated by aggregating the market value of common shares, preferred shares and convertible debentures at a specific date plus senior debt less cash and cash equivalents. Management believes that total enterprise value provides useful information to investors to assess the overall market value of the Company and as an input to calculate financial ratios. Management utilizes total enterprise value to assess Pembina's growth.

(\$ millions, except where noted)	As at February 21, 2017	As at December 31	
		2016	2015
Shares outstanding (millions of shares)	399	397	373
Closing share price (dollars)	\$42.83	\$41.96	\$30.15
Market value			
Common Shares	17,082	16,653	11,258
Series 1 Preferred Shares (PPL.PR.A)	205	188	167
Series 3 Preferred Shares (PPL.PR.C)	128	119	109
Series 5 Preferred Shares (PPL.PR.E)	231	218	194
Series 7 Preferred Shares (PPL.PR.G)	218	207	193
Series 9 Preferred Shares (PPL.PR.I)	225	221	199
Series 11 Preferred Shares (PPL.PR.K)	178	180	
Series 13 Preferred Shares (PPL.PR.M)	261	264	
5.75% convertible debentures (PPL.DB.F)	213	210	166
Market capitalization	18,741	18,260	12,286
Senior debt	4,267	4,020	3,192
Cash and cash equivalents	(140)	(35)	(28)
Total enterprise value	22,868	22,245	15,450

	Number of instruments outstanding	Market price at		
		February 21, 2017	December 31, 2016	December 31, 2015
Series 1 Preferred Shares (PPL.PR.A)	10 million	\$20.48	\$18.75	\$16.70
Series 3 Preferred Shares (PPL.PR.C)	6 million	\$21.32	\$19.75	\$18.10
Series 5 Preferred Shares (PPL.PR.E)	10 million	\$23.09	\$21.84	\$19.40
Series 7 Preferred Shares (PPL.PR.G)	10 million	\$21.77	\$20.70	\$19.30
Series 9 Preferred Shares (PPL.PR.I)	9 million	\$24.97	\$24.58	\$22.09
Series 11 Preferred Shares (PPL.PR.K)	6.8 million	\$26.19	\$26.48	
Series 13 Preferred Shares (PPL.PR.M)	10 million	\$26.14	\$26.39	
5.75% convertible debentures (PPL.DB.F) <sup>(1)</sup>		\$144.63	\$142.40	\$112.00

<sup>(1)</sup> \$148 million principal amount outstanding at February 21, 2017, \$148 million principal amount outstanding at December 31, 2016 and \$149 million principal amount outstanding at December 31, 2015. Conversion price is \$29.53.

The following is a list of abbreviations that may be used in this MD&A:

Measurement

mbbls	thousands of barrels
mbpd	thousands of barrels per day
mmbpd	millions of barrels per day
mmbbls	millions of barrels
mboe/d	thousands of barrels of oil equivalent per day
MMcf/d	millions of cubic feet per day
bcf/d	billions of cubic feet per day
km	kilometre

Other

B.C.	British Columbia
DRIP	Premium Dividend <sup>TM(1)</sup> and Dividend Reinvestment Plan
IFRS	International Financial Reporting Standards
NGL	Natural gas liquids
U.S.	United States
WCSB	Western Canadian Sedimentary Basin
deep cut	Ethane-plus capacity extraction gas processing capabilities
shallow cut	Sweet gas processing with propane and/or condensate-plus extraction capabilities

<sup>(1)</sup> <sup>TM</sup> denotes trademark of Canaccord Genuity Corp.

## Forward-Looking Statements & Information

In the interest of providing Pembina's security holders and potential investors with information regarding Pembina, including management's assessment of the Company's future plans and operations, certain statements contained in this MD&A constitute forward-looking statements or information (collectively, "forward-looking statements"). Forward-looking statements are typically identified by words such as "anticipate", "continue", "estimate", "expect", "may", "will", "project", "should", "could", "would", "believe", "plan", "intend", "design", "target", "undertake", "view", "indicate", "maintain", "explore", "entail", "schedule", "objective", "strategy", "likely", "potential", "outlook", "aim", "propose", "goal", and similar expressions suggesting future events or future performance.

By their nature, such forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause actual results or events to differ materially from those anticipated in such forward-looking statements. Pembina believes the expectations reflected in those forward-looking statements are reasonable but no assurance can be given that these expectations will prove to be correct and such forward-looking statements included in this MD&A should not be unduly relied upon. These statements speak only as of the date of the MD&A.

