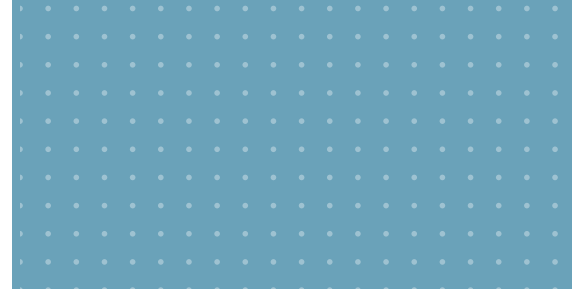




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ANNUAL REPORT

PEMBINA PIPELINE
CORPORATION



REPORT TO SHAREHOLDERS

Year ended December 31, 2021



MANAGEMENT'S DISCUSSION AND ANALYSIS

Table of Contents

1. About Pembina	2
2. Financial & Operating Overview	3
3. Segment Results	7
4. Liquidity & Capital Resources	24
5. Share Capital	28
6. Capital Expenditures	30
7. Selected Quarterly Information	31
8. Selected Equity Accounted Investee Information	33
9. Other	35
10. Accounting Policies & Estimates	38
11. Risk Factors	40
12. Non-GAAP & Other Financial Measures	63
13. Abbreviations	67
14. Forward-Looking Statements & Information	68

Basis of Presentation

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 24, 2022, and is supplementary to, and should be read in conjunction with, Pembina's audited consolidated financial statements as at and for the year ended December 31, 2021 ("Consolidated Financial Statements"). The Consolidated Financial Statements have been prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board, using the accounting policies described in Note 3 of the Consolidated Financial Statements. All dollar amounts contained in this MD&A are expressed in Canadian dollars unless otherwise noted. For further details on Pembina and Pembina's significant assets, including definitions for capitalized terms used herein and not otherwise defined, refer to Pembina's annual information form ("AIF") for the year ended December 31, 2021. Additional information about Pembina filed with Canadian and U.S. securities commissions, including quarterly and annual reports, annual information forms (filed with the U.S. Securities and Exchange Commission (the "SEC") under Form 40-F) and management information circulars, can be found online at www.sedar.com, www.sec.gov and through Pembina's website at www.pembina.com.

Abbreviations

For a list of abbreviations that may be used in this MD&A, refer to the Abbreviations section of this MD&A.

Non-GAAP and Other Financial Measures

Pembina has disclosed certain financial measures and ratios within this MD&A that management believes provide meaningful information in assessing Pembina's underlying performance, but which are not specified, defined or determined in accordance with the Canadian generally accepted accounting principles ("GAAP") and which are not disclosed in Pembina's Consolidated Financial Statements. Such non-GAAP financial measures and non-GAAP ratios do not have any standardized meaning prescribed by IFRS and may not be comparable to similar financial measures disclosed by other issuers. Refer to the "Non-GAAP & Other Financial Measures" section of this MD&A for additional information regarding these non-GAAP measures and non-GAAP ratios.

Risk Factors and Forward-Looking Information

Management has identified the primary risk factors that could have a material impact on the financial results and operations of Pembina. Such risk factors are described in the "Risk Factors" section of this MD&A and are also included in Pembina's AIF. The Company's financial and operational performance is potentially affected by a number of factors, including, but not limited to, the factors described within the "Forward-Looking Statements & Information" section of this MD&A. This MD&A contains forward-looking statements based on Pembina's current expectations, estimates, projections and assumptions. This information is provided to assist readers in understanding the Company's future plans and expectations and may not be appropriate for other purposes.

1. ABOUT PEMBINA

Pembina Pipeline Corporation is a leading energy transportation and midstream service provider that has served North America's energy industry for more than 65 years. Pembina owns an integrated network of hydrocarbon liquids and natural gas pipelines, gas gathering and processing facilities, oil and natural gas liquids infrastructure and logistics services, and a growing export terminals business. Through our integrated value chain, we seek to provide safe and reliable infrastructure solutions which connect producers and consumers of energy across the world, support a more sustainable future and benefit our customers, investors, employees and communities. For more information, please visit pembina.com.

Purpose of Pembina:

To be the leader in delivering integrated infrastructure solutions connecting global markets:

- **Customers** choose us first for reliable and value-added services;
- **Investors** receive sustainable industry-leading total returns;
- **Employees** say we are the 'employer of choice' and value our safe, respectful, collaborative and inclusive work culture; and
- **Communities** welcome us and recognize the net positive impact of our social and environmental commitment.

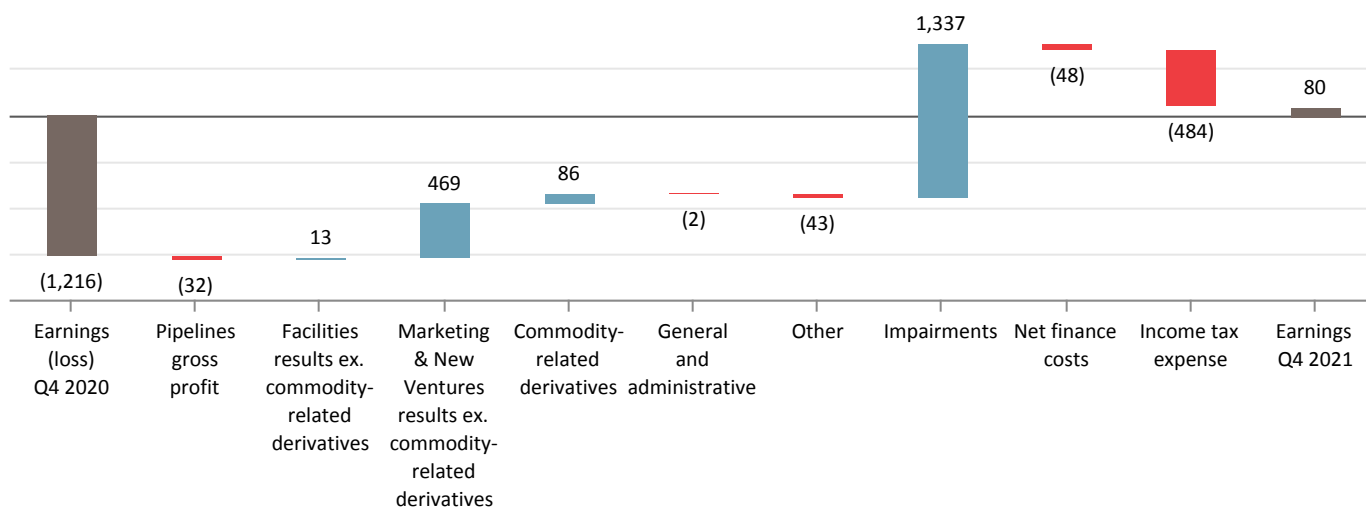
2. FINANCIAL & OPERATING OVERVIEW

Consolidated Financial Overview for the Three Months Ended December 31

Results of Operations

(\$ millions, except where noted)	2021	2020	Change	% Change
Revenue	2,560	1,680	880	52
Net revenue ⁽¹⁾	1,084	954	130	14
Gross profit	785	247	538	218
Earnings (loss)	80	(1,216)	1,296	107
Earnings (loss) per common share – basic and diluted (dollars)	0.08	(2.28)	2.36	104
Cash flow from operating activities	697	766	(69)	(9)
Cash flow from operating activities per common share – basic (dollars)	1.27	1.39	(0.12)	(9)
Adjusted cash flow from operating activities ⁽¹⁾	734	603	131	22
Adjusted cash flow from operating activities per common share – basic (dollars) ⁽¹⁾	1.33	1.10	0.23	21
Capital expenditures	176	161	15	9
Adjusted EBITDA ⁽¹⁾	970	866	104	12
Total volumes (mboe/d) ⁽²⁾	3,437	3,614	(177)	(5)

Change in Earnings (\$ millions)⁽³⁾⁽⁴⁾



Results Overview

Earnings in the fourth quarter of 2021 were positively impacted by higher gross profit in Marketing & New Ventures due to higher margins on NGL and crude oil sales, combined with higher share of profit from Aux Sable, partially offset by higher realized losses on commodity-related derivative financial instruments compared to the fourth quarter of 2020. Facilities gross profit increased due to Prince Rupert Terminal and Duvernay III being placed into service, partially offset by unrealized losses on commodity related derivatives for certain gas processing fees tied to AECO prices. Pipelines gross profit was impacted by higher recoverable costs, offset by a lower share of profit from Ruby, combined with the expiration of contracts on the Nipisi and Mitsue Pipeline systems. Pembina recognized \$439 million (\$335 million net of tax) in impairments during the fourth quarter of 2021 largely related to certain Oil Sands assets, compared to impairments of \$2.1 billion (\$1.6 billion net of tax) recognized during the fourth quarter of 2020 associated with its investments in Ruby, CKPC and the assets associated with Jordan Cove. Other expense increased due to higher transformation and restructuring costs and project write-downs. Net finance costs increased during the fourth quarter of 2021 due to lower foreign exchange gains and losses on non-commodity-related derivative financial instruments as compared to gains in the fourth quarter of 2020. Income tax expense increased as impairments in the prior year drove a deferred tax recovery.

Changes in Results for the Three Months Ended December 31

Revenue	▲	\$880 million increase, largely due to higher NGL and crude oil market prices during the fourth quarter of 2021, combined with the contribution from assets placed into service in Facilities and higher recoverable costs, partially offset by the expiration of contracts on certain Oil Sands assets, discussed below.
Cost of goods sold	▼	\$750 million increase, largely due to higher NGL and crude oil market prices.
Operating expenses	●	Consistent with the prior period. Higher power costs, the majority of which are recoverable, were largely offset by lower repairs and maintenance costs.
Depreciation and amortization included in operations	●	Consistent with the prior period.
Share of profit from equity accounted investees	▲	\$13 million increase, largely due to higher share of profit from Aux Sable as a result of higher NGL margins and a wider AECO-Chicago natural gas price differential, combined with higher share of profit from Veresen Midstream due to Veresen Midstream Hythe Developments going into service and higher volumes on the Dawson Assets and higher share of profit from Alliance due to a gain recognized on the debt re-financing, partially offset by a lower contribution from Ruby as the owners agreed to defer distributions for the fourth quarter of 2021.
Realized loss on commodity-related derivatives	▼	\$30 million negative variance, due to higher NGL market prices during the fourth quarter of 2021, which also drove higher margins on NGL sales, resulting in a realized loss on NGL-based derivative instruments for the period. Pembina utilizes derivative instruments to stabilize the results of its marketing business.
Unrealized (gain) loss on commodity-related derivatives	▲	\$116 million positive variance, primarily due to contracts maturing in the period, partially offset by newly added contracts and unrealized losses on commodity-related derivatives for certain gas processing fees tied to AECO prices, discussed in the "Facilities" section.
General & administrative	●	Consistent with the prior period. Higher short term incentives were largely offset by a reduction in salaries due to a lower headcount.
Other expense	▼	\$45 million increase primarily due higher transformation and restructuring costs and higher project write-downs.
Impairments	▲	During the fourth quarter of 2021, Pembina recognized \$439 million in impairments (\$335 million net of tax) primarily related to the Nipisi and Mitsue Pipeline systems and the Edmonton South Rail Terminal due to contract expirations, compared to impairments of \$2.1 billion (\$1.6 billion net of tax) recognized during the fourth quarter of 2020 associated with its investments in Ruby, CKPC and the assets associated with Jordan Cove.
Net finance costs	▼	\$48 million increase, primarily driven by lower foreign exchange gains and losses on non-commodity-related derivative financial instruments compared to gains in the fourth quarter of 2020.
Current tax expense	▲	\$14 million decrease, primarily due to higher tax depreciation, partially offset by higher current year earnings.
Deferred tax expense	▼	\$498 million increase, primarily due to the deferred tax recovery recognized in 2020 associated with the impairment of investments in Ruby, CKPC and the assets associated with Jordan Cove.
Cash flow from operating activities	▼	\$69 million decrease, primarily driven by a \$105 million change in non-cash working capital and a \$85 million increase in taxes paid largely due to the \$350 million received from the termination of the arrangement agreement ("Arrangement Termination Payment") with Inter Pipeline Ltd., partially offset by an increase in operating results after adjusting for non-cash items, combined with a \$27 million increase in revenue collected and deferred and a \$19 million increase in distributions from equity accounted investees.
Adjusted cash flow from operating activities⁽¹⁾	▲	\$131 million increase, largely due to the same items impacting cash flow from operating activities, discussed above, net of the change in non-cash working capital and increase in taxes paid, combined with \$14 million lower current tax expense.
Adjusted EBITDA⁽¹⁾	▲	\$104 million increase, largely due to higher margins on NGL and crude oil sales, a higher contribution from Aux Sable, combined with the contributions from assets placed into service in Facilities, and higher contribution from Veresen Midstream due to higher volumes on the Dawson Assets, partially offset by the realized loss on commodity-related derivatives, lower contribution from Ruby, and the expiration of contracts on certain Oil Sands assets, discussed above. Included in adjusted EBITDA is \$189 million (2020: \$174 million) related to equity accounted investees.
Total volumes (mboe/d)⁽²⁾	▼	177 mboe/d decrease, largely driven by lower contracted volumes on Oil Sands pipeline systems and on the Ruby Pipeline, combined with lower deferred revenue volumes on the Peace Pipeline system and lower volumes at Alberta Ethane Gathering System ("AEGS") due to third party outages and planned turnarounds in the fourth quarter of 2021, partially offset by higher contracted volumes at Younger, higher volumes associated with Duvernay III being placed into service in the fourth quarter of 2020 and higher volumes on the Dawson Assets. Volumes include 294 mboe/d (2020: 315 mboe/d) related to equity accounted investees.

▲ Increase; ▼ Decrease; or ● No impact; to earnings, adjusted EBITDA, cash flow from operations, adjusted cash flow from operating activities or total volumes.

⁽¹⁾ Refer to the "Non-GAAP & Other Financial Measures" section of this MD&A.

⁽²⁾ Total revenue volumes. See the "Abbreviations" section of this MD&A for definition. Marketed NGL volumes are excluded from volumes to avoid double counting. Refer to the "Marketing & New Ventures" section of this MD&A for further information.

⁽³⁾ Facilities results ex. commodity-related derivatives and Marketing & New Ventures results ex. commodity-related derivatives includes gross profit less realized and unrealized losses on commodity related derivative financial instruments.

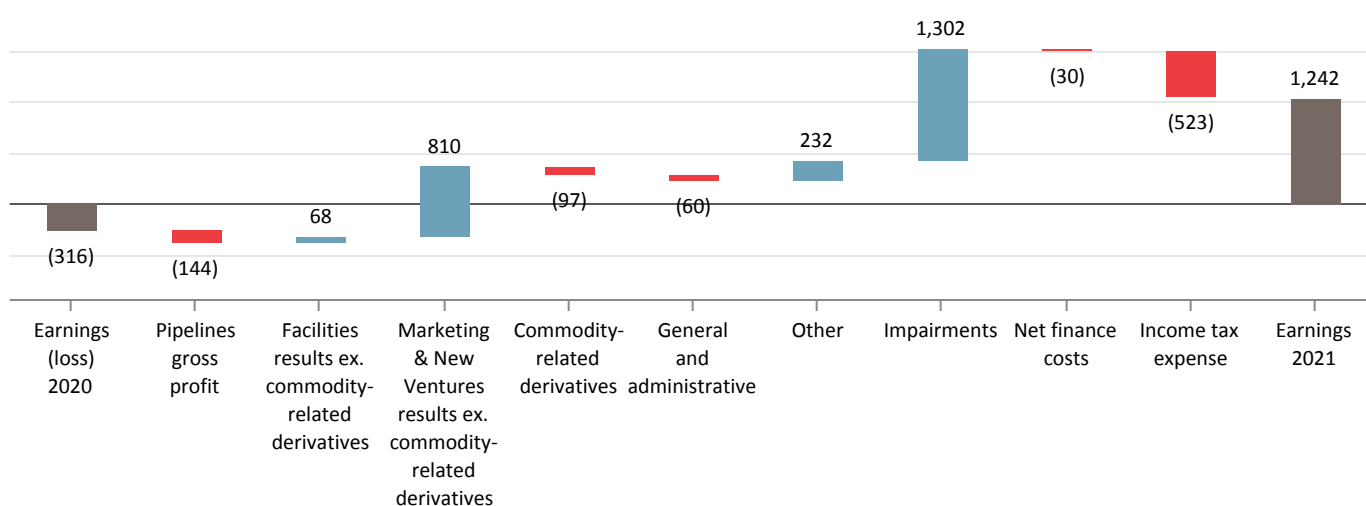
⁽⁴⁾ Other includes other expenses and corporate.

Consolidated Financial Overview for the 12 Months Ended December 31

Results of Operations

(\$ millions, except where noted)	2021	2020	Change	% Change
Revenue	8,627	5,953	2,674	45
Net revenue ⁽¹⁾	3,938	3,444	494	14
Gross profit	2,647	2,008	639	32
Earnings (loss)	1,242	(316)	1,558	493
Earnings (loss) per common share – basic (dollars)	2.00	(0.86)	2.86	333
Earnings (loss) per common share – diluted (dollars)	1.99	(0.86)	2.85	331
Cash flow from operating activities	2,650	2,252	398	18
Cash flow from operating activities per common share – basic (dollars)	4.82	4.10	0.72	18
Adjusted cash flow from operating activities ⁽¹⁾	2,640	2,289	351	15
Adjusted cash flow from operating activities per common share – basic (dollars) ⁽¹⁾	4.80	4.16	0.64	15
Capital expenditures	658	1,029	(371)	(36)
Adjusted EBITDA ⁽¹⁾	3,433	3,281	152	5
Total volumes (mboe/d) ⁽²⁾	3,456	3,500	(44)	(1)

Change in Earnings (\$ millions)⁽³⁾⁽⁴⁾



Results Overview

Earnings for 2021 were positively impacted by higher gross profit in Marketing & New Ventures due to higher margins on NGL and crude oil sales, combined with higher marketed NGL volumes and higher share of profit from Aux Sable, offset by losses on commodity-related derivative financial instruments. Facilities gross profit increased due to Empress Infrastructure, Prince Rupert Terminal, and Duvernay III being placed into service, combined with unrealized gains on commodity related derivatives for certain gas processing fees tied to AECO prices and higher share of profit from Veresen Midstream. In Pipelines, higher volumes and higher recoverable costs were offset by expiration of contracts related to certain assets in Pipelines, lower share of profit from Ruby, combined with the impact of the lower U.S. dollar exchange rate. Pembina recognized \$474 million (\$361 million net of tax) in impairments in 2021, largely related to certain Oil Sands assets, compared to impairments of \$2.1 billion (\$1.6 billion net of tax) recognized during the fourth quarter of 2020 associated with its investments in Ruby, CKPC and the assets associated with Jordan Cove. Other income increased due to the receipt of the \$350 million (\$250 million net of tax and associated expenses) Arrangement Termination Payment, offset by lower income received from the Canadian Emergency Wage Subsidy, higher transformation and restructuring related costs, and higher project write-downs. General & administrative increased due to higher incentive costs primarily driven by the change in Pembina's share price. Income tax expense increased due to the deferred tax recovery on impairments in prior year, combined with higher current year earnings associated with the Arrangement Termination Payment.

Changes in Results for the 12 Months Ended December 31

Revenue	▲	\$2.7 billion increase, largely due to higher NGL and crude oil market prices and higher marketed NGL volumes as Pembina monetized a portion of its previously built up storage positions, combined with assets placed into service in Facilities, higher volumes in Pipelines, and higher recoverable costs. These increases were partially offset by lower storage and rail terminal revenue, expiration of contracts on certain Oil Sands assets, discussed below, lower volumes on the Vantage Pipeline as end users sourced their supply from the Redwater Complex and the impact of the lower U.S. dollar exchange rate.
Cost of goods sold	▼	\$2.2 billion increase, largely due to higher NGL and crude oil market prices, combined with higher marketed NGL volumes.
Operating expenses	▼	\$49 million increase, largely due to an increase in power costs, the majority of which are recoverable, as a result of higher power pool prices during 2021, combined with higher operating expenses associated with the additional assets being placed into service in Facilities.
Depreciation and amortization included in operations	▼	\$22 million increase, primarily due to additional assets being placed into service during 2021.
Share of profit from equity accounted investees	●	Consistent with the prior year. Higher NGL margins and a wider AECO-Chicago natural gas price differential at Aux Sable, combined with higher share of profit from Veresen Midstream due to the contributions from the Hythe Developments going into service in March 2021 and higher volumes at the Dawson Assets, were largely offset by lower contribution from Ruby and the impact of the lower U.S. dollar exchange rate.
Realized loss (gain) on commodity-related derivatives	▼	\$254 million negative variance, due to higher NGL and crude oil market prices during the period, which also drove higher margins on NGL and crude sales, resulting in a realized loss on NGL and crude oil-based derivative instruments for the year, compared to realized gains recognized during 2020. Pembina utilizes derivative instruments to stabilize the results of its marketing business.
Unrealized gain on commodity-related derivatives	▲	\$157 million positive variance, primarily due to contracts maturing in the period and unrealized gains on commodity-related derivatives for certain gas processing fees tied to AECO prices, discussed in the "Facilities" section, partially offset by newly added contracts.
General & administrative	▼	\$60 million increase largely due to higher incentive costs primarily driven by the change in Pembina's share price and an increase in optimization project costs, partially offset by a reduction in salaries due to a lower headcount.
Other income	▲	\$230 million increase primarily due to the \$350 million (\$250 million net of tax and associated expenses) Arrangement Termination Payment, partially offset by lower income associated with Canadian Emergency Wage Subsidy, higher transformation and restructuring costs, and higher project write-downs.
Impairments	▲	During 2021, Pembina recognized \$474 million in impairments (\$361 million net of tax) primarily related to the Nipisi and Mitsue Pipeline systems and the Edmonton South Rail Terminal due to contract expirations, compared to impairments of \$2.1 billion (\$1.6 billion net of tax) recognized during the fourth quarter of 2020 associated with its investments in Ruby, CKPC and the assets associated with Jordan Cove.
Net finance costs	▼	\$30 million increase, primarily driven by higher interest expense related to the subordinated hybrid notes and losses on non-commodity-related derivative financial instruments compared to gains in 2020, partially offset by foreign exchange gains in the year compared to foreign exchange losses in 2020 as a result of hedge accounting adopted in the second quarter of 2020.
Current tax expense	▼	\$46 million increase, primarily due to higher current year earnings associated with the Arrangement Termination Payment, discussed above.
Deferred tax expense	▼	\$477 million increase, largely due to the deferred tax recovery recognized in 2020 associated with the impairment of investments in Ruby, CKPC and the assets associated with Jordan Cove.
Cash flow from operating activities	▲	\$398 million increase, primarily driven by an increase in operating results after adjusting for non-cash items and the \$350 million Arrangement Termination Payment received in the third quarter of 2021, discussed above, partially offset by a \$60 million increase in taxes paid and \$35 million increase in net interest paid.
Adjusted cash flow from operating activities⁽¹⁾	▲	\$351 million increase, largely due to the same items impacting cash flow from operating activities, discussed above, net of the increase in taxes paid and \$15 million decrease in preferred share dividends paid, partially offset by the \$69 million higher accrued share-based payments and \$46 million higher current tax expense.
Adjusted EBITDA⁽¹⁾	▲	\$152 million increase, primarily due to higher margins on NGL and crude oil sales, combined with new assets placed into service in Facilities, higher contribution from Aux Sable, and higher volumes on the Peace Pipeline system, partially offset by the realized loss on commodity-related derivatives, lower contribution from Ruby, and the expiration of contracts on certain Oil Sands assets, discussed above, combined with higher general and administrative expenses and the impact of the lower U.S. dollar exchange rate. Included in adjusted EBITDA is \$725 million (2020: \$681 million) related to equity accounted investees.
Total volumes (mboe/d)⁽²⁾	▼	44mboe/d decrease, largely due to lower volumes at AEGS due to third-party outages in the second half of 2021 and planned turnarounds in the fourth quarter of 2021, combined with lower contracted volumes on Oil Sands pipeline systems and on the Ruby Pipeline, partially offset by higher revenue volumes from assets placed into service in Facilities and higher volumes on the Peace Pipeline system due to increased upstream activities. Volumes include 312 mboe/d (2020: 312 mboe/d) related to equity accounted investees.

▲ Increase; ▼ Decrease; or ● No impact; to earnings, adjusted EBITDA, cash flow from operations, adjusted cash flow from operating activities or total volumes.

⁽¹⁾ Refer to the "Non-GAAP & Other Financial Measures" section of this MD&A.

⁽²⁾ Total revenue volumes. See the "Abbreviations" section of this MD&A for definition. Marketed NGL volumes are excluded from volumes to avoid double counting. Refer to the "Marketing & New Ventures" section of this MD&A for further information.

⁽³⁾ Facilities results ex. commodity-related derivatives and Marketing & New Ventures results ex. commodity-related derivatives includes gross profit less realized and unrealized losses on commodity related derivative financial instruments.

⁽⁴⁾ Other includes other expenses and corporate.

3. SEGMENT RESULTS

Business Overview

The Pipelines Division provides customers with pipeline transportation, terminalling, storage and rail services in key market hubs in Canada and the United States for crude oil, condensate, natural gas liquids and natural gas. The division manages pipeline transportation capacity of 3.1 mmbbl/d⁽¹⁾, above ground storage of 11 mmbbls⁽¹⁾ and rail terminalling capacity of approximately 105 mboe/d⁽¹⁾ within its conventional, oil sands and heavy oil, and transmission assets. The conventional assets include strategically located pipelines and terminalling hubs that gather and transport light and medium crude oils, condensate and natural gas liquids from western Alberta and northeast British Columbia to the Edmonton, Alberta area for further processing or transportation on downstream pipelines. The oil sands and heavy oil assets transport heavy and synthetic crude oil produced within Alberta to the Edmonton, Alberta area and offer associated storage, terminalling and rail services. The transmission assets transport natural gas, ethane and condensate throughout Canada and the United States on long haul pipelines linking various key market hubs. In addition, the Pipelines Division assets provide linkages between Pembina's upstream and downstream assets across North America, enabling integrated customer service offerings. Together, these assets supply products from hydrocarbon producing regions to refineries, fractionators and market hubs in Alberta, British Columbia, Illinois and California, as well as other regions throughout North America.

The Facilities Division includes infrastructure that provides Pembina's customers with natural gas, condensate and NGL services. Pembina's natural gas gathering and processing assets are strategically positioned in active, liquids-rich areas of the WCSB and Williston Basin and are integrated with the Company's other businesses. Pembina provides sweet and sour gas gathering, compression, condensate stabilization, and both shallow cut and deep cut gas processing services with a total capacity of approximately 6.1 bcf/d⁽²⁾ for its customers. Condensate and NGL extracted at virtually all Canadian-based facilities have access to transportation on Pembina's pipelines. In addition, all NGL transported along the Alliance Pipeline are extracted through the Pembina operated Channahon Facility at the terminus. The Facilities Division includes approximately 354 mbpd⁽²⁾ of NGL fractionation capacity, 21 mmbbls⁽¹⁾ of cavern storage capacity and associated pipeline and rail terminalling facilities and a liquefied propane export facility on Canada's West Coast. These facilities are fully integrated with the Company's other divisions, providing customers with the ability to access a comprehensive suite of services to enhance the value of their hydrocarbons. In addition, Pembina owns a bulk marine import/export terminal in Vancouver, British Columbia.

The Marketing & New Ventures Division strives to maximize the value of hydrocarbon liquids and natural gas originating in the basins where the Company operates. Pembina pursues this goal through the creation of new markets, and further enhances existing markets, to support both the Company's and its customers' overall business interests. In particular, Pembina seeks to identify opportunities to connect hydrocarbon production to new demand locations through the development of infrastructure. Pembina strives to increase producer netbacks and product demand to improve the overall competitiveness of the basins where the Company operates. Within the Marketing & New Ventures Division, Pembina undertakes value-added commodity marketing activities including buying and selling products (natural gas, ethane, propane, butane, condensate, crude oil and electricity), commodity arbitrage, and optimizing storage opportunities. The marketing business enters into contracts for capacity on both Pembina's and third-party infrastructure, handles proprietary and customer volumes and aggregates production for onward sale.

⁽¹⁾ Net capacity; excludes projects under development.

⁽²⁾ Net capacity. Includes Aux Sable capacity. The financial and operational results for Aux Sable are included in the Marketing & New Ventures Division; excludes projects under development.

Financial and Operational Overview by Division

	3 Months Ended December 31					
	2021			2020		
	Volumes ⁽¹⁾	Reportable Segment Earnings (Loss) Before Tax	Adjusted EBITDA ⁽²⁾	Volumes ⁽¹⁾	Reportable Segment Earnings (Loss) Before Tax	Adjusted EBITDA ⁽²⁾
<i>(\$ millions, except where noted)</i>						
Pipelines	2,571	(70)	548	2,730	(992)	577
Facilities	866	160	285	884	143	255
Marketing & New Ventures ⁽³⁾	—	224	183	—	(684)	75
Corporate	—	(181)	(46)	—	(114)	(41)
Total	3,437	133	970	3,614	(1,647)	866

	12 Months Ended December 31					
	2021			2020		
	Volumes ⁽¹⁾	Reportable Segment Earnings (Loss) Before Tax	Adjusted EBITDA ⁽²⁾	Volumes ⁽¹⁾	Reportable Segment Earnings (Loss) Before Tax	Adjusted EBITDA ⁽²⁾
<i>(\$ millions, except where noted)</i>						
Pipelines	2,586	917	2,102	2,623	128	2,208
Facilities	870	715	1,097	877	642	1,012
Marketing & New Ventures ⁽³⁾	—	391	420	—	(646)	193
Corporate	—	(358)	(186)	—	(540)	(132)
Total	3,456	1,665	3,433	3,500	(416)	3,281

⁽¹⁾ Volumes for Pipelines and Facilities are revenue volumes, which are physical volumes plus volumes recognized from take-or-pay commitments. Volumes are stated in mboe/d, with natural gas volumes converted to mboe/d from MMcf/d at a 6:1 ratio.

⁽²⁾ Refer to the "Non-GAAP & Other Financial Measures" section of this MD&A.

⁽³⁾ Marketed NGL volumes are excluded from volumes to avoid double counting. Refer to the "Marketing & New Ventures" section of this MD&A for further information.

Pipelines

Financial Overview for the Three Months Ended December 31

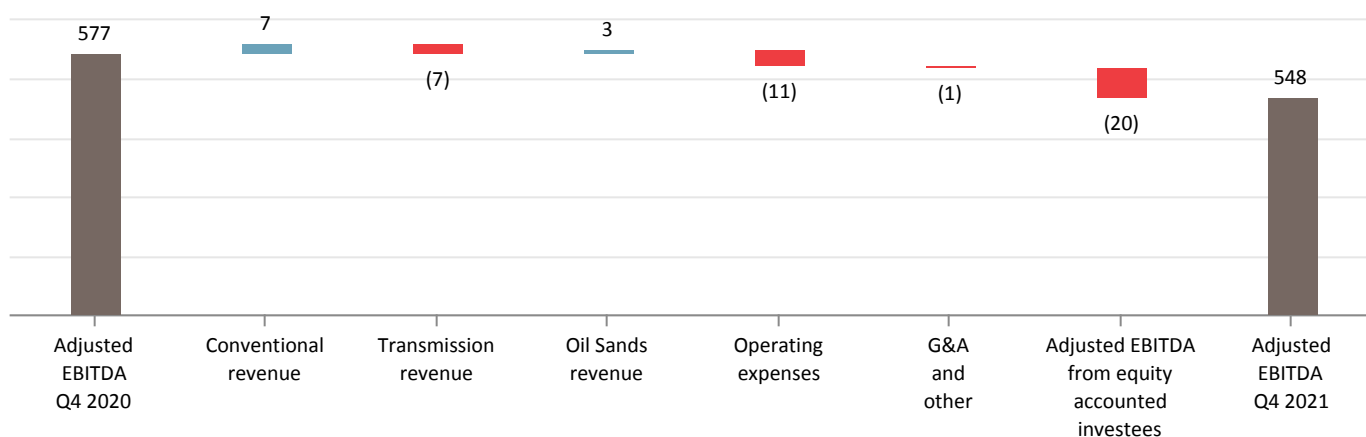
Results of Operations

(\$ millions, except where noted)	2021	2020	Change	% Change
Conventional revenue ⁽¹⁾⁽²⁾	379	372	7	2
Transmission revenue ⁽¹⁾⁽²⁾	112	119	(7)	(6)
Oil Sands revenue ⁽¹⁾⁽²⁾	115	112	3	3
Pipelines revenue ⁽¹⁾	606	603	3	—
Operating expenses ⁽¹⁾	147	136	11	8
Depreciation and amortization included in operations	101	102	(1)	(1)
Share of profit from equity accounted investees	29	54	(25)	(46)
Gross profit	387	419	(32)	(8)
Reportable segment earnings (loss) before tax	(70)	(992)	922	93
Adjusted EBITDA ⁽³⁾	548	577	(29)	(5)
Volumes (mboe/d) ⁽⁴⁾	2,571	2,730	(159)	(6)
Distributions from equity accounted investees	51	80	(29)	(36)

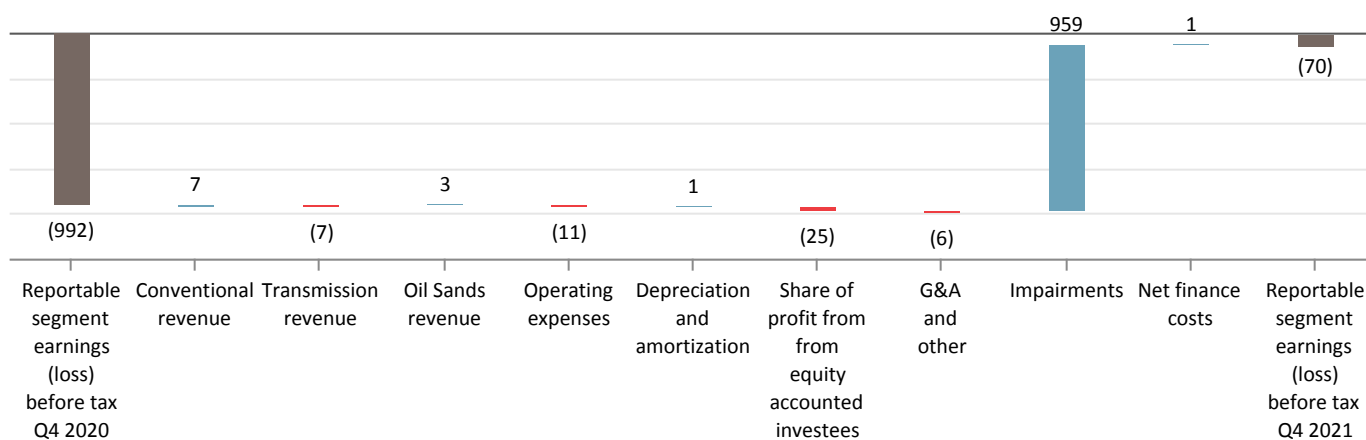
Change in Results

Conventional revenue⁽¹⁾⁽²⁾	●	Consistent with prior period. Higher recoverable costs and tolls, combined with higher contribution from the NEBC Montney Infrastructure were largely offset by a timing difference in the recognition of deferred revenue associated with the Peace Pipeline system.
Transmission revenue⁽¹⁾⁽²⁾	●	Consistent with prior period. Lower volumes on the Cochin Pipeline due to a timing difference in the recognition of deferred revenue in the fourth quarter of 2021, combined with the lower U.S. dollar exchange rate was largely offset by higher revenue on the Vantage Pipeline.
Oil Sands revenue⁽¹⁾⁽²⁾	●	Consistent with prior period. Higher recoverable costs on the Horizon Pipeline system and Syncrude Pipeline, were largely offset by the expiration of contracts on the Nipisi and Mitsue Pipeline systems.
Operating expenses⁽¹⁾	▼	Increase largely due to a \$12 million increase in power costs, of which \$9 million was recovered in revenue, as a result of higher power pool prices during the fourth quarter of 2021.
Share of profit from equity accounted investees	▼	Decrease largely due to lower contribution from Ruby as the owners agreed to defer distributions for the fourth quarter of 2021, partially offset by an increased share of profit from Alliance due to a gain recognized on the debt re-financing.
Reportable segment earnings (loss) before tax	▲	Increase largely due to \$437 million in impairments recognized during the fourth quarter of 2021 associated with contract expirations on the Nipisi and Mitsue Pipeline systems and at the Edmonton South Rail Terminal compared to \$1.4 billion recognized during the fourth quarter of 2020 associated with Pembina's investments in Ruby. This was combined with higher contribution from the NEBC Montney Infrastructure, partially offset by lower contribution from Ruby, combined with lower volumes on the Cochin Pipeline.
Adjusted EBITDA⁽³⁾	▼	Decrease largely due to the same items impacting reportable segment earnings (loss) before tax, discussed above, net of the decrease in impairments. Included in adjusted EBITDA is \$80 million (2020: \$70 million) related to Alliance and \$14 million (2020: \$45 million) related to Ruby.
Volumes (mboe/d)⁽⁴⁾	▼	Decrease largely driven by lower contracted volumes on Oil Sands pipeline systems and on the Ruby Pipeline, lower deferred revenue volumes on the Peace Pipeline system recognized in the fourth quarter of 2021, combined with lower volumes at AEGS due to third party outages and planned turnarounds in the fourth quarter of 2021, partially offset by higher volumes on the Drayton Valley Pipeline. Volumes include 144 mboe/d (2020: 139 mboe/d) related to Alliance and 60 mboe/d (2020: 101 mboe/d) related to Ruby.
Distributions from equity accounted investees	▼	\$51 million (2020: \$51 million) from Alliance and no distributions (2020: \$29 million) from Ruby. The reduction in distributions from Ruby are due to the same factors impacting share of profit from equity accounted investees discussed above.

Change in Adjusted EBITDA (\$ millions)⁽²⁾⁽³⁾



Change in Reportable Segment Earnings (Loss) Before Tax (\$ millions)⁽²⁾



⁽¹⁾ Includes inter-segment transactions. See Note 20 of the Consolidated Financial Statements.

⁽²⁾ Conventional, transmission and oil sands revenue include revenue generated from Pembina's conventional, transmission and oil sands and heavy oil assets within the Pipelines operating segment, respectively. For further details on Pembina's assets, refer to Pembina's AIF for the year ended December 31, 2021.

⁽³⁾ Refer to the "Non-GAAP & Other Financial Measures" section of this MD&A.

⁽⁴⁾ Revenue volumes. See the "Abbreviations" section of this MD&A for definition.