In particular, this MD&A contains forward-looking statements pertaining to the following:

- the future levels and sustainability of cash dividends that Pembina intends to pay to its shareholders, the dividend payment date and the tax treatment thereof;
- planning, construction, capital expenditure estimates, schedules, regulatory and environmental applications and anticipated approvals, expected capacity, incremental volumes, in-service dates, rights, activities, benefits and operations with respect to new construction of, or expansions on existing, pipelines, gas services facilities, fractionation facilities, terminalling, storage and hub facilities and other facilities or energy infrastructure, as well as the impact of the Company's new projects on its future financial performance;
- pipeline, processing, fractionation and storage facility and system operations and throughput levels;
- treatment under governmental regulatory regimes including taxes, environmental and greenhouse gas regulations and related abandonment and reclamation obligations, and Aboriginal, landowner and other stakeholder consultation requirements;
- Pembina's estimates of and strategy for payment of future abandonment costs and decommissioning obligations, and deferred tax liability;
- Pembina's strategy and the development and expected timing of new business initiatives and growth opportunities and the impact thereof;
- increased throughput potential, processing capacity and fractionation capacity due to increased oil and gas industry activity and new connections and other initiatives on Pembina's pipelines and at Pembina's facilities;
- expected future cash flows and the sufficiency thereof, financial strength, sources of and access to funds at attractive rates, future contractual obligations, future financing options, future renewal of credit facilities, availability of capital to fund growth plans, operating obligations and dividends and the use of proceeds from financings;
- tolls and tariffs and processing, transportation, fractionation, storage and services commitments and contracts;
- operating risks (including the amount of future liabilities related to pipeline spills and other environmental incidents) and related insurance coverage and inspection and integrity programs;
- the adoption of new accounting standards;
- inventory and pricing in the North American liquids market;
- the impact of the current commodity price environment on Pembina; and
- competitive conditions and Pembina's ability to position itself competitively in the industry.

Various factors or assumptions are typically applied by Pembina in drawing conclusions or making the forecasts, projections, predictions or estimations set out in forward-looking statements based on information currently available to Pembina. These factors and assumptions include, but are not limited to:

- oil and gas industry exploration and development activity levels and the geographic region of such activity;
- the success of Pembina's operations;
- prevailing commodity prices, interest rates and exchange rates and the ability of Pembina to maintain current credit ratings;
- the availability of capital to fund future capital requirements relating to existing assets and projects;

- expectations regarding participation in Pembina's DRIP and pension plan;
- future operating costs including geotechnical and integrity costs being consistent with historical costs;
- oil and gas industry compensation levels remaining consistent;
- in respect of current developments, expansions, planned capital expenditures, completion dates and capacity expectations: that third parties will provide any necessary support; that any third-party projects relating to Pembina's growth projects will be sanctioned and completed as expected; that any required commercial agreements can be reached; that all required regulatory and environmental approvals can be obtained on the necessary terms in a timely manner; that counterparties will comply with contracts in a timely manner; that there are no unforeseen events preventing the performance of contracts or the completion of the relevant facilities; and that there are no unforeseen material costs relating to the facilities which are not recoverable from customers;
- in respect of the stability of Pembina's dividends: prevailing commodity prices, margins and exchange rates; that Pembina's future results of operations will be consistent with past performance and management expectations in relation thereto; the continued availability of capital at attractive prices to fund future capital requirements relating to existing assets and projects, including but not limited to future capital expenditures relating to expansion, upgrades and maintenance shutdowns; the success of growth projects; future operating costs; that counterparties to material agreements will continue to perform in a timely manner; that there are no unforeseen events preventing the performance of contracts; and that there are no unforeseen material construction or other costs related to current growth projects or current operations;
- prevailing regulatory, tax and environmental laws and regulations and tax pool utilization; and
- the amount of future liabilities relating to lawsuits and environmental incidents and the availability of coverage under Pembina's insurance policies (including in respect of Pembina's business interruption insurance policy).

The actual results of Pembina could differ materially from those anticipated in these forward-looking statements as a result of the material risk factors set forth below:

- the regulatory environment and decisions and Aboriginal and landowner consultation requirements;
- the impact of competitive entities and pricing;
- labour and material shortages;
- reliance on key relationships and agreements and the outcome of stakeholder engagement;
- the strength and operations of the oil and natural gas production industry and related commodity prices;
- non-performance or default by counterparties to agreements which Pembina or one or more of its subsidiaries has entered into in respect of its business;
- actions by governmental or regulatory authorities including changes in tax laws and treatment, changes in royalty rates or increased environmental regulation;
- fluctuations in operating results;
- adverse general economic and market conditions in Canada, North America and elsewhere, including changes, or prolonged weakness, as applicable, in interest rates, foreign currency exchange rates, commodity prices, supply/demand trends and overall industry activity levels;
- constraints on, or the unavailability of adequate infrastructure;
- changes in the political environment, in North America and elsewhere, and public opinion;
- ability to access various sources of debt and equity capital;
- changes in credit ratings;
- technology and security risks;
- natural catastrophe; and
- the other factors discussed under "Risk Factors" in Pembina's AIF for the year ended December 31, 2016. Pembina's MD&A and AIF are available at [www.pembina.com](http://www.pembina.com) and in Canada under Pembina's company profile on [www.sedar.com](http://www.sedar.com) and in the U.S. on the Company's profile at [www.sec.gov](http://www.sec.gov).

These factors should not be construed as exhaustive. Unless required by law, Pembina does not undertake any obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise. Any forward-looking statements contained herein are expressly qualified by this cautionary statement.