Financial Overview for the 12 Months Ended December 31

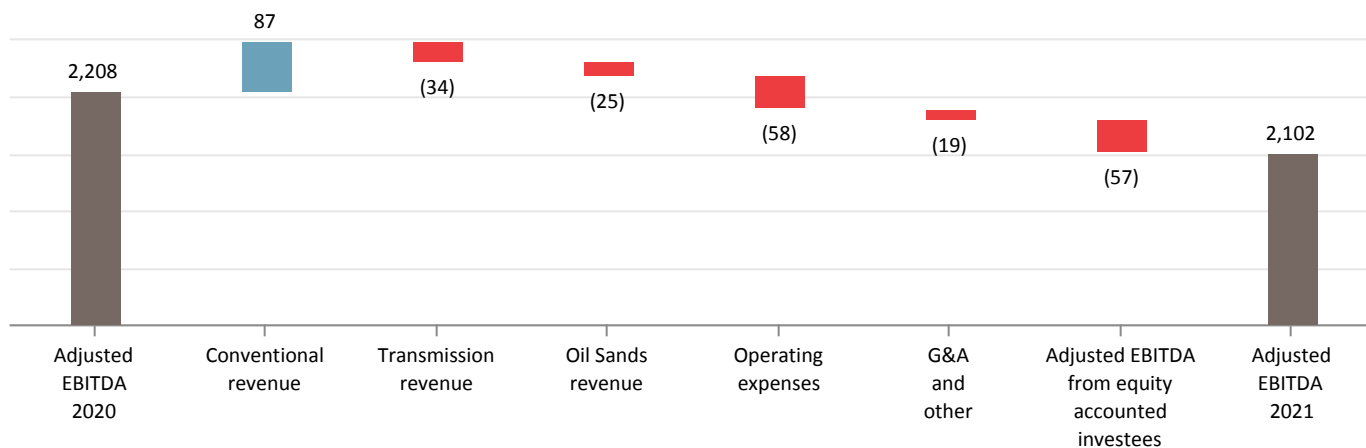
Results of Operations

(\$ millions, except where noted)	2021	2020	Change	% Change
Conventional revenue ⁽¹⁾⁽²⁾	1,410	1,323	87	7
Transmission revenue ⁽¹⁾⁽²⁾	427	461	(34)	(7)
Oil Sands revenue ⁽¹⁾⁽²⁾	442	467	(25)	(5)
Total revenue ⁽¹⁾	2,279	2,251	28	1
Operating expenses ⁽¹⁾	556	498	58	12
Depreciation and amortization included in operations	413	402	11	3
Share of profit from equity accounted investees	124	227	(103)	(45)
Gross profit	1,434	1,578	(144)	(9)
Reportable segment earnings before tax	917	128	789	616
Adjusted EBITDA ⁽³⁾	2,102	2,208	(106)	(5)
Volumes (mboe/d) ⁽⁴⁾	2,586	2,623	(37)	(1)
Distributions from equity accounted investees	226	339	(113)	(33)

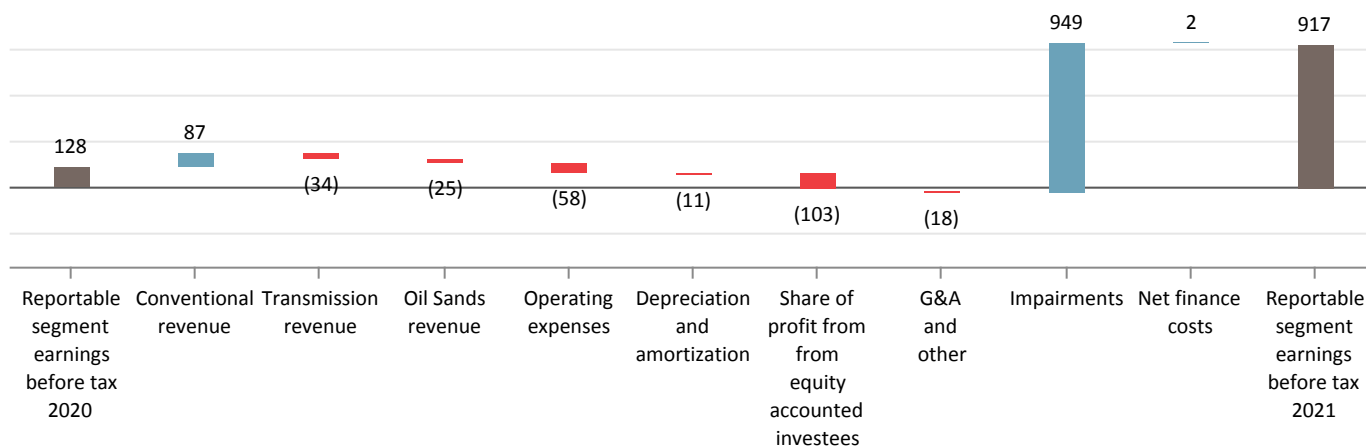
Change in Results

Conventional revenue ⁽¹⁾⁽²⁾	▲	Increase largely due to higher volumes on the Peace Pipeline system as higher NGL and crude market prices have resulted in increased upstream activities, combined with higher tolls and recoverable costs.
Transmission revenue ⁽¹⁾⁽²⁾	▼	Decrease largely due to lower volumes on the Vantage Pipeline as end users sourced their supply from the Redwater Complex, combined with the impact of the lower U.S. dollar exchange rate.
Oil Sands revenue ⁽¹⁾⁽²⁾	▼	Decrease largely due to lower storage and rail terminal revenue, including fully recovered capital fees at the Edmonton South Rail Terminal in April 2020, the expiration of contracts on the Nipisi and Mitsue Pipeline systems, combined with the sale of the Alberta Crude Terminal effective January 2021, partially offset by higher recoverable costs on the Horizon Pipeline system and Syncrude Pipeline.
Operating expenses ⁽¹⁾	▼	Increase largely due to a \$45 million increase in power costs, of which \$33 million was recovered in revenue, as a result of higher power pool prices during 2021, combined with higher long-term incentives.
Share of profit from equity accounted investees	▼	Decrease largely due to lower contribution from Ruby as the owners agreed to defer distributions during 2021, partially offset by an increased share of profit from Alliance due to a gain recognized on the debt re-financing and higher interruptible volumes, combined with the impact of the lower U.S. dollar exchange rate.
Reportable segment earnings before tax	▲	Increase largely due to \$447 million in impairments recognized during 2021 primarily associated with contract expirations on the Nipisi and Mitsue Pipeline systems and at the Edmonton South Rail Terminal compared to \$1.4 billion recognized during the fourth quarter of 2020 associated with Pembina's investments in Ruby. This was combined with higher volumes on the Peace Pipeline system, partially offset by lower contribution from Ruby, lower Transmission and Oil Sands revenue, discussed above, the impact of the lower U.S. dollar exchange rate on Alliance and Ruby, combined with increased operating expenses due to higher power costs not recoverable in revenue and higher long-term incentives.
Adjusted EBITDA ⁽³⁾	▼	Decrease largely due to the same items impacting reportable segment earnings before tax, discussed above, net of the decrease in impairments. Included in adjusted EBITDA is \$282 million (2020: \$274 million) related to Alliance and \$125 million (2020: \$188 million) related to Ruby.
Volumes (mboe/d) ⁽⁴⁾	▼	Decrease largely driven by lower volumes at AEGS due to third party outages in the second half of 2021 and planned turnarounds in the fourth quarter of 2021, combined with lower contracted volumes on the Ruby Pipeline and Oil Sands pipeline systems, partially offset by higher volumes on the Peace Pipeline system, discussed above. Volumes include 142 mboe/d (2020: 130 mboe/d) related to Alliance and 83 mboe/d (2020: 103 mboe/d) related to Ruby.
Distributions from equity accounted investees	▼	\$212 million (2020: \$217 million) from Alliance and \$13 million (2020: \$122 million) from Ruby. The reduction in distributions from Ruby is due to the same factors impacting share of profit from equity accounted investees discussed above.

Change in Adjusted EBITDA (\$ millions)⁽²⁾⁽³⁾



Change in Reportable Segment Earnings Before Tax (\$ millions)⁽²⁾



⁽¹⁾ Includes inter-segment transactions. See Note 20 of the Consolidated Financial Statements.

⁽²⁾ Conventional, transmission and oil sands revenue include revenue generated from Pembina's conventional, transmission and oil sands and heavy oil assets within the Pipelines operating segment, respectively. For further details on Pembina's assets, refer to Pembina's AIF for the year ended December 31, 2021.

⁽³⁾ Refer to the "Non-GAAP & Other Financial Measures" section of this MD&A.

⁽⁴⁾ Revenue volumes. See the "Abbreviations" section of this MD&A for definition.

Financial and Operational Overview

(\$ millions, except where noted)	3 Months Ended December 31						12 Months Ended December 31					
	2021			2020			2021			2020		
	Volumes ⁽¹⁾	Reportable Segment Earnings (Loss) Before Tax	Adjusted EBITDA ⁽²⁾	Volumes ⁽¹⁾	Reportable Segment Earnings (Loss) Before Tax	Adjusted EBITDA ⁽²⁾	Volumes ⁽¹⁾	Reportable Segment Earnings (Loss) Before Tax	Adjusted EBITDA ⁽²⁾	Volumes ⁽¹⁾	Reportable Segment Earnings (Loss) Before Tax	Adjusted EBITDA ⁽²⁾
Pipelines⁽³⁾												
Conventional	959	238	298	993	250	295	908	894	1,100	898	872	1,055
Transmission	616	74	172	684	(1,283)	205	642	292	714	670	(928)	828
Oil Sands	996	(382)	78	1,053	41	77	1,036	(269)	288	1,055	184	325
Total	2,571	(70)	548	2,730	(992)	577	2,586	917	2,102	2,623	128	2,208

⁽¹⁾ Revenue volumes in mboe/d. See the "Abbreviations" section of this MD&A for definition.

⁽²⁾ Refer to the "Non-GAAP & Other Financial Measures" section of this MD&A.

⁽³⁾ Includes values attributed to Pembina's conventional, transmission and oil sands and heavy oil assets within the Pipelines operating segment. Refer to Pembina's AIF for the year ended December 31, 2021.

Projects & New Developments⁽¹⁾

Pipelines continues to focus on the execution of various system expansions. The projects in the following table were recently placed into service.

Significant Projects	In-service Date
NEBC Montney Infrastructure	February 2021
Phase VI Peace Pipeline Expansion	June 2020
Wapiti Condensate Lateral	March 2020

The following outlines the projects and new developments within Pipelines:

As previously announced during the quarter, Phase VII continues to trend under budget and ahead of schedule. The capital cost estimate for the project has been revised lower, by \$110 million, to \$665 million, and is now anticipated to be in service in mid-2022. The revised cost and schedule reflect highly effective project management, favorable weather conditions and well performing contractors.

Phase VII Peace Pipeline Expansion

Capital Budget: \$665 million **In-service Date:** Mid-2022 **Status:** Ahead of schedule and under budget

This expansion includes a new 20-inch, approximately 220 km pipeline and two new pump stations or terminal upgrades. Phase VII will add approximately 160 mbpd of incremental capacity upstream of Fox Creek, accessing capacity available on the mainlines downstream of Fox Creek. Construction is underway and progressing according to schedule.

Phase IX Peace Pipeline Expansion

Capital Budget: \$120 million **In-service Date:** Second half of 2022 **Status:** On time, trending on budget

This expansion will include new 6-inch and 16-inch pipelines debottlenecking the corridor north of Gordondale, Alberta as well as upgrades at one pump station. In addition, this expansion will see existing pipelines, which are currently batching, converted to single product lines. Phase IX also includes a pump station in the Wapiti-to-Kakwa corridor that was previously part of the Phase VII project scope.

The previously announced Phase VIII Peace Pipeline Expansion remains deferred. Initial contracts supporting the project remain intact and customers continue to signal plans which will necessitate the incremental capacity. Prior to deferral, Phase VIII had an associated capital cost of approximately \$500 million. Value engineering work is ongoing, and Pembina continues to evaluate this project in discussions with its producing customers. Due to ongoing uncertainty around development timing in NEBC stemming from discussion between the British Columbia government and First Nations communities, a reactivation decision is expected in the first half of 2022.

Phase VIII Peace Pipeline Expansion

Status: Deferred

This expansion will include 10-inch and 16-inch pipelines in the Gordondale to La Glace corridor as well as six new pump stations or terminal upgrades located between Gordondale and Fox Creek.

⁽¹⁾ For further details on Pembina's significant assets, including definitions for capitalized terms used herein that are not otherwise defined, refer to Pembina's AIF for the year ended December 31, 2021 filed at www.sedar.com (filed with the U.S. Securities and Exchange Commission at www.sec.gov under Form 40-F) and on Pembina's website at www.pembina.com.

Facilities

Financial Overview for the Three Months Ended December 31

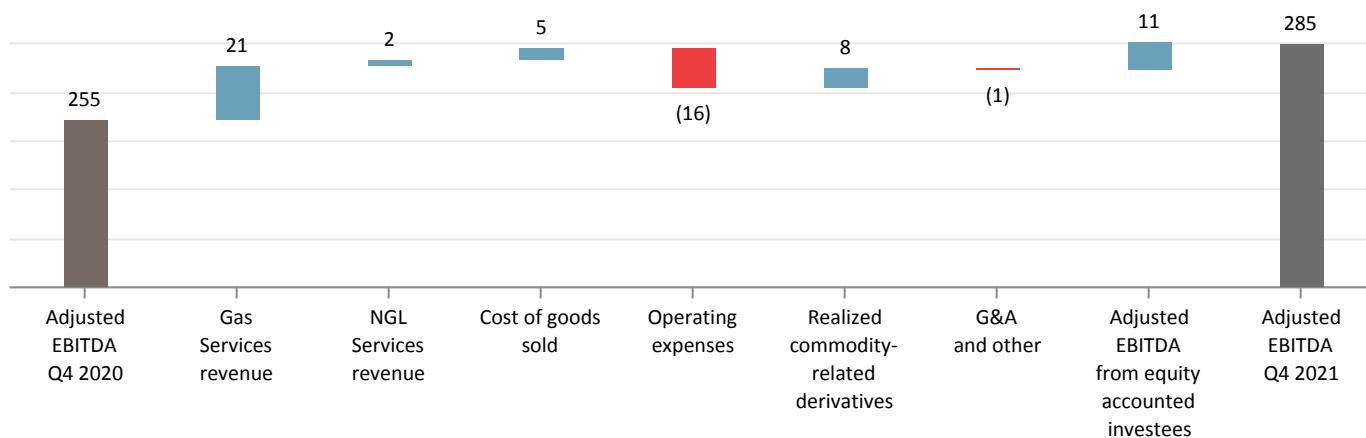
Results of Operations

(\$ millions, except where noted)	2021	2020	Change	% Change
Gas Services revenue ⁽¹⁾⁽²⁾	172	151	21	14
NGL Services revenue ⁽¹⁾⁽²⁾	177	175	2	1
Facilities revenue ⁽¹⁾	349	326	23	7
Operating expenses ⁽¹⁾	127	111	16	14
Cost of goods sold ⁽¹⁾	(1)	4	(5)	(125)
Depreciation and amortization included in operations	56	50	6	12
Realized gain on commodity-related derivative financial instruments	(8)	—	(8)	100
Unrealized loss on commodity-related derivative financial instruments	24	10	14	140
Share of profit from equity accounted investees	21	14	7	50
Gross profit	172	165	7	4
Reportable segment earnings before tax	160	143	17	12
Adjusted EBITDA ⁽³⁾	285	255	30	12
Volumes (mboe/d) ⁽⁴⁾	866	884	(18)	(2)
Distributions from equity accounted investees	40	25	15	60

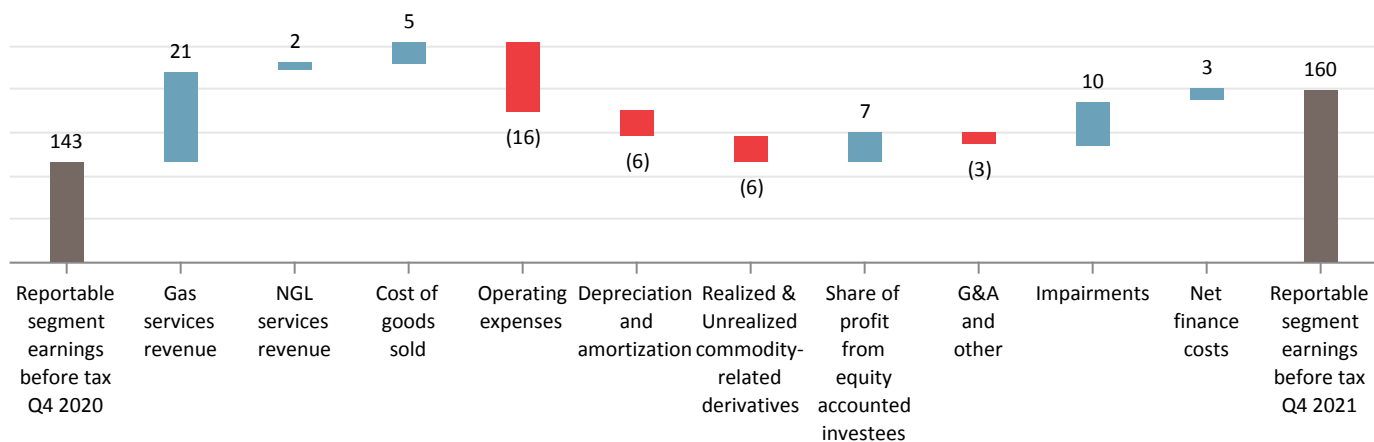
Changes in Results

Gas Services revenue⁽¹⁾⁽²⁾	▲	Increase largely due to higher operating expense recoveries at the Empress Infrastructure as a result of higher power costs, Duvernay III being placed into service in November 2020, the transfer of the Burstall Ethane Storage Facility ("Burstall") from NGL Services to Gas Services in January 2021, combined with higher contracted volumes at Younger.
NGL Services revenue⁽¹⁾⁽²⁾	●	Consistent with prior period. Higher revenue from the Prince Rupert Terminal being placed into service in March 2021 was largely offset by the transfer of Burstall to Gas Services in January 2021.
Operating expenses⁽¹⁾	▼	Increase largely due to a \$19 million increase in power costs, all of which is recovered in revenue, as a result of higher power pool prices during the fourth quarter of 2021.
Share of profit from equity accounted investees	▲	Increase mainly due to the contribution from the Veresen Midstream Hythe Developments going into service in March 2021, combined with higher volumes on Veresen Midstream's Dawson Assets.
Unrealized loss & realized gain on commodity-related derivatives	▼	Unrealized loss on commodity-related derivatives primarily due to 2021 derivatives being realized during the fourth quarter of 2021, combined with AECO forward prices beginning to normalize during the fourth quarter of 2021 compared to the significant increase in forward prices earlier in the year.
Reportable segment earnings before tax	▲	Increase primarily due to the contribution from new assets placed into service and higher contribution from Veresen Midstream, discussed above, and higher contracted volumes at Younger, combined with the realized gain on commodity-related derivatives.
Adjusted EBITDA⁽³⁾	▲	Increase primarily due to the same items impacting reportable segment earnings before tax, discussed above. Included in adjusted EBITDA is \$53 million (2020: \$42 million) related to Veresen Midstream.
Volumes (mboe/d)⁽⁴⁾	▼	Decrease largely due to lower supply volumes on the East NGL System, which are now being processed by the Empress Infrastructure, and lower volumes at the Redwater Complex following third party outages, partially offset by higher contracted volumes at Younger, higher volumes associated with Duvernay III being placed into service in the fourth quarter of 2020 and higher volumes on the Dawson Assets. Volumes include 90 mboe/d (2020: 75 mboe/d) related to Veresen Midstream.
Distributions from equity accounted investees	▲	\$39 million (2020: \$25 million) from Veresen Midstream and \$1 million (2020: nil) from Fort Corp. The increase in distributions is due to the same reasons impacting share of profit above.

Change in Adjusted EBITDA (\$ millions)⁽²⁾⁽³⁾



Change in Reportable Segment Earnings Before Tax (\$ millions)⁽²⁾



⁽¹⁾ Includes inter-segment transactions. See Note 20 of the Consolidated Financial Statements.

⁽²⁾ Gas services and NGL services revenue include revenue generated from Pembina's gas services and NGL services assets within the Facilities operating segment, respectively. For further details on Pembina's assets, refer to Pembina's AIF for the year ended December 31, 2021.

⁽³⁾ Refer to the "Non-GAAP & Other Financial Measures" section of this MD&A.

⁽⁴⁾ Revenue volumes. See the "Abbreviations" section of this MD&A for definition.

Financial Overview for the 12 Months Ended December 31

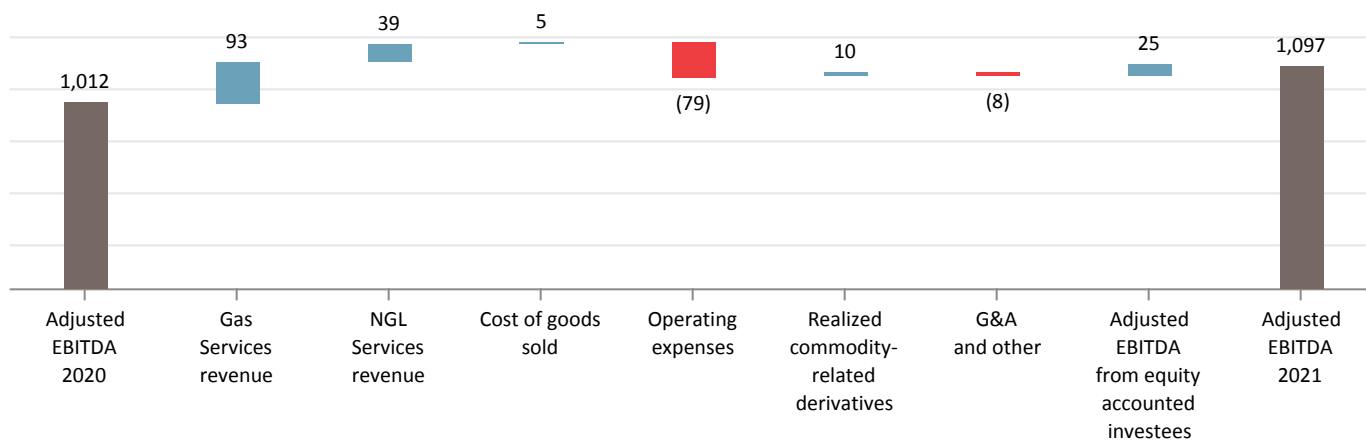
Results of Operations

(\$ millions, except where noted)	2021	2020	Change	% Change
Gas Services revenue ⁽¹⁾⁽²⁾	675	582	93	16
NGL Services revenue ⁽¹⁾⁽²⁾	688	649	39	6
Facilities revenue ⁽¹⁾	1,363	1,231	132	11
Operating expenses ⁽¹⁾	471	392	79	20
Cost of goods sold ⁽¹⁾	6	11	(5)	(45)
Depreciation and amortization included in operations	214	199	15	8
Realized gain on commodity-related derivative financial instruments	(10)	—	(10)	100
Unrealized gain on commodity-related derivative financial instruments	(38)	(4)	(34)	850
Share of profit from equity accounted investees	80	55	25	45
Gross profit	800	688	112	16
Reportable segment earnings before tax	715	642	73	11
Adjusted EBITDA ⁽³⁾	1,097	1,012	85	8
Volumes (mboe/d) ⁽⁴⁾	870	877	(7)	(1)
Distributions from equity accounted investees	135	101	34	34

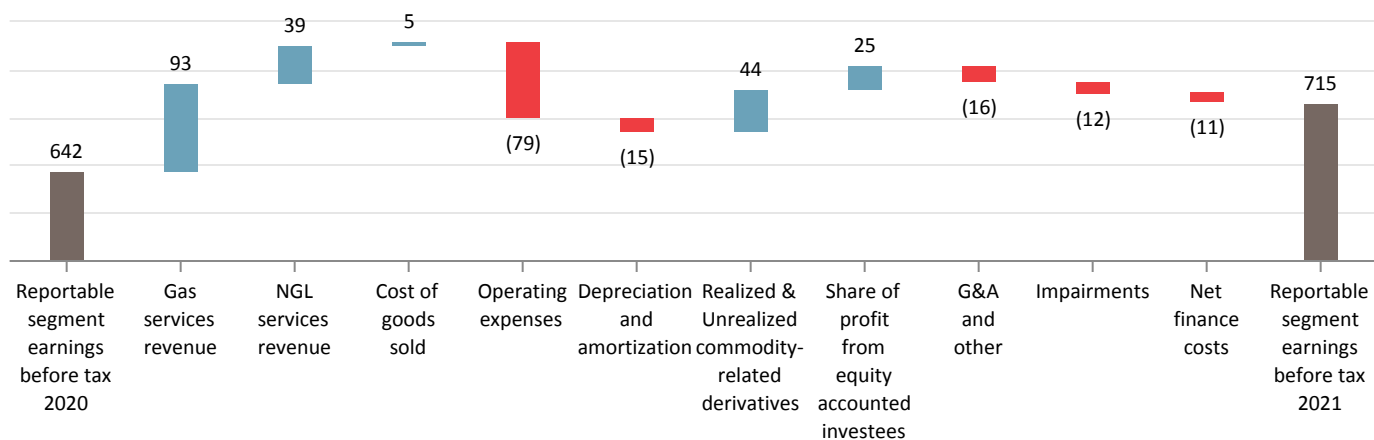
Changes in Results

Gas Services revenue⁽¹⁾⁽²⁾	▲	Increase largely due to Empress Infrastructure and Duvernay III being placed into service in the fourth quarter of 2020, Burstall being transferred from NGL Services to Gas Services in January 2021, increased operating expense recoveries as a result of higher power costs, combined with higher contracted volumes at Younger due to a turnaround in September 2020.
NGL Services revenue⁽¹⁾⁽²⁾	▲	Increase primarily due to the Prince Rupert Terminal being placed into service in March 2021, combined with higher operating expense recoveries at the Redwater Complex, partially offset by the transfer of Burstall to Gas Services.
Operating expenses⁽¹⁾	▼	Increase largely due to operating expenses associated with the additional assets placed into service, discussed above, combined with a \$62 million increase in power costs, all of which is recovered in revenue, as a result of higher power pool prices during 2021 compared to 2020.
Share of profit from equity accounted investees	▲	Increase mainly due to the contribution from the Veresen Midstream Hythe Developments going into service in March 2021, combined with higher volumes on Veresen Midstream's Dawson Assets.
Realized & unrealized gain on commodity-related derivatives	▲	Certain gas processing fees are tied to AECO prices and the significant increase in the AECO price has resulted in higher unrealized and realized gains during 2021.
Reportable segment earnings before tax	▲	Increase primarily due to the contribution from new assets placed into service and higher contribution from Veresen Midstream, discussed above, higher revenue at the Redwater Complex, combined with the realized gain on commodity-related derivatives, partially offset by higher operating expenses and higher long-term incentive costs.
Adjusted EBITDA⁽³⁾	▲	Increase largely due to the same items impacting reportable segment earnings before tax, discussed above. Included in adjusted EBITDA is \$201 million (2020: \$174 million) related to Veresen Midstream.
Volumes (mboe/d)⁽⁴⁾	▼	Decrease largely due to lower supply volumes on the East NGL System, which are now being processed by the Empress Infrastructure, partially offset by higher revenue volumes associated with Duvernay III being placed into service in the fourth quarter of 2020 and higher volumes at Younger. Volumes include 87 mboe/d (2020: 79 mboe/d) related to Veresen Midstream.
Distributions from equity accounted investees	▲	\$131 million (2020: \$97 million) from Veresen Midstream and \$4 million (2020: \$4 million) from Fort Corp. The increase in distributions is due to the same reasons impacting share of profit above.

Change in Adjusted EBITDA (\$ millions)⁽²⁾⁽³⁾



Change in Reportable Segment Earnings Before Tax (\$ millions)⁽²⁾



⁽¹⁾ Includes inter-segment transactions. See Note 20 of the Consolidated Financial Statements.

⁽²⁾ Gas services and NGL services revenue include revenue generated from Pembina's gas services and NGL services assets within the Facilities operating segment, respectively. For further details on Pembina's assets, refer to Pembina's AIF for the year ended December 31, 2021.

⁽³⁾ Refer to the "Non-GAAP & Other Financial Measures" section of this MD&A.

⁽⁴⁾ Revenue volumes. See the "Abbreviations" section of this MD&A for definition.

Financial and Operational Overview

(\$ millions, except where noted)	3 Months Ended December 31						12 Months Ended December 31					
	2021			2020			2021			2020		
	Volumes ⁽¹⁾	Reportable Segment Earnings Before Tax	Adjusted EBITDA ⁽²⁾	Volumes ⁽¹⁾	Reportable Segment Earnings Before Tax	Adjusted EBITDA ⁽²⁾	Volumes ⁽¹⁾	Reportable Segment Earnings Before Tax	Adjusted EBITDA ⁽²⁾	Volumes ⁽¹⁾	Reportable Segment Earnings Before Tax	Adjusted EBITDA ⁽²⁾
Facilities⁽³⁾												
Gas Services	677	81	172	673	65	138	669	403	640	667	319	558
NGL Services	189	79	113	211	78	117	201	312	457	210	323	454
Total	866	160	285	884	143	255	870	715	1,097	877	642	1,012

⁽¹⁾ Revenue volumes in mboe/d, with natural gas volumes converted to mboe/d from MMcf/d at a 6:1 ratio. See the "Abbreviations" section of this MD&A for definition.

⁽²⁾ Refer to the "Non-GAAP & Other Financial Measures" section of this MD&A.

⁽³⁾ Includes values attributed to Pembina's gas and NGL services assets within the Facilities operating segment. For a description of Pembina's gas and NGL assets, refer to Pembina's AIF for the year ended December 31, 2021.

Projects & New Developments⁽¹⁾

Facilities continues to build-out its natural gas and NGL processing and fractionation assets to service customer demand. The projects in the following table were recently placed into service.

Significant Projects	In-service Date
Vancouver Wharves Expansion	June 2021
Prince Rupert Terminal	March 2021
Duvernay III	November 2020
Empress Infrastructure	October 2020
Duvernay Sour Treatment Facilities	March 2020
Veresen Midstream⁽²⁾	
Hythe Developments	March 2021

The following outlines the projects and new developments within Facilities:

Empress Cogeneration Facility
Capital Budget: \$120 million
In-service Date: Fourth quarter of 2022
Status: Ahead of schedule, on budget
The Empress Cogeneration Facility will use natural gas to generate up to 45 megawatts of electrical power, thereby reducing overall operating costs by providing electricity and heat to the existing Empress NGL Extraction Facility. All the power will be consumed on site, thereby supplying up to 90 percent of the site's electrical requirements. Further, this project will contribute to annual greenhouse gas emission reductions at the Empress NGL Extraction Facility through the utilization of the cogeneration waste heat and the low-emission power generated. Pembina anticipates a reduction of approximately 90,000 tonnes of carbon dioxide equivalent per year based on the current energy demand of the Empress NGL Extraction Facility. Construction is progressing well with the mechanical and electrical contractor on site.

The Prince Rupert Terminal Expansion remains deferred. Engineering of the expansion is well advanced and in conjunction with market dynamics that include customer demand, shipping costs, and North American and international pricing, Pembina expects to make a decision in the first quarter of 2022 whether to proceed with the expansion.

Prince Rupert Terminal Expansion	Status: Deferred
The Prince Rupert Terminal Expansion will increase the export capacity of the Prince Rupert Terminal.	

⁽¹⁾ For further details on Pembina's significant assets, including definitions for capitalized terms used herein that are not otherwise defined, refer to Pembina's AIF for the year ended December 31, 2021 filed at www.sedar.com (filed with the U.S. Securities and Exchange Commission at www.sec.gov under Form 40-F) and on Pembina's website at www.pembina.com.

⁽²⁾ Veresen Midstream is an equity accounted investee, in which Pembina had a 45 percent interest in as of December 31, 2021. Results from Veresen Midstream impact share of profit from equity accounted investees and proportionally consolidated metrics. See Note 9 to the Consolidated Financial Statements.

Marketing & New Ventures

Financial Overview for the Three Months Ended December 31

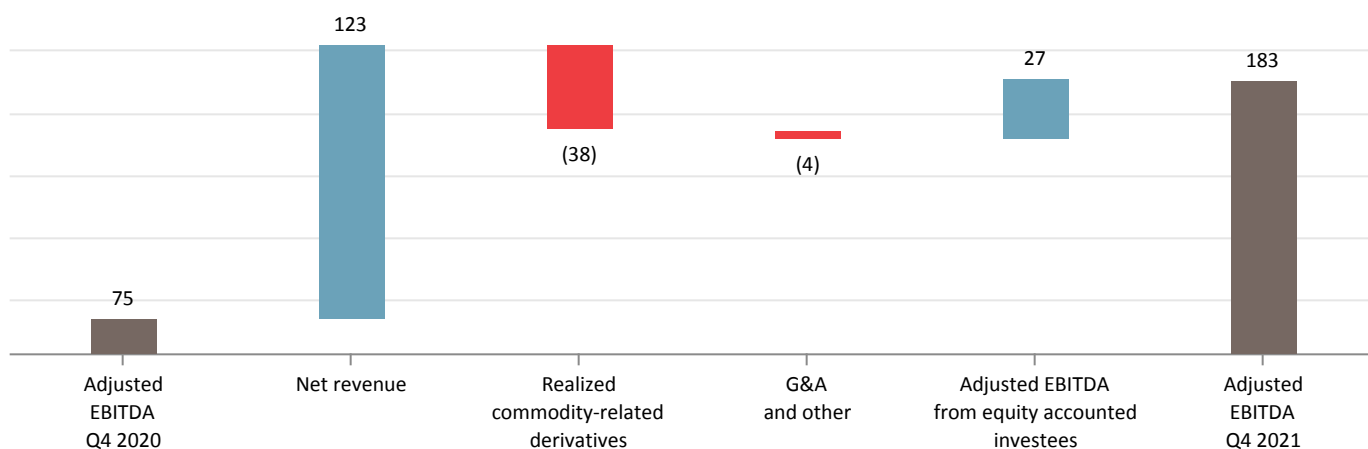
Results of Operations

(\$ millions, except where noted)	2021	2020	Change	% Change
Marketing revenue ⁽¹⁾	1,750	882	868	98
Cost of goods sold ⁽¹⁾	1,554	809	745	92
Net revenue ⁽¹⁾⁽²⁾	196	73	123	168
Depreciation and amortization included in operations	12	13	(1)	(8)
Realized loss on commodity-related derivative financial instruments	44	6	38	633
Unrealized (gain) loss on commodity-related derivative financial instruments	(54)	76	(130)	(171)
Share of profit from equity accounted investees - operations	33	2	31	1,550
Impairment in share of profit from equity accounted investees	—	(314)	314	100
Gross profit	227	(334)	561	168
Reportable segment earnings (loss) before tax	224	(684)	908	133
Adjusted EBITDA ⁽²⁾	183	75	108	144
Volumes (mboe/d) ⁽³⁾	193	207	(14)	(7)
Distributions from equity accounted investees	37	4	33	825

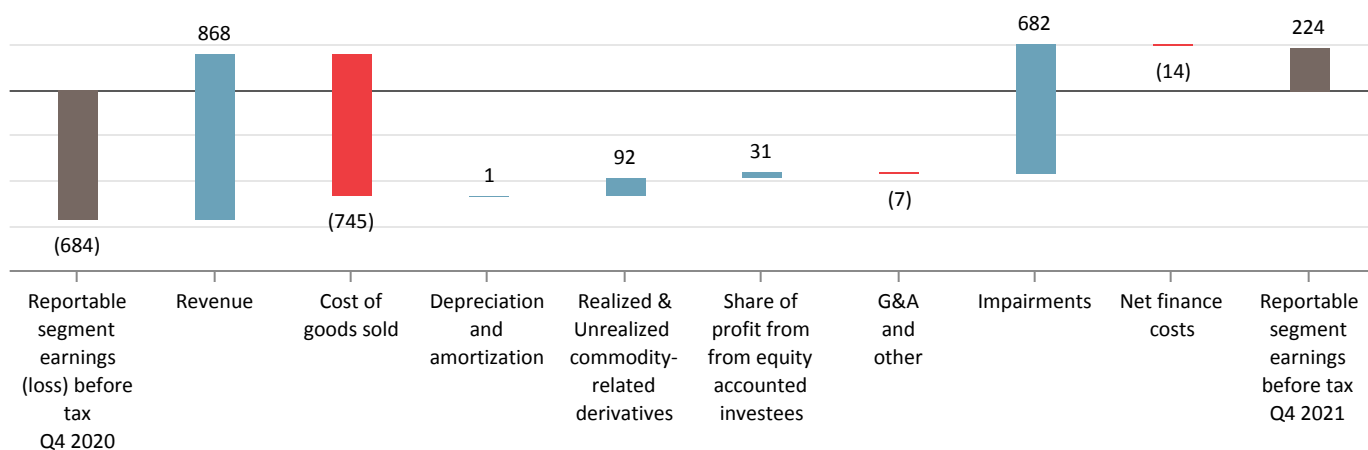
Change in Results

Net revenue ⁽¹⁾⁽²⁾	▲	Increase largely due to higher NGL and crude oil market prices, resulting in higher margins, during the fourth quarter of 2021, partially offset by an increase in cost of goods sold related to transportation and terminalling fees associated with the Prince Rupert Terminal being placed into service.
Share of profit from equity accounted investees - operations	▲	Increase largely due to higher revenues at Aux Sable as a result of higher NGL margins and a wider AECO-Chicago natural gas price differential.
Realized loss on commodity-related derivatives	▼	Realized loss due to higher NGL market prices during the fourth quarter of 2021, which also drove higher margins on NGL sales, resulting in a realized loss on NGL-based derivative instruments for the period. Pembina utilizes derivative instruments to stabilize the results of its marketing business.
Unrealized (gain) loss on commodity-related derivatives	▲	Unrealized gain on commodity-related derivatives primarily due to contracts maturing in the period, partially offset by newly added contracts.
Impairment in share of profit from equity accounted investees	▲	During the fourth quarter of 2020, Pembina recognized an impairment for the full amount of its investment in CKPC.
Reportable segment earnings (loss) before tax	▲	Increase largely due to impairment recognized during the fourth quarter of 2020 on Pembina's investment in CKPC and the assets associated with Jordan Cove, combined with higher margins on NGL and crude oil sales as a result of the higher NGL and crude oil prices during the fourth quarter of 2021, and a higher contribution from Aux Sable, discussed above, partially offset by the realized loss on commodity-related derivatives.
Adjusted EBITDA ⁽²⁾	▲	Increase largely due to the same items impacting reportable segment earnings (loss) before tax, discussed above, net of the impairment recognized during the fourth quarter of 2020. Included in adjusted EBITDA is \$38 million (2020: \$13 million) related to Aux Sable.
Volumes (mboe/d) ⁽³⁾	▼	Marketed NGL volumes decreased largely due to lower ethane sales caused by third party outages partially offset by increased propane and butane sales volumes. Revenue volumes includes 35 mboe/d (2020: 37 mboe/d) related to Aux Sable.
Distributions from equity accounted investees	▲	\$37 million (2020: \$4 million) from Aux Sable. Increase largely due to the higher margins at Aux Sable, discussed above.

Change in Adjusted EBITDA (\$ millions)⁽²⁾



Change in Reportable Segment Earnings (Loss) Before Tax (\$ millions)



⁽¹⁾ Includes inter-segment transactions. See Note 20 of the Consolidated Financial Statements.

⁽²⁾ Refer to the "Non-GAAP & Other Financial Measures" section of this MD&A.

⁽³⁾ Marketed NGL volumes. See the "Abbreviations" section of this MD&A for definition.

Financial Overview for the 12 Months Ended December 31

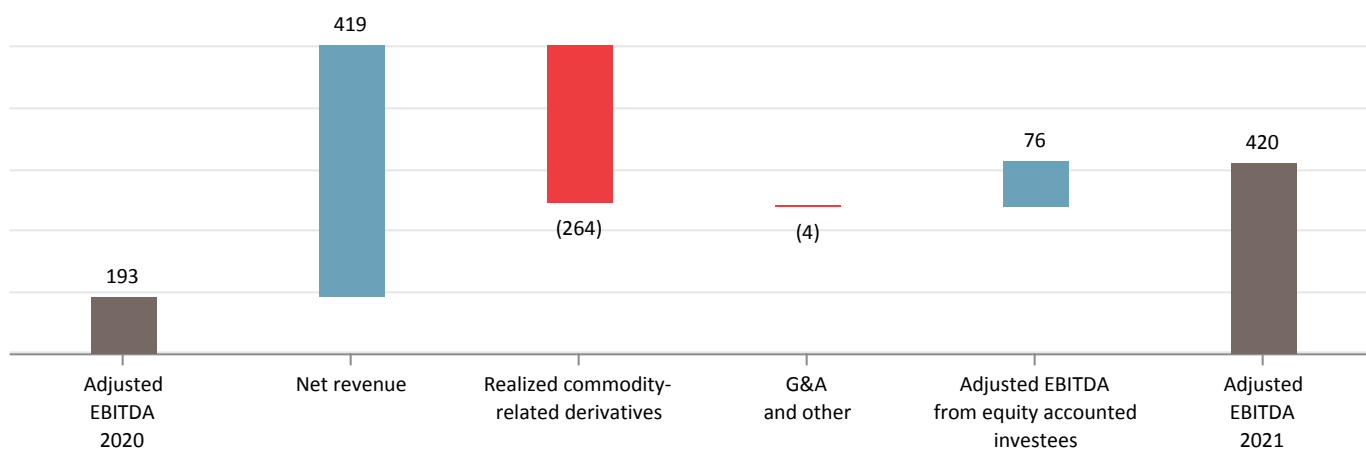
Results of Operations

(\$ millions, except where noted)	2021	2020	Change	% Change
Marketing revenue ⁽¹⁾	5,577	2,956	2,621	89
Cost of goods sold ⁽¹⁾	5,017	2,815	2,202	78
Net revenue ⁽¹⁾⁽²⁾	560	141	419	297
Depreciation and amortization included in operations	50	50	—	—
Realized loss (gain) on commodity-related derivative financial instruments	210	(54)	264	489
Unrealized (gain) loss on commodity-related derivative financial instruments	(35)	88	(123)	(140)
Share of profit from equity accounted investees - operations	77	—	77	—
Impairment in share of profit from equity accounted investees	—	(314)	314	100
Gross profit	412	(257)	669	260
Reportable segment earnings (loss) before tax	391	(646)	1,037	161
Adjusted EBITDA ⁽²⁾	420	193	227	118
Volumes (mboe/d) ⁽³⁾	190	182	8	4
Distributions from equity accounted investees	100	19	81	426

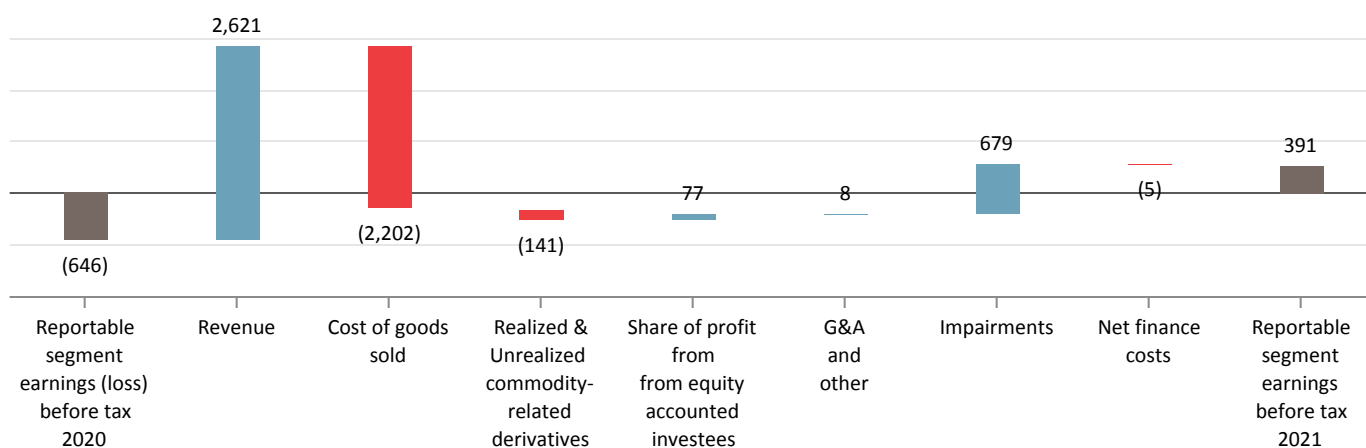
Change in Results

Net revenue⁽¹⁾⁽²⁾	▲	Increase largely due to higher NGL and crude oil market prices, resulting in higher margins, combined with higher marketed NGL volumes, discussed below, partially offset by an increase in cost of goods sold related to transportation and terminalling fees associated with the Prince Rupert Terminal and Empress Infrastructure being placed into service.
Share of profit from equity accounted investees - operations	▲	Increase largely due to higher revenues at Aux Sable as a result of higher NGL margins and a wider AECO-Chicago natural gas price differential.
Realized loss (gain) on commodity-related derivatives	▼	Realized loss due to higher NGL and crude oil market prices during the year, which also drove higher margins on NGL and crude sales, resulting in a realized loss on NGL- and crude oil-based derivative instruments in the year, compared to realized gains recognized during 2020. Pembina utilizes derivative instruments to stabilize the results of its marketing business.
Unrealized (gain) loss on commodity-related derivatives	▲	Unrealized gain on commodity-related derivatives primarily due to contracts maturing in the year, partially offset by newly added contracts.
Impairment in share of profit from equity accounted investees	▲	During the fourth quarter of 2020, Pembina recognized an impairment for the full amount of its investment in CKPC.
Reportable segment earnings (loss) before tax	▲	Increase largely due to impairment recognized during the fourth quarter of 2020 on Pembina's investment in CKPC and the assets associated with Jordan Cove, combined with higher margins on NGL and crude oil sales as a result of the higher NGL and crude oil prices during 2021 and higher marketed NGL volumes, combined with a higher contribution from Aux Sable, discussed above, partially offset by the realized loss on commodity-related derivatives due to higher NGL market prices.
Adjusted EBITDA⁽²⁾	▲	Increase largely due to the same items impacting reportable segment earnings (loss) before tax, discussed above, net of the impairments recognized during the fourth quarter of 2020. Included in adjusted EBITDA is \$100 million (2020: \$27 million) related to Aux Sable.
Volumes (mboe/d)⁽³⁾	●	Consistent with prior year. Higher marketed NGL volumes as Pembina monetized previously built up storage positions during the first quarter of 2021 and higher NGL supply volumes in the second and third quarter of 2021 were largely offset by lower ethane sales caused by third party outages during the fourth quarter of 2021. Revenue volumes includes 36 mboe/d (2020: 37 mboe/d) related to Aux Sable.
Distributions from equity accounted investees	▲	\$100 million (2020: \$19 million) from Aux Sable. Increase largely due to the higher margins at Aux Sable, discussed above.

Change in Adjusted EBITDA (\$ millions)⁽²⁾



Change in Reportable Segment Earnings (Loss) Before Tax (\$ millions)



⁽¹⁾ Includes inter-segment transactions. See Note 20 of the Consolidated Financial Statements.

⁽²⁾ Refer to the "Non-GAAP & Other Financial Measures" section of this MD&A.

⁽³⁾ Marketed NGL volumes. See the "Abbreviations" section of this MD&A for definition.

Financial and Operational Overview

(\$ millions, except where noted)	3 Months Ended December 31						12 Months Ended December 31					
	2021			2020			2021			2020		
	Volumes ⁽¹⁾	Reportable Segment Earnings (Loss) Before Tax	Adjusted EBITDA ⁽²⁾	Volumes ⁽¹⁾	Reportable Segment Earnings (Loss) Before Tax	Adjusted EBITDA ⁽²⁾	Volumes ⁽¹⁾	Reportable Segment Earnings (Loss) Before Tax	Adjusted EBITDA ⁽²⁾	Volumes ⁽¹⁾	Reportable Segment Earnings (Loss) Before Tax	Adjusted EBITDA ⁽²⁾
Marketing & New Ventures⁽³⁾												
Marketing	193	229	185	207	(7)	78	190	407	431	182	50	205
New Ventures ⁽⁴⁾	—	(5)	(2)	—	(677)	(3)	—	(16)	(11)	—	(696)	(12)
Total	193	224	183	207	(684)	75	190	391	420	182	(646)	193

⁽¹⁾ Marketed NGL volumes in mboe/d. See the "Abbreviations" section of this MD&A for definition.

⁽²⁾ Refer to the "Non-GAAP & Other Financial Measures" section of this MD&A.

⁽³⁾ Includes values attributed to Pembina's marketing activities and new ventures projects within the Marketing & New Ventures operating segment. For further details on

⁽⁴⁾ Pembina's marketing activities and projects, refer to Pembina's AIF for the year ended December 31, 2021.

All New Ventures projects have not yet commenced operations and therefore have no volumes.

Projects & New Developments⁽¹⁾

Pembina's New Ventures group continues to advance business opportunities in liquefied natural gas ("LNG"), low-carbon energy, and petrochemicals. New Ventures is focused on developing opportunities that integrate into Pembina's core businesses, while progressing projects that will extend Pembina's value-chain and benefit stakeholders.

Pembina has formed a partnership agreement with the Haisla First Nation to develop the proposed Cedar LNG Project, a floating LNG facility strategically positioned to leverage Canada's abundant natural gas supply and British Columbia's growing LNG infrastructure to produce industry-leading low-carbon, low-cost Canadian LNG for overseas markets. The Cedar LNG Project is expected to be the largest First Nation-owned infrastructure project in Canada and have one of the cleanest environmental profiles in the world. Cedar LNG's application for an Environmental Assessment Certificate was recently submitted to the British Columbia Environmental Assessment Office, moving the project into the 180-day application review phase. This key project milestone comes following detailed studies, engineering and meaningful engagement with Indigenous and local communities.

In addition, Pembina and TC Energy Corporation ("TC Energy") intend to jointly develop the Alberta Carbon Grid, a world-scale carbon transportation and sequestration system, which will enable Alberta-based industries to effectively manage their greenhouse gas emissions, contribute positively to Alberta's lower-carbon economy and create sustainable long-term value for Pembina and TC Energy stakeholders. Subsequent to year end, on February 1, 2022, Pembina and an affiliate of TC Energy submitted a proposal to jointly develop the Alberta Carbon Grid, in response to the Government of Alberta's request for a full project proposal, detailing Pembina and TC Energy's interest in developing and operating a carbon sequestration hub to serve emissions sources in the Alberta industrial heartland region.

⁽¹⁾ For further details on Pembina's significant assets, including definitions for capitalized terms used herein that are not otherwise defined, refer to Pembina's AIF for the year ended December 31, 2021 filed at www.sedar.com (filed with the U.S. Securities and Exchange Commission at www.sec.gov under Form 40-F) and on Pembina's website at www.pembina.com.

4. LIQUIDITY & CAPITAL RESOURCES

Available Sources of Liquidity

As at December 31 (\$ millions)	2021	2020
Working capital ⁽¹⁾	(1,145)	(792)
Variable rate debt ⁽²⁾⁽³⁾		
Bank debt	910	1,534
Variable rate debt swapped to fixed	(316)	(318)
Total variable rate loans and borrowings outstanding (weighted average interest rate of 1.1% (2020: 1.6%))	594	1,216
Fixed rate debt ⁽²⁾		
Senior unsecured medium-term notes	9,700	9,300
Variable rate debt swapped to fixed	316	318
Total fixed rate loans and borrowings outstanding (weighted average interest rate of 3.9% (2020: 3.9%))	10,016	9,618
Total loans and borrowings outstanding	10,610	10,834
Cash and unutilized debt facilities	2,469	2,685
Subordinated hybrid notes (weighted average interest rate of 4.8% (2020: nil))	600	—

⁽¹⁾ As at December 31, 2021, working capital included \$1 billion (December 31, 2020: \$600 million) associated with the current portion of long-term debt.

⁽²⁾ Face value.

⁽³⁾ Includes U.S. \$250 million variable rate debt outstanding at December 31, 2021 (December 31, 2020: U.S. \$250 million).

Pembina currently anticipates that its cash flow from operating activities, the majority of which is derived from fee-based contracts, will be more than sufficient to meet its operating obligations, to fund its dividend and to fund its capital expenditures in the short-term and long-term. Pembina expects to source funds required for debt maturities from cash, its credit facilities and by accessing the capital markets, as required. Based on its successful access to financing in the capital markets over the past several years, Pembina expects to continue to have access to additional funds as required. Refer to "Risk Factors – General Risk Factors – Additional Financing and Capital Resources" in Pembina's MD&A and Note 25 to the Consolidated Financial Statements for more information. Management continues to monitor Pembina's liquidity situation and remains satisfied that the leverage employed in Pembina's capital structure is sufficient and appropriate given the characteristics and operations of the underlying asset base.

Management may adjust 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 debt terms, repay existing debt, seek new borrowings, issue additional equity or hybrid securities and/or repurchase additional common or preferred shares.

As at December 31, 2021, Pembina's credit facilities consisted of: an unsecured \$2.5 billion (December 31, 2020: \$2.5 billion) revolving credit facility, which includes a \$750 million (December 31, 2020: \$750 million) accordion feature and matures in June 2026; an unsecured \$500 million (December 31, 2020: \$500 million) non-revolving term loan, which matures in August 2022; an unsecured U.S. \$250 million (December 31, 2020: U.S. \$250 million) non-revolving term loan, which matures in May 2025; and an operating facility of \$20 million (December 31, 2020: \$20 million), which matures in May 2022 and is typically renewed on an annual basis (collectively, the "Credit Facilities"). There are no mandatory principal repayments due over the term of the Credit Facilities, with principal repayments not due until maturity. Pembina is required to meet certain specific and customary affirmative and negative financial covenants under the indenture governing its medium-term notes and the agreements governing its Credit Facilities, including a requirement to maintain certain financial ratios. See "Liquidity & Capital Resources – Covenants" below for more information. Pembina is also subject to customary restrictions on its operations and activities under the indenture governing its medium-term notes and the agreements governing its Credit Facilities, including restrictions on the granting of security, incurring indebtedness and the sale of its assets.

Financing Activity

On January 25, 2021, Pembina closed a \$600 million offering of Fixed-to-Fixed Rate Subordinated Hybrid Notes (the "Series 1 Subordinated Notes"). The Series 1 Subordinated Notes have a fixed 4.80 percent interest rate, payable semi-annually, which resets on January 25, 2031, and on every fifth anniversary thereafter, based on the five-year Government of Canada yield plus: (i) 4.17 percent for the period from, and including, January 25, 2031 to, but excluding January 25, 2051; and (ii) 4.92 percent for the period from, and including, January 25, 2051 to, but excluding January 25, 2081. Pembina used the net proceeds of the offering of the Series 1 Subordinated Notes to fund the redemption of its outstanding Cumulative Redeemable Minimum Rate Reset Class A Preferred Shares, Series 11 ("Series 11 Class A Preferred Shares"), its outstanding Cumulative Redeemable Minimum Rate Reset Class A Preferred Shares, Series 13 ("Series 13 Class A Preferred Shares"), to repay outstanding debt, as well as for general corporate purposes.

On March 25, 2021, Pembina cancelled its \$800 million revolving credit facility, which was entered into in April 2020 to ensure additional liquidity and flexibility in Pembina's capital structure in light of the impact of the COVID-19 pandemic on market conditions at the time. No balance was outstanding on the cancellation date.

On April 30, 2021, Pembina completed an extension on its \$2.5 billion revolving credit facility, which now matures on June 1, 2026.

On December 10, 2021, Pembina closed an offering of \$1.0 billion of senior unsecured medium-term notes. The offering was conducted in two tranches, consisting of the issuance of \$500 million in senior unsecured medium-term notes, series 17, having a fixed coupon of 3.53 percent per annum, payable semi-annually and maturing on December 10, 2031; and \$500 million in senior unsecured medium-term notes, series 18, having a fixed coupon of 4.49 percent per annum, payable semi-annually and maturing on December 10, 2051.

Covenants

Pembina's financial covenants under the indenture governing its medium-term notes and the agreements governing the Credit Facilities include the following:

Debt Instrument	Financial Covenant ⁽¹⁾	Ratio	Ratio as at December 31, 2021
Senior unsecured medium-term notes	Funded Debt to Capitalization	Maximum 0.70	0.42
Credit Facilities	Debt to Capital	Maximum 0.70	0.43

⁽¹⁾ Terms as defined in relevant agreements.

Pembina was in compliance with all covenants under the note indenture governing its medium-term notes and the agreements governing its Credit Facilities as at December 31, 2021 (December 31, 2020: in compliance).

Credit Risk

Pembina continues to actively monitor and reassess the creditworthiness of its counterparties. While the global economic slowdown has eased, the outlook for the global economic recovery remains uncertain and the potential for volatility in demand for crude oil and other commodities as a result of the ongoing COVID-19 pandemic could increase Pembina's counterparty risk, as uncertainty and the potential for volatility in the demand for crude oil could negatively impact the financial position of Pembina's customers and related parties and their access to credit, capital markets and other sources of liquidity. The majority of Pembina's credit exposure is to investment grade or split-investment grade counterparties. Pembina assesses all counterparties during the on-boarding process and actively monitors credit limits and exposure across the business. Financial assurances to mitigate and reduce risk may include guarantees, letters of credit and cash. Letters of credit totaling \$100 million (December 31, 2020: \$130 million) were held as at December 31, 2021, primarily in respect of customer trade receivables.

Credit Ratings

The following information with respect to Pembina's credit ratings is provided as such information 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 of 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 and the associated costs may affect Pembina's ability to enter into normal course derivative or hedging transactions. Credit ratings are intended to provide investors with an independent measure of the 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 credit ratings comment on the market price or suitability for a particular investor. Any credit 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.

On April 28, 2021, DBRS Limited ("DBRS") upgraded its ratings for Pembina's senior unsecured medium-term notes to 'BBB (high)', to 'BBB (low)' for the Series 1 Subordinated Notes and to 'Pfd-3 (high)' for each issued series of Pembina's Class A Preferred Shares, other than the Class A Preferred Shares, Series 2021-A (the "Series 2021-A Class A Preferred Shares"), which are deliverable to the holders of the Series 1 Subordinated Notes following the occurrence of certain bankruptcy or insolvency events in respect of Pembina.

The long-term corporate credit rating assigned by S&P Global Ratings ("S&P") on Pembina is 'BBB'. S&P has also assigned a debt rating of 'BBB' to Pembina's senior unsecured medium-term notes, a debt rating of 'BB+' to the Series 1 Subordinated Notes, and a rating of 'P-3 (High)' to each issued series of Pembina's Class A Preferred Shares, other than the Series 2021-A Class A Preferred Shares. S&P affirmed Pembina's credit rating during the second quarter of 2021.

Refer to "Description of the Capital Structure of Pembina – Credit Ratings" in the AIF for further information.

Contractual Obligations and Off-Balance Sheet Arrangements

Contractual Obligations

Pembina had the following contractual obligations outstanding at December 31, 2021:

Contractual Obligations ⁽¹⁾ (\$ millions)	Payments Due By Period				
	Total	Less than 1 year	1 – 3 years	3 – 5 years	After 5 years
Leases ⁽²⁾	978	113	181	152	532
Long-term debt ⁽³⁾	17,409	1,519	2,002	2,146	11,742
Construction commitments ⁽⁴⁾	1,042	435	32	24	551
Other	531	92	120	74	245
Total contractual obligations	19,960	2,159	2,335	2,396	13,070

⁽¹⁾ 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 9 years and involve the purchase of NGL products from producers. Assuming product is available, Pembina has secured between 18 and 190 mbpd of NGL each year up to and including 2030. Power purchase agreements range from one to 23 years and involve the purchase of power from electrical service providers. Pembina has secured up to 79 megawatts per day each year up to and including 2045.

⁽²⁾ Includes terminals, rail, office space, land and vehicle leases.

⁽³⁾ Includes loans and borrowings, subordinated hybrid notes and interest payments on Pembina's senior unsecured medium-term notes and subordinated hybrid notes. Excludes deferred financing costs.

⁽⁴⁾ Excluding significant projects that are awaiting regulatory approval, projects which Pembina is not committed to construct, and projects that are executed by equity accounted investees.

Off-Balance Sheet Arrangements

As at December 31, 2021, Pembina does not have any off-balance sheet arrangements that have, or are reasonably likely to have, a current or future effect on Pembina's financial condition, results of operations, liquidity or capital expenditures.

Letters of Credit

Pembina has provided letters of credit to various third parties in the normal course of conducting business. The letters of credit include guarantees to counterparties for product purchases and sales, transportation services, utilities, engineering and construction services. The letters of credit have not had and are not expected to have a material impact on Pembina's financial position, earnings, liquidity or capital resources. As at December 31, 2021, Pembina had \$135 million (December 31, 2020: \$91 million) in letters of credit issued.

5. SHARE CAPITAL

Common Shares

On February 25, 2021, the Toronto Stock Exchange ("TSX") accepted the Company's notice of intention to commence a normal course issuer bid ("NCIB") that allows the Company to repurchase, at its discretion, up to approximately 27.5 million common shares through the facilities of the TSX, the New York Stock Exchange and/or alternative Canadian trading systems or as otherwise permitted by applicable securities law, subject to certain restrictions on the number of common shares that may be purchased on a single day. Common shares purchased by the Company will be cancelled. The NCIB commenced March 2, 2021 and will terminate on March 1, 2022 or on such earlier date as the Company has purchased the maximum number of common shares permitted pursuant to the notice of intention.

The following table summarizes Pembina's share repurchases under its NCIB:

For the years ended December 31 (millions, except as noted)	2021	2020
Number of common shares repurchased for cancellation (thousands)	450	—
Average price per share	\$37.77	—
Total cost ⁽¹⁾	17	—

⁽¹⁾ Total cost includes \$13 million (2020: nil) charged to share capital and \$4 million (2020: nil) charged to deficit.

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 Pembina's 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 Shares

On January 25, 2021, in connection with the offering of the Series 1 Subordinated Notes, Pembina issued 600,000 Series 2021-A Class A Preferred Shares, to Computershare Trust Company of Canada, to be held in trust as treasury shares to satisfy Pembina's obligations under the indenture governing the Series 1 Subordinated Notes.

On March 1, 2021, Pembina redeemed all of the 6.8 million issued and outstanding Series 11 Class A Preferred Shares for a redemption price equal to \$25.00 per Series 11 Class A Preferred Share, less taxes required to be deducted or withheld by the Company.

On June 1, 2021, Pembina redeemed all of the 10 million issued and outstanding Series 13 Class A Preferred Shares for a redemption price equal to \$25.00 per Series 13 Class A Preferred Shares, less taxes required to be deducted or withheld by the Company.

Preferred Share Dividends

Other than in respect of the Series 2021-A Class A Preferred Shares, the holders of Pembina's Class A Preferred Shares are entitled to receive fixed cumulative dividends. Dividends on the Series 1, 3, 5, 7, 9 and 21 Class A Preferred Shares are payable quarterly on the first day of March, June, September and December, if, as and when declared by the Board of Directors of Pembina. Dividends on the Series 15, 17 and 19 Class A Preferred Shares are payable on the last day of March, June, September and December in each year, if, as and when declared by the Board of Directors of Pembina. Dividends on the Series 23 and 25 Class A Preferred Shares are payable on the 15th day of February, May, August and November in each year, if, as and when declared by the Board of Directors of Pembina.

Dividends are not payable on the Series 2021-A Class A Preferred Shares, nor shall any dividends accumulate or accrue, prior to delivery to the holders of the Series 1 Subordinated Notes following the occurrence of certain bankruptcy or insolvency events in respect of Pembina. Thereafter, dividends on the Series 2021-A Class A Preferred Shares are payable on the 25th day of January and July in each year, if, as and when declared by the Board of Directors.

Outstanding Share Data

Issued and outstanding (<i>thousands</i>) ⁽¹⁾	February 18, 2022
Common shares	550,338
Stock options	19,437
Stock options exercisable	11,330
Series 1 Class A Preferred Shares	10,000
Series 3 Class A Preferred Shares	6,000
Series 5 Class A Preferred Shares	10,000
Series 7 Class A Preferred Shares	10,000
Series 9 Class A Preferred Shares	9,000
Series 15 Class A Preferred Shares	8,000
Series 17 Class A Preferred Shares	6,000
Series 19 Class A Preferred Shares	8,000
Series 21 Class A Preferred Shares	16,000
Series 23 Class A Preferred Shares	12,000
Series 25 Class A Preferred Shares	10,000

⁽¹⁾ Pembina issued 600,000 Series 2021-A Class A Preferred shares to the Computershare Trust Company of Canada, to be held in trust to satisfy its obligations under the indenture governing the Series 1 Subordinated Notes, in connection with the issuance of the Series 1 Subordinated Notes.

6. CAPITAL EXPENDITURES

(\$ millions)	3 Months Ended December 31		12 Months Ended December 31	
	2021	2020	2021	2020
Pipelines	123	76	475	587
Facilities	34	75	136	370
Marketing & New Ventures	6	4	21	38
Corporate and other projects	13	6	26	34
Total capital expenditures ⁽¹⁾⁽²⁾	176	161	658	1,029

⁽¹⁾ Includes \$28 million for the three months ended December 31, 2021 (2020: \$16 million) related to non-recoverable sustainment activities.

⁽²⁾ Includes \$77 million for the twelve months ended December 31, 2021 (2020: \$92 million) related to non-recoverable sustainment activities.

In both 2021 and 2020, Pipeline capital expenditures continued to be primarily related to Pembina's Peace Pipeline system expansion projects with increased spending on the NEBC Montney Infrastructure in 2021. In 2021, Facilities capital expenditures were largely related to the Prince Rupert Terminal, continued expansion at the Empress Co-generation Facility, and Vancouver Wharves. In 2020, Facilities capital expenditures included construction of Duvernay III, the Empress Co-generation Facility and the Prince Rupert Terminal. Marketing & New Ventures had capital expenditures primarily related to offshore LNG projects in 2021 and the Jordan Cove LNG project in 2020. Corporate capital expenditures relate to IT infrastructure and systems development.

Contributions to Equity Accounted Investees

(\$ millions)	3 Months Ended December 31		12 Months Ended December 31	
	2021	2020	2021	2020
Alliance	299	—	299	—
Aux Sable	1	—	2	3
Veresen Midstream	—	—	29	69
CKPC	—	—	—	152
Cedar	5	—	5	—
Total	305	—	335	224

Alliance contributions in 2021 are the result of early bond redemptions on December 10, 2021, see the "Selected Equity Accounted Investee Information - Financing Activities for Equity Accounted Investees" section for further details.

Contributions made to Veresen Midstream during both 2021 and 2020 were largely related to the construction of the Hythe Developments, which was placed into service in March 2021.

There were no contributions made to CKPC during 2021, following the indefinite suspension of the propane dehydration ("PDH") plant and polypropylene upgrading facility ("PDH/PP Facility") announced in the fourth quarter of 2020.

7. SELECTED QUARTERLY INFORMATION

Selected Quarterly Operating Information

<i>(mboe/d)</i>	2021				2020			
	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
Volumes⁽¹⁾⁽²⁾								
Pipelines								
Conventional Pipelines	959	918	892	862	993	863	834	902
Transmission Pipelines	616	595	685	674	684	661	668	668
Oil Sands Pipelines	996	1,050	1,050	1,051	1,053	1,056	1,053	1,059
Facilities								
Gas Services	677	660	662	677	673	657	658	678
NGL Services	189	188	211	218	211	214	214	201
Total	3,437	3,411	3,500	3,482	3,614	3,451	3,427	3,508

⁽¹⁾ Revenue volumes. See the "Abbreviations" section of this MD&A for definition.

⁽²⁾ Includes Pembina's proportionate share of volumes from equity accounted investees.

Deferred Take-or-pay Revenue

<i>(\$ millions)</i>	2021				2020			
	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
Pipelines								
Opening balance	21	32	22	3	42	45	22	8
Revenue deferred	43	48	45	42	52	66	53	40
Revenue recognized	(61)	(59)	(35)	(23)	(91)	(69)	(30)	(26)
Ending take-or-pay contract liability balance	3	21	32	22	3	42	45	22
Facilities								
Opening balance	—	3	1	—	—	2	1	—
Revenue deferred	—	—	2	1	—	1	1	1
Revenue recognized	—	(3)	—	—	—	(3)	—	—
Ending take-or-pay contract liability balance	—	—	3	1	—	—	2	1

Quarterly Financial Information

(\$ millions, except where noted)	2021				2020			
	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
Revenue	2,560	2,149	1,902	2,016	1,680	1,496	1,229	1,548
Net revenue ⁽¹⁾	1,084	961	894	999	954	849	776	865
Operating expenses	206	187	186	182	201	178	154	179
Realized loss (gain) on commodity-related derivative financial instruments	36	43	33	88	6	(7)	(36)	(17)
Share of profit (loss) from equity accounted investees	83	75	52	71	(244)	62	66	84
Gross profit	785	682	550	630	247	568	460	733
Earnings (loss)	80	588	254	320	(1,216)	323	258	319
Earnings (loss) per common share – basic and diluted (dollars)	0.08	1.01	0.39	0.51	(2.28)	0.52	0.40	0.51
Cash flow from operating activities	697	913	584	456	766	434	642	410
Cash flow from operating activities per common share – basic (dollars)	1.27	1.66	1.06	0.83	1.39	0.78	1.17	0.75
Adjusted cash flow from operating activities ⁽¹⁾	734	786	538	582	603	524	586	576
Adjusted cash flow from operating activities per common share – basic (dollars) ⁽¹⁾	1.33	1.43	0.98	1.06	1.10	0.95	1.07	1.05
Common shares outstanding (millions):								
Weighted average – basic	550	550	550	550	550	550	550	549
Weighted average – diluted	551	551	551	550	550	550	550	549
End of period	550	550	550	550	550	550	550	550
Common share dividends declared	346	347	347	346	346	346	347	346
Dividends per common share	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63
Preferred share dividends declared	33	31	35	36	38	38	37	38
Capital expenditures	176	209	146	127	161	174	211	483
Contributions to equity accounted investees	305	18	—	12	—	28	2	194
Distributions from equity accounted investees	128	106	112	115	109	111	116	123
Adjusted EBITDA ⁽¹⁾	970	850	778	835	866	796	789	830

⁽¹⁾ Refer to the "Non-GAAP & Other Financial Measures" section of this MD&A.

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

- Impairments recognized on Pembina's interests in Ruby, CKPC and the assets associated with Jordan Cove in the fourth quarter of 2020 and on certain assets in Pipelines as a result of contract expirations in the fourth quarter of 2021;
- The COVID-19 pandemic and the resulting decrease in demand for commodities starting in the second quarter of 2020, which led to a significant decline in global energy prices and a reduction in capital spending budgets by Pembina and its customers in 2020, and the subsequent recovery in demand for commodities and global energy prices in 2021;
- Volatility in the AECO-Chicago natural gas price differential, power pool prices and foreign exchange rates impacting operating results;
- New large-scale growth projects across Pembina's business being placed into service;
- Volatility in commodity market prices impacting margins within the marketing business, partially mitigated through Pembina's risk management program;
- Higher net finance costs impacting earnings associated with debt related to financing growth projects, volatility in foreign exchange rates and volatility in Pembina's share price impacting incentive costs;
- Contract expiries on certain assets; and
- The receipt and associated tax of the Arrangement Termination Payment.

8. SELECTED EQUITY ACCOUNTED INVESTEE INFORMATION

Loans and Borrowings of Equity Accounted Investees

Under equity accounting, the assets and liabilities of an investment are net into a single line item in the Consolidated Statement of Financial Position, "Investments in Equity Accounted Investees". To assist readers' understanding and to evaluate the capitalization of Pembina's investments, loans and borrowings associated with investments in equity accounted investees are presented below based on Pembina's proportionate ownership in such investments, as at December 31, 2021. In addition, certain of the equity accounted investees have borrowing arrangements with an amortization structure, thereby necessitating periodic repayments of principal. These repayments occur prior to the distribution of residual cash flow to Pembina. The loans and borrowings and amortization schedules are presented below and classified by the division in which the results for the investment are reported. Please refer to the "Abbreviations" section for a summary of Pembina's investments in equity accounted investees and the division in which their results are reported.

As at December 31 <i>(\$ millions)</i> ⁽¹⁾	2021	2020
Pipelines	642	926
Facilities	1,214	1,200
Marketing & New Ventures	1	—
Total	1,857	2,126

⁽¹⁾ Balances reflect Pembina's ownership percentage of the outstanding balance face value.

Amortization Schedule of Loans and Borrowings of Equity Accounted Investees

<i>(\$ millions)</i> ⁽¹⁾	12 Months Ended					
	December 31, 2021	2022	2023	2024	2025	2026+
Pipelines	376	303	3	318	2	16
Facilities	12	36	36	1,142	—	—
Marketing & New Ventures	—	1	—	—	—	—
Total	388	340	39	1,460	2	16

⁽¹⁾ Balances reflect Pembina's ownership percentage of the outstanding balance face value.

Financing Activities for Equity Accounted Investees

On April 19, 2021, Ruby fully repaid the \$16 million outstanding on its term loan.

A wholly-owned subsidiary of Ruby has debt obligations in the form of non-recourse, asset level financing. Specifically, the subsidiary has U.S. \$475 million of senior notes outstanding, which come due April 1, 2022. Pembina presently does not expect the subsidiary to have adequate funds on hand to retire the senior notes when they come due. Management is currently evaluating options to satisfy this debt upon maturity.

On December 10, 2021, Alliance redeemed all of its issued and outstanding senior notes, for a total of \$367 million and U.S. \$175 million.

On December 10, 2021, Alliance issued a new syndicated unsecured credit agreement comprising of a \$315 million non-revolving term loan facility, a \$30 million revolving facility, a U.S. \$250 million non-revolving term loan facility and a U.S. \$30 million revolving facility. The credit facilities have a maturity date of December 10, 2024.

Commitments to Equity Accounted Investees

Pembina has commitments to provide contributions to certain equity accounted investees based on annual budgets approved by the joint venture partners and contractual agreements.

Credit Risk for Equity Accounted Investees

At December 31, 2021, Pembina's various equity accounted investees held letters of credit totaling \$73 million (December 31, 2020: \$105 million) primarily in respect of customer trade receivables.

Cedar LNG Acquisition

On June 4, 2021, Pembina acquired a 49.9 percent interest in a joint venture with the Haisla Nation to develop the Cedar LNG Project, a LNG facility located on the coast of British Columbia within the Douglas Channel on Haisla-owned land. The purchase price of \$125 million was allocated to goodwill as the net fair value of the identifiable assets and liabilities is nil. Pembina's investment of \$130 million at December 31, 2021 includes \$70 million of accrued contingent consideration payable on achievement of certain conditions. Under the terms of the agreements, Pembina has commitments to make additional payments on a positive final investment decision as well as contributions to fund development costs and annual operating budgets.

9. OTHER

Selected Annual Financial Information

<i>(\$ millions, except where noted)</i>	2021	2020	2019
Revenue	8,627	5,953	6,372
Earnings (loss)	1,242	(316)	1,507
Per common share - basic <i>(dollars)</i>	2.00	(0.86)	2.69
Per common share - diluted <i>(dollars)</i>	1.99	(0.86)	2.68
Total assets	31,456	31,416	32,755
Total non-current liabilities	14,703	14,620	14,438
Common share dividends declared <i>(\$ per share)</i>	2.52	2.52	2.36
Preferred share dividends declared	135	151	126

See the "Quarterly Financial Information" section for the factors impacting years ended December 31, 2021 and 2020. The decrease in revenues, earnings and earnings per common share (basic and diluted) between 2019 and 2020 were largely due to the impacts of the COVID-19 pandemic and resulting significant decline in global energy prices, combined with impairments recognized in Pembina's investment in Ruby, CKPC and the assets associated with Jordan Cove in the fourth quarter of 2020, partially offset by additional assets and loans and borrowings associated with the Kinder Acquisition and the results from new assets going into service and a significant deferred tax recovery associated with the impairment mentioned above.

Related Party Transactions

Pembina enters into transactions with related parties in the normal course of business and on terms equivalent to those that prevail in arm's length transactions, unless otherwise noted. Pembina contracts capacity from its equity accounted investees, advances funds to support operations, provides letters of credit, including financial guarantees, and provides services, on a cost recovery basis, to investments in equity accounted investees. These services are provided under separate consulting services agreements. For more information on these transactions, refer to Note 28 to the Consolidated Financial Statements.

Risk Management

Pembina's risk management strategies, policies and limits, ensure risks and exposures are aligned to its business strategy and risk tolerance. Pembina's Board of Directors is responsible for providing risk management oversight at Pembina and oversees how management monitors compliance with Pembina's risk management policies and procedures and reviews the adequacy of this risk framework in relation to the risks faced by Pembina.

Pembina's financial risks are consistent with those discussed in Note 25 of the Consolidated Financial Statements. Pembina has exposure to counterparty credit risk, liquidity risk and market risk. As at December 31, 2021, the Company has entered into certain financial derivative contracts in order to manage commodity price, foreign exchange and interest rate risk. These instruments are not used for trading or speculative purposes. For more information on Pembina's derivative instruments, refer to Note 25 to the Consolidated Financial Statements.

Pension Liability

Pembina maintains defined contribution plans and defined benefit pension plans for 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 2021, the pension plans carried a net obligation of \$6 million (2020: \$44 million). At December 31, 2021, plan obligations amounted to \$274 million (2020: \$296 million) compared to plan assets of \$268 million (2020: \$252 million). In 2021, the pension plans' expense was \$30 million (2020: \$20 million). Pembina's contributions to the pension plans totaled \$23 million in 2021 (2020: \$23 million).

Effective January 1, 2021, Pembina revised the eligibility requirements for the defined benefit plan. Employees with an age plus years of service of 40 at January 1, 2021 will remain eligible for the defined benefit plan, when their age plus years of service reaches 50. All other employees will remain in the defined contribution plan.

Disclosure Controls and Procedures and Internal Control over Financial Reporting

Disclosure Controls and Procedures

Pembina maintains disclosure controls and procedures ("DC&P") designed to provide reasonable assurance that information required to be disclosed in Pembina's annual filings, interim filings and other reports filed or submitted by it under applicable securities laws is recorded, processed, summarized and reported accurately and in the time periods specified under such securities laws, and include controls and procedures designed to ensure such information is accumulated and communicated to Pembina's management, including its certifying officers, as appropriate to allow timely decisions regarding required disclosure. As at December 31, 2021, an evaluation of the effectiveness of the design and operation of Pembina's DC&P, as defined in Rule 13a – 15(e) and 15(d) – 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 President and Chief Executive Officer ("CEO") and the interim Chief Financial Officer ("CFO"). Based on the evaluation, the CEO and CFO have concluded that the design and operation of Pembina's DC&P were effective as at December 31, 2021 to ensure that material information relating to Pembina is made known to the CEO and CFO by others.

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.

Management's Annual Report on 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 Rule 13a – 15(e) and 15(d) – 15(e) under the Exchange Act and NI 52-109.

Under the supervision and with the participation of our CEO and our CFO, management has conducted an evaluation of the effectiveness of our internal control over financial reporting, as at December 31, 2021 based on the framework set forth in Internal Control – Integrated Framework issued in 2013 by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). Based on management's assessment as at December 31, 2021, the CEO and CFO have concluded that Pembina's internal control over financial reporting is effective.

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 at a specific date, and continued effectiveness in future periods is subject to the risks that controls may become inadequate.

The effectiveness of internal control over financial reporting as at December 31, 2021 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 the Consolidated Financial Statements.

Changes in Internal Control over Financial Reporting

Other than the remediation of the material weakness described below, there has been no change in Pembina's internal control over financial reporting that occurred during the year ended December 31, 2021 that has materially affected, or are reasonably likely to materially affect, Pembina's internal control over financial reporting.

Remediation of Material Weakness

As at September 30, 2021, management identified a material weakness related to controls over contract assessment in its Marketing business. Specifically, the Company did not have controls to identify all contracts where an accounting assessment was required and as a result lacked analysis of all relevant contract terms required to make the assessment in the Marketing business. Because of the deficiency, the Company presented revenue and cost of goods sold for certain crude contracts in the Marketing and New Ventures Division on a gross basis that should have been recorded on a net basis.

Management restated revenue and cost of goods sold for the comparative years ended December 31, 2020 and December 31, 2019 with no impact on earnings, cash flows or financial position. Refer to Note 3 to the Consolidated Financial Statements as at and for the year ended December 31, 2020 for details of the restatement.

Over the course of the fourth quarter of 2021, the Company has remediated the control deficiency by designing and implementing controls associated with enhanced contract analysis and revising the processes to assess accounting implications for complex contracts and to identify contracts requiring consultation with internal experts to assist in the evaluation of technical accounting matters. Management has supervised an evaluation of the remedial measures implemented by the Company in the fourth quarter of 2021. Based on this evaluation, including testing the operating effectiveness of the controls addressing the material weakness, management have concluded that the previously identified material weakness relating to the operating effectiveness of the Company's disclosure controls and procedures and its internal controls over financial reporting has been remediated as at December 31, 2021.

10. ACCOUNTING POLICIES & ESTIMATES

Changes in Accounting Policies

The accounting policies used in preparing the Consolidated Financial Statements are described in Note 3. There were no new accounting standards or amendments to existing standards adopted in the 12 months ended December 31, 2021 that are expected to have a material impact on Pembina's financial statements.

New Standards and Interpretations Not Yet Adopted

The International Accounting Standards Board have issued a standard and amendments to existing standards that are effective for periods on or after January 1, 2022, with early application permitted. Assessment of the impacts of these standards is ongoing, however, no material impacts on Pembina's Consolidated Financial Statements have been identified.

- Onerous Contracts - Cost of Fulfilling a Contract (Amendments to IAS 37);
- Updating a Reference to the Conceptual Framework (Amendments to IFRS 3);
- Annual Improvements to IFRS Standards 2018-2020;
- Classification of Liabilities as Current or Non-Current (Amendments to IAS 1);
- Disclosure Initiative – Accounting Policies (Amendments to IAS 1);
- Definition of Accounting Estimates (Amendments to IAS 8); and
- IFRS 17: *Insurance Contracts*.

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 facts and circumstances and estimates at the date of the Consolidated 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.

Ongoing Impact of the COVID-19 Pandemic

Following the World Health Organization declaring the COVID-19 outbreak a pandemic in March 2020, many governments have imposed restrictions on individuals and businesses to contain the spread of the virus, which adversely impacted global commercial activity and significantly increased economic uncertainty. Although restrictions have largely been relaxed and vaccination programs implemented, there continues to be uncertainty and the potential for continued volatility in the global economy as a result of the possible resurgence of the virus, including variants, while the COVID-19 pandemic remains. Management considered these uncertainties when applying judgment to estimates and assumptions in the Consolidated Financial Statements.

The following judgments and estimation uncertainties are those management considers material to the Consolidated Financial Statements:

Judgments

(i) Impairment

Assessment of impairment of non-financial assets is based on management's judgment of whether or not events or changes in circumstances indicate that the carrying value of an asset, investment, cash generating unit ("CGU") or group of CGUs exceeds its recoverable amount. The determination of a CGU is based on management's judgment and is an assessment of the smallest group of assets that generate cash inflows independently of other assets. When an impairment test is performed, the carrying value of a CGU or group of CGUs is compared to its recoverable amount, defined as the greater of fair value less costs of disposal and value in use. As such, the asset composition of a CGU or group of CGUs directly impacts both the carrying value and recoverability of the assets included therein.

(ii) Joint Control Over Joint Arrangements

The determination of joint control requires judgment about the influence Pembina has over the financial and operating decisions of an arrangement and the extent of the benefits it obtains based on the facts and circumstances of the arrangement during the reporting period. Joint control exists when decisions about the relevant activities require the unanimous consent of the parties that control the arrangement collectively. Ownership percentage alone may not be a determinant of joint control.

Estimates

(i) 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. Deferred income tax assets are recognized to the extent that it is probable that the deductible temporary differences will be recoverable in future periods, and estimates and judgement are used in assessing the recognition. Estimates including, but not limited to, the timing of reversal and future taxability may differ on actual realization, and may result in an income tax charge or credit in future periods.

(ii) Impairment of Non-Financial Assets

In determining the recoverable amount of a CGU, a group of CGUs or an individual asset, management uses its best estimates of future cash flows, including considerations related to climate change, and assesses discount rates to reflect management's best estimate of a rate that reflects a current market assessment of the time value of money and the specific risks associated with the underlying assets and cash flows.

11. RISK FACTORS

Pembina's value proposition is based on balancing economic benefit against risk. Where appropriate, Pembina will seek to reduce risk. Pembina continually works to mitigate the impact of potential risks to its business by identifying all significant risks so that they can be appropriately managed. To assist with identifying and managing risk, Pembina has implemented a comprehensive Risk Management Program. 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 AIF, an electronic copy of which is available at www.pembina.com or on Pembina's SEDAR profile at www.sedar.com and which is filed under Form 40-F on Pembina's EDGAR profile at 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 25 of the Consolidated Financial Statements.

Risks Inherent in Pembina's Business

Commodity Price Risk

Pembina's business is exposed to commodity price volatility and a substantial decline in the prices of these commodities could adversely affect its financial results.

Certain of the transportation contracts or tolling arrangements with respect to Pembina's pipeline assets do not include take-or-pay commitments from crude oil and gas producers and, as a result, Pembina is exposed to volume risk with respect to those assets. A decrease in volumes transported can directly and adversely affect Pembina's revenues and earnings. The demand for, and utilization of, Pembina's pipeline assets may be impacted by factors such as changing market fundamentals, capacity bottlenecks, operational incidents, regulatory restrictions, system maintenance, weather and increased competition. Market fundamentals, such as commodity prices and price differentials, natural gas and gasoline consumption, alternative energy sources and global supply disruptions outside of Pembina's control can impact both the supply of and demand for the commodities transported on Pembina's pipelines. See "*Reserve Replacement, Throughput and Product Demand*" below.

Pembina's Marketing business includes activities related to product storage, terminalling, and hub services. These activities expose Pembina to certain risks relating to fluctuations in commodity prices and, as a result, Pembina may experience volatility in revenue and impairments related to the book value of stored product with respect to these activities. Primarily, Pembina enters into contracts to purchase and sell crude oil, condensate, NGL and natural gas at floating market prices; as a result, the prices of products that are marketed by Pembina are subject to volatility as a result of factors such as seasonal demand changes, extreme weather conditions (the severity of which could increase due to climate change), market inventory levels, general economic conditions, the availability and price of transportation logistics, changes in crude oil markets and other factors. Pembina manages its risk exposure by balancing purchases and sales to secure less volatile margins. Notwithstanding Pembina's management of price and quality risk, marketing margins for commodities can vary and have varied significantly from period to period in the past. This variability could have an adverse effect on the results of Pembina's Marketing business and its overall results of operations. To assist in reducing this inherent variability in its Marketing business, Pembina has invested, and will continue to invest, in assets that have a fee-based revenue component.

Pembina is also exposed to potential price declines and decreasing frac spreads between the time Pembina purchases NGL feedstock and sells NGL products. Frac spread is the difference between the revenue from the sale of NGL if removed from a gas stream and the value such NGL would have had if left in the gas stream and sold at natural gas 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, transport differentials and changes in the Canadian to U.S. dollar exchange rate. In addition to the frac spread ratio changes, there is also a differential between NGL product prices and crude oil prices which can change margins realized for midstream products. The amount of profit or loss made on the extraction portion of the business will generally increase or decrease with frac spreads. This exposure could result in variability of cash flow generated by the Marketing business, which could affect Pembina and the cash dividends that Pembina is able to distribute.

The Company utilizes financial derivative instruments as part of its overall risk management strategy to assist in managing the exposure to commodity price, interest rate, cost of power and foreign exchange risks. As an example of commodity price mitigation, the Company actively fixes a portion of its exposure to fractionation margins through the use of derivative financial instruments. Additionally, Pembina's Marketing business is also exposed to variability in quality, time and location differentials for various products, and financial instruments may be used to offset the Company's exposures to these differentials. 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, which is discussed in more detail below.

For more information with respect to Pembina's financial instruments and financial risk management program, see Note 25 to Pembina's Consolidated Financial Statements.

Regulation and Legislation

Legislation in Alberta and British Columbia, the jurisdictions from which most products transported by Pembina are produced, exists to ensure that producers have fair and reasonable opportunities to produce, process and market their reserves. Regulatory authorities in Alberta and British Columbia may declare the operator of a pipeline a common carrier of crude oil, NGL or natural gas. Common carriers must not discriminate between producers who seek access to the pipeline. Regulatory authorities may also establish conditions under which the common carrier must accept and carry product, including the tariffs that may be charged. Producers and shippers may also apply to the appropriate 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. The potential for direct regulation of tariffs for pipelines other than the Alliance Pipeline and the Cochin Pipeline (the tolls and tariffs of which are otherwise subject to CER oversight), while considered remote by Pembina, could result in tariff levels that are less advantageous to Pembina and could impair the economic operation of such pipeline systems.

The AER is the primary regulatory body that oversees Pembina's Alberta-issued energy development permits, with some minor exceptions. Certain of Pembina's subsidiaries own pipelines in British Columbia, which are regulated by the BCOGC and the BCUC, and pipelines that cross provincial or international boundaries, which are regulated by the CER and/or the FERC and PHMSA. Certain of Pembina's operations and expansion projects are subject to additional regulations, and as Pembina's operations expand throughout Canada and North America, Pembina may be required to comply with the requirements of additional regulators and legislative bodies, including the IAAC, the BCEAO, the Ontario Ministry of Natural Resources and Forestry, the Saskatchewan Ministry of Energy and Resources and The Petroleum Branch of Manitoba Mineral Resources under Manitoba Agriculture and Resource Development.

In the U.S., FERC regulates interstate natural gas pipelines and the transportation of crude oil, NGL and refined products in interstate commerce. Under the NGA, FERC regulates the construction, extension, and abandonment of interstate natural gas pipelines and the rates, terms and conditions of service and other aspects of the business of interstate natural gas pipelines. Interstate natural gas pipelines rates, terms and conditions of service are filed at FERC and publicly available. Under the ICA, FERC regulates the rates, terms and conditions of the transportation in interstate commerce of crude oil, NGLs and refined products. Pipeline safety is regulated by the 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 the PHMSA, inspects and enforces the pipeline safety regulations across the U.S. All regulations and environmental, safety and economic compliance obligations are subject to change at the initiative of FERC, PHMSA or other United States Federal agencies with jurisdiction over aspects of the operations of pipelines, including environmental, economic and safety regulations. Changes by FERC in its regulations or policies could adversely impact Pembina's natural gas pipelines, making the construction, extension, expansion or abandonment of such pipelines more costly, causing delay in the permitting of such projects or impacting the likelihood of success of completion of such projects. Similarly, changes in FERC's regulations or policies could adversely impact the rates that Pembina's FERC regulated pipelines are able to charge and how such pipelines do business, whether such pipelines are regulated by FERC pursuant to the NGA or the ICA. 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 the potential 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 2019, the federal government overhauled the environmental assessment and federal energy regulation regime in Canada. The National Energy Board ("NEB") and NEB Act were replaced by the CER and the *Canadian Energy Regulator Act* (Canada) ("CER Act"). Similarly, the *Canadian Environmental Assessment Act, 2012* (Canada) ("CEAA") was replaced by the *Impact Assessment Act* (Canada) ("IAA") and the Canadian Environmental Assessment Agency was replaced by the new IAAC as the authority responsible for conducting all federal impact assessments (formerly "environmental assessments") for certain designated projects under the IAA. The list of designated projects which are subject to mandatory assessment under the IAA is similar to the list under the CEAA; however, the length of new pipelines for which an impact assessment is required has been increased from 40 km to 75 km. The IAA also contains a broader project assessment process than under the CEAA and provides for enhanced consultation with groups that may be affected by proposed projects, while also expanding the scope of factors and considerations that need to be taken into account under the project assessment process. The CER continues to oversee approved federal, interprovincial and international energy projects in a manner similar to the former regime under the NEB, with new projects being referred to a review panel under the IAA. On July 16, 2020, the federal government published the Strategic Assessment of Climate Change ("SACC") under the provisions for such assessments in the IAA. The SACC imposes the new requirements regarding GHG emissions planning on projects subject to the IAA.

Few projects have been subject to the new federal impact assessment regime to date and Pembina continues to actively monitor developments in this area. To the extent these changes lengthen the review timeline for projects or expand the scope of the matters to be considered, the new regime could materially impact the amount of time and capital resources required by Pembina to seek and obtain approval to construct and operate international or interprovincial pipelines or other projects designated pursuant to the IAA project list or ministerial designation powers under the IAA. The new regime could therefore materially and directly impact Pembina's business and financial results, and could indirectly affect Pembina's business and financial results by impacting the financial condition and growth projects of its customers and, ultimately, production levels and throughput on Pembina's pipelines and in its facilities.

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

There can be no assurance that changes to income tax laws, regulatory and environmental laws or policies and government incentive programs relating to the pipeline or crude oil and natural gas industry will not adversely affect Pembina or the value of its securities.

Operational Risks

Operational risks include, but are not limited to: 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); releases at truck terminals and hubs; releases associated with the loading and unloading of potentially harmful substances onto rail cars and trucks; adverse sea conditions (including storms and rising sea levels) and releases or spills from shipping vessels loaded at Pembina's marine terminal; 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, those related to climate change and extreme weather events, including fires, floods and other natural disasters, explosions, train derailments, earthquakes, widespread epidemics or pandemic outbreaks, acts of civil protest or disobedience, terrorism or sabotage, and other similar events, many of which are beyond the control of Pembina and all of which could result in operational disruptions, damage to assets, related releases or other environmental issues, and delays in construction, labour and materials. Pembina may also be exposed from time to time to additional operational risks not stated in the immediately preceding sentence. In addition, the consequences of any operational incident (including as a result of adverse sea conditions) at Vancouver Wharves and Prince Rupert Terminal or involving a vessel receiving products from Vancouver Wharves or Prince Rupert Terminal, may be even more significant as a result of the complexities involved in addressing leaks and releases occurring in the ocean or along coastlines and/or the repair of marine terminals. Any leaks, releases or other incidents involving such vessels, or other similar operators along the West Coast, could result in significant harm to the environment, curtailment of, or disruptions of and/or delays in, offshore shipping activity in the affected areas, including Pembina's ability to effectively carry on operations at Vancouver Wharves and the Prince Rupert Terminal. The occurrence or continuance of any of the foregoing events could increase the cost of operating Pembina's assets or reduce revenue, thereby impacting earnings. Additionally, 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. In the long-term, constraints on natural resource development could be impacted by climate change initiatives or policies, resulting in additional operational costs, delays or restrictions.

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 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 pipeline 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 Security Management Program designed to reduce security-related risks.

Inflation

The general rate of inflation impacts the economies and business environments in which Pembina operates. Increased inflation and any economic conditions resulting from governmental attempts to reduce inflation, such as the imposition of higher interest rates or wage and price controls, may negatively impact levels of demand for Pembina's services and cost of inputs, and could, accordingly, have a material adverse effect on Pembina's business, financial condition and results of operations. Higher interest rates as a result of inflation could negatively impact the Company's borrowing costs, which could, in turn, have a material adverse effect on Pembina's cash flow and ability to service obligations under its debt securities and other debt obligations.

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 on terms and rates acceptable to Pembina, receipt of regulatory approvals, reaching long-term commercial arrangements with customers in respect of certain portions of the expansions, construction schedules, commissioning difficulties or delays and costs that may change depending on supply, demand and/or inflation, labour, materials and equipment availability, contractor non-performance, acts of civil protest or disobedience, terrorism or sabotage, weather conditions, cost of engineering services, and change in governments that granted the requisite regulatory approvals. 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 project, or at all, or that satisfactory commercial arrangements with customers will be entered into 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, Indigenous, landowner and other stakeholder consultation requirements, civil protest or disobedience, changes in shipper support, and changes to the legislative or regulatory framework could all have an impact on meeting contractual and regulatory milestones. As a result, the cost estimates and completion dates for Pembina's major projects may 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 Indigenous consultation requirements. Accordingly, actual costs and construction schedules 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 operating agreements, the Company is obligated to construct the facilities and pipelines regardless of delays and cost increases and Pembina bears the risk for any cost overruns. Future agreements entered into with customers with respect to expansions may contain similar conditions. While Pembina is not currently aware of any significant undisclosed cost overruns with respect to its current projects at the date hereof, any such cost overruns 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.

See "*General Risk Factors – Additional Financing and Capital Resources*" and "*Customer Contracts*" below.

Possible Failure to Realize Anticipated Benefits of Corporate Strategy

Pembina evaluates the value proposition for expansion projects, new acquisitions and divestitures on an ongoing basis. Planning and investment analysis is highly dependent on accurate forecasting assumptions and, to the extent that these assumptions do not materialize, financial performance may be lower or more volatile than expected. Volatility in the economy, change in cost estimates, failure to obtain regulatory approvals and permits, project scoping and risk assessment could result in a loss in profits for Pembina. As part of its ongoing strategy, Pembina may complete acquisitions of assets or other entities in the future. Achieving the benefits of completed and future acquisitions depends, in part, on successfully consolidating functions and integrating operations, procedures and personnel in a timely and efficient manner, as well as Pembina's ability to realize the anticipated growth opportunities and synergies from combining the acquired businesses and operations with those of Pembina. In particular, large scale acquisitions may involve significant pricing and integration risk. The integration of acquired businesses and entities requires the dedication of substantial management effort, time and resources, which may divert management's focus and resources from other strategic opportunities and from operational matters during this process. The integration process may also result in the loss of key employees and the disruption of ongoing business, customer and employee relationships, which may adversely affect Pembina's ability to achieve the anticipated benefits of any acquisitions. Acquisitions may also expose Pembina to additional risks, including risks relating to entry into markets or businesses in which Pembina has little or no direct prior experience, increased credit risks through the assumption of additional debt, costs and contingent liabilities and exposure to liabilities of the acquired business or assets.

As part its value proposition evaluation, Pembina may also desire to divest assets to optimize its operations and financial performance. Pembina may, however, be unable to sell certain assets or, if Pembina is able to sell certain assets, it may not receive the optimal or desired amount of proceeds from such asset sales. Additionally, the timing to close any asset sales could be significantly different than Pembina's expected timeline.

See "*General Risk Factors – Additional Financing and Capital Resources*" below.

Joint Ownership and Third-Party Operators

Certain of Pembina's assets are jointly owned and are governed by partnership or shareholder agreements entered into with third-parties. As a result, certain decisions relating to these assets require the approval of a simple majority of the owners, while others require unanimous approval of the owners. In addition, certain of these assets are operated by unrelated third-party entities. The success of these assets is, to some extent, dependent on the effectiveness of the business relationship and decision-making among Pembina and the other joint owner(s) and the expertise and ability of any third-party operators to operate and maintain the assets. While Pembina believes that there are prudent governance and other contractual rights in place, there can be no assurance that Pembina will not encounter disputes with joint owners or that assets operated by third parties may not perform as expected. Such events could impact operations or cash flows of these assets or cause them to not operate as Pembina expects which, in turn, could have a negative impact on Pembina's business operations and financial results, and could reduce Pembina's expected return on investment, thereby reducing the level of cash available for dividends and to service obligations under Pembina's debt securities and other debt obligations.

Reserve Replacement, Throughput and Product Demand

Pembina's pipeline revenue is based on a variety of tolling arrangements, including fee-for-service, cost-of-service agreements and market-based tolls. As a result, certain pipeline revenue is heavily dependent upon throughput levels of crude oil, condensate, NGL and natural gas. Future throughput on crude oil, NGL and natural gas 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 the 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, as a result, the level of tolls collected by Pembina decreases, 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 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, NGL and natural gas 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 crude oil, condensate, NGL and natural gas. 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 efficiency and energy generation in 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 demand for midstream infrastructure could decline. Producers in the areas serviced by Pembina may not be successful in exploring for and developing additional reserves or achieving technological improvements to increase recovery rates and lower production costs during periods of lower commodity prices, which may also reduce demand for midstream infrastructure.

Future prices of these hydrocarbons are determined by supply and demand factors, including weather and general economic conditions as well as economic, political and other conditions in other crude oil and natural gas regions, all of which are beyond Pembina's control. The rate and timing of production from proven natural gas reserves tied into gas plants is at the discretion of producers and is subject to regulatory constraints. Producers have no obligation to produce from their natural gas reserves, which means production volumes are at the discretion of producers. Lower production volumes may increase the competition for natural gas supply at gas processing plants, which could result in higher shrinkage premiums being paid to natural gas producers. In addition, lower production volumes may lead to less demand for pipelines and processing capacity and could adversely impact Pembina's ability to re-contract on favourable terms with shippers as current agreements expire.

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 Pembina's gas processing assets, which may have an adverse effect on Pembina's business.

Competition

Pembina competes with other pipeline, midstream, marketing and gas processing, fractionation and handling/storage service providers in its service areas as well as other transporters of crude oil, NGL and natural gas. The introduction of competing transportation alternatives into Pembina's service areas could limit Pembina's ability to adjust tolls as it may deem necessary and could 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 is determined to meet, and believes that it is prepared for, these existing and potential competitive pressures, including through agreements which provide for areas of dedication over the geographic areas in which Pembina's pipeline infrastructure is located. Pembina also competes with other businesses for growth and business opportunities, including competition related to potential greenfield development opportunities, which could impact its ability to grow through acquisitions and developments and could impact earnings and cash flow available to pay dividends and to service obligations under Pembina's debt securities and other debt obligations.

Reliance on Principal Customers

Pembina sells services and products to large customers within its area of operations and relies on several significant customers to purchase product for the Marketing business. If for any reason these parties are unable to perform their obligations under the various agreements with Pembina, the revenue and dividends of the Company and the operations of Pembina could be negatively impacted. See "*General Risk Factors – Counterparty Credit Risk*" below.

Customer Contracts

Throughput on Pembina's pipelines is governed by transportation contracts or tolling arrangements with various crude oil and natural gas producers. Pembina is party to numerous contracts of varying durations in respect of its gas gathering, processing and fractionation facilities as well as its terminalling and storage services. Any default by counterparties under such contracts or any expiration or early termination of such contracts or tolling arrangements without renewal or replacement, provided that such contracts are material to Pembina's business and operations, may have an adverse effect on Pembina's business and results from operations and there is no guarantee that any of the contracts that Pembina currently has in place will be renewed at the end of their term, including on terms favourable to Pembina, or replaced with other contracts in the event of early termination. Further, some contracts associated with the services described above are comprised of a mixture of firm and non-firm commitments. The revenue that Pembina earns on non-firm or firm commitments without take-or-pay service is dependent on the volume of crude oil, condensate, NGL and natural gas produced by producers in the relevant geographic areas. Accordingly, lower production volumes in these areas, including for reasons such as low commodity prices, may have an adverse effect on Pembina's revenue.

Risks Relating to Leases and Rights of Way Access

Certain Pembina facilities and associated infrastructure are located on lands leased or licensed from third parties and such leases and licenses must be renewed from time to time. Failure to renew the leases or licenses on terms acceptable to Pembina could significantly reduce the operations of such facilities and could result in related decommissioning costs for Pembina, pursuant to the terms of such leases or licenses. Successful development of new pipelines or extensions to existing pipelines depends in part on securing leases, easements, rights-of-way, permits and/or licenses from landowners or governmental authorities allowing access for such purposes. The process of securing rights-of-way or similar access is becoming more complex, particularly in more densely populated, environmentally sensitive and other areas. The inability to secure such rights-of-way or similar access could have an adverse effect on Pembina's operations and financial results.

Reputation

Reputational risk is the potential risk that market- or company-specific events, or other factors, could result in the deterioration of Pembina's reputation with key stakeholders. Pembina's business and operations, projects and growth opportunities require us to have strong relationships with key stakeholders, including local communities, Indigenous communities and other groups directly impacted by the Company's activities, as well as governments and government agencies.

The potential for deterioration of Pembina's reputation exists in many business decisions, which may negatively impact Pembina's business and the value of its securities. Reputational risk cannot be managed in isolation from other forms of risk. Credit, market, operational, insurance, liquidity, regulatory and legal, and 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 Pembina has no control. In particular, Pembina's reputation could be impacted by negative publicity related to pipeline incidents, expansion plans or new projects or due to opposition from civilians or organizations opposed to energy, oil sands and pipeline development and, particularly, with shipment of production from oil sands regions. Further, Pembina's reputation could be negatively impacted by changing public attitudes towards climate change and the perceived causes thereof, over which the Company has no control. Negative impacts resulting from a compromised reputation, whether caused by Pembina's actions or otherwise, could include revenue loss, reduction in customer base, delays in obtaining regulatory approvals with respect to growth projects, reduced access to capital or decreased value of Pembina's securities and reduced insurance capacity and coverage.

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 may experience incidents, malfunctions or other unplanned events that may result in spills or emissions and/or result in personal injury, fines, penalties, other sanctions or property damage. Pembina may also incur liability for environmental contamination associated with past and present activities and properties.

Pembina's 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 as it was initially granted. There can be no assurance that Pembina will be able to obtain all 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 of Pembina's pipelines or facilities unsafe or not in compliance with applicable laws, they may order such facilities to be shut down. Certain significant environmental legislative initiatives that may materially impact Pembina's business and financial results and conditions are outlined below.

On December 11, 2020, the federal government announced "A Healthy Environment and a Healthy Economy" ("New Federal Climate Plan"), which aims to exceed the federal government's previous 2030 target for national GHG emissions reductions and to set Canada on a track to net-zero GHG emissions by 2050. The upstream oil and gas industry is expected to contribute a significant amount of the reduction needed to achieve these goals. The New Federal Climate Plan implements a number of specific measures described below, but is also expected to affect the decision-making of all federal government bodies, including federal regulators, consistent with, for instance, the application of the SACC to projects subject to the IAA, as described above.

The federal government mandated a pan-Canadian carbon price beginning at \$20 per tonne in 2019, rising by \$10 per tonne per year to \$50 per tonne in 2022. Pursuant to the New Federal Climate Plan, after 2022, the carbon price will rise by \$15 a year to \$170 in 2030. The GGPPA establishes a set of minimum national standards for carbon pricing in Canada, which standards apply to provinces that otherwise fail to impose adequate provincial carbon pricing measures. The New Federal Climate Plan indicates the federal government will review the standard for adequacy of provincial carbon pricing measures under the GGPPA. This may result in the GGPPA applying more broadly to the provinces and territories. In 2021, a majority of the Supreme Court of Canada confirmed that the carbon pricing regime established under the GGPPA is constitutional. Future amendments to the GGPPA, including the potential increase in carbon price in accordance with the New Federal Climate Plan (which does not currently have the force of law), may impose additional costs on the operations of Pembina and Pembina's customers.

The federal Regulations Respecting Reduction in the Release of Methane and Certain Volatile Organic Compounds (Upstream Oil and Gas Sector) ("Federal Methane Regulations"), which require reduction of fugitive and vented gas emissions from the upstream oil and gas sector, came into force on January 1, 2020. The federal government reported on the effectiveness of the Federal Methane Regulations in December 2021 and confirmed that the stringency of the Federal Methane Regulations will increase. The federal government has committed to reducing oil and gas methane emissions by at least 75 percent below 2012 levels by 2030 and expects to release draft regulations to implement this commitment in early 2023. The Federal Methane Regulations may impose additional costs on the operations of Pembina and Pembina's customers.

The federal government is also developing a Clean Fuel Standard that will require all producers and importers of liquid fossil fuels in Canada to reduce or offset the carbon intensity of the fuels they produce or import leading to a decrease of approximately 13 percent (below 2016 levels) in the carbon intensity of liquid fuels used in Canada by 2030. The final version of the regulations implementing the Clean Fuel Standard have been delayed and are now expected in early 2022. Pembina will continue to monitor the development of regulations on liquid fossil fuels. The potential costs and benefits of the Clean Fuel Standard to Pembina and its customers are continuing to be assessed.

Alberta satisfies federal requirements with respect to output-based carbon pricing for large emitters but is subject to the federal fuel charge pursuant to the GGPPA as of January 1, 2020. The fuel charge was \$40 per tonne on April 1, 2021 and will rise to \$50 per tonne on April 1, 2022.

The Technology Innovation and Emissions Reduction ("TIER") Regulation replaced the Carbon Competitiveness Incentive Regulation as Alberta's output-based emission allocations for large facility emitters on January 1, 2020. The TIER continues to facilitate emissions reductions relative to facilities that emitted 100,000 tonnes of GHGs or more in 2016 or any subsequent year. Facilities which are subject to the TIER are exempt from the federal output-based carbon price included in the GGPPA as the regimes are currently deemed equivalent. Pembina has three natural gas processing facilities subject to the TIER. At present, the operational and financial impacts of TIER are minimal and are anticipated to not change substantially over the next few years, subject to any significant increase in carbon price that may be imposed on Alberta pursuant to the GGPPA and the New Federal Climate Plan. As more facilities expand and increase production, it is anticipated that additional facilities will become subject to the TIER. The potential costs and benefits to Pembina of those facilities under the TIER are continuing to be assessed.

By an equivalency agreement with the federal government, which came into force October 26, 2020, the Federal Methane Regulations do not currently apply in Alberta. The application of the Federal Methane Regulations in Alberta may change in 2023 or earlier as the federal government works to meet its desired GHG emissions reduction targets. The Methane Emission Reduction Regulation came into force in Alberta on January 1, 2020, and, along with certain AER Directives, imposes largely the same constraints as the Federal Methane Regulations. The Federal Methane Regulations apply in Ontario and Manitoba but not currently, by equivalency agreements similar to that in effect in Alberta, in British Columbia or Saskatchewan.

The Government of Alberta, in its climate change legislation and guidelines, has legislated an overall cap on oil sands GHG emissions. The legislated emissions cap on oil sands operations has been set to a maximum of 100 megatonnes in any year.

Oil sands operations currently emit approximately 70 megatonnes per year. This legislated cap may limit oil sands production growth in the future.

Pembina is subject to regulation by the AER under the Licensee Liability Rating Program and the Large Facility Liability Management Program. Currently, if a licensee's deemed liabilities exceed its deemed assets (as calculated pursuant to the programs), it must reduce its liabilities or provide the AER with a security deposit. Failure to do so may restrict the licensee's ability to transfer licenses or result in enforcement action by the AER. On July 30, 2020, the Government of Alberta announced a new Liability Management Framework that will replace the current regime. On December 1, 2021, AER Directive 088: Licensee Life-cycle Management ("Directive 088") came into force. Directive 088 will replace the AER's current Licensee Liability Rating Program when it is fully implemented in 2022. Directive 088 introduces several new programs and assessments relative to the life cycle of Pembina's energy assets that are regulated by the AER, including the new licensee capability assessment, Licensee Management Program, Inventory Reduction Program, and security collection requirements. Beginning January 1, 2022, all licensees that have liability associated with inactive infrastructure will be required to spend a specified amount each year on reclamation activities, or post equivalent security with the AER.

Pembina is subject to regulation by the BCOGC under the Liability Management Rating program. Currently, if a licensee's deemed liabilities exceed its deemed assets (as calculated pursuant to the programs), it must reduce its liabilities or provide the BCOGC with a security deposit. Failure to do so may restrict the licensee's ability to transfer licenses or result in enforcement action by the BCOGC. The Liability Management Rating Program is being replaced by the "Permittee Capability Assessment" program. The Permittee Capability Assessment program is being developed in collaboration with the AER, is expected to generally align Directive 088 and is expected to be implemented in April 2022.

Policy reviews relating to climate change, liability management and other environmental issues are ongoing in the jurisdictions in which Pembina operates. 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 continue to be developed.

While Pembina believes its current operations are in material compliance with applicable environmental, health and safety laws, there can be no assurance that substantial costs or liabilities will not be incurred as a result of non-compliance with such laws. Moreover, it is possible that other developments, such as changes in environmental, health and safety laws, regulations and enforcement policies thereunder, including with respect to climate change, claims for damages to persons or property resulting from Pembina's operations, and the discovery of pre-existing environmental liabilities in relation to 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 tolls, 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, health and safety regulations and legislation, including with respect to climate change, may also impact Pembina's customers and could result in crude oil and natural gas development and production becoming uneconomical, which would impact throughput and revenue on Pembina's systems and in its facilities.

See "*Reserve Replacement, Throughput and Product Demand*" above.

While Pembina maintains insurance for damage caused by seepage or pollution from its pipelines or facilities 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 may not be available.

Abandonment Costs

Pembina is responsible for compliance with all applicable laws and regulations regarding the dismantling, decommissioning, environmental, reclamation and remediation activities associated with 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 is 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 of 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 the Consolidated Financial Statements.

The proceeds from the disposition of certain assets, including in respect of certain pipeline systems and line fill, may be available to offset abandonment costs. 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 to pay for dividends to Shareholders and to service obligations under Pembina's debt securities and Pembina's other debt obligations.

To the best of its knowledge, Pembina has complied in all material respects with CER requirements relative to its wholly-owned CER-regulated pipelines for abandonment funding and has completed the compliance-based filings that are required under the applicable CER rules and regulations regarding the abandonment of its pipeline systems and assets. Pembina also has ownership in CER-regulated pipelines including in respect of the Alliance Pipeline, the Tupper pipelines and the Kerrobert pipeline, which are operated by or with its joint venture partners. Pembina and the joint venture partner in each case are responsible for the abandonment funding and the submission of the CER-compliance based filings for those CER-regulated pipelines. 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 CER.

Operating and Capital Costs

The operating and capital costs of Pembina's assets may vary considerably from current and forecasted 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. In addition, operating and capital costs may increase as a result of a number of factors beyond Pembina's control, including general economic, business and market conditions and supply, demand and/or inflation in respect of required goods and/or services. 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 certain operating costs are recaptured through the tolls charged on natural gas volumes processed and crude oil and NGL transported, respectively, to the extent such tolls escalate, producers may seek lower cost alternatives or stop production of their crude oil and/or natural gas.

Risks Relating to NGL by Rail

Pembina's operations include rail loading, offloading and terminalling facilities. Pembina relies on railroads and trucks to distribute its products for customers and to transport raw materials to its processing facilities. Costs for environmental damage, damage to property and/or personal injury in the event of a railway incident involving hydrocarbons have the potential to be significant. At this time, the *Railway Safety Act* (Canada), which governs the operation of railway equipment, does not contemplate regulatory enforcement proceedings against shippers, but consignors and shippers may be subject to regulatory proceedings under the *Transportation of Dangerous Goods Act* (Canada), which specifies the obligations of shippers to identify and classify dangerous goods, select appropriate equipment and prepare shipping documentation. While the *Canada Transportation Act* was amended in 2015 to preclude railway companies from shifting liability for third-party claims to shippers by tariff publication alone, major Canadian railways have adopted standard contract provisions designed to implement such a shift. Under various environmental statutes in both Canada and the U.S., Pembina could be held responsible for environmental damage caused by hydrocarbons loaded at its facilities or being carried on its leased rail cars. Pembina partially mitigates this risk by securing insurance coverage, but such insurance coverage may not be adequate in the event of an incident.

Railway incidents in Canada and the U.S. have prompted regulatory bodies to initiate reviews of transportation rules and publish various directives. Regulators in Canada and the U.S. have begun to phase-in more stringent engineering standards for tank cars used to move hydrocarbon products, which require all North American tank cars carrying crude oil or ethanol to be retrofitted and all tank cars carrying flammable liquids to be compliant in accordance with the required regulatory timelines. In addition, in 2020, the Government of Canada directed industry to review and update the rules regarding the transportation of crude oil and liquefied petroleum gas. While most legislative and regulatory changes apply directly to railway companies, costs associated with retrofitting locomotives and rail cars, implementing safety systems, increased inspection and reporting requirements may be indirectly passed on to Pembina through increased freight rates and car leasing costs. In addition, regulators in Canada and the U.S. have implemented changes that impose obligations directly on consignors and shippers, such as Pembina, relating to the certification of product, equipment procedures and emergency response procedures.

In the event that Pembina is ultimately held liable for any damages resulting from its activities relating to transporting NGL by rail, for which insurance is not available, or increased costs or obligations are imposed on Pembina as a result of new regulations, this could have an impact on Pembina's business, operations and prospects and could impact earnings and cash flow available to pay dividends and to service obligations under Pembina's debt securities and other debt obligations.

Ongoing Impact of the COVID-19 Pandemic

COVID-19 Related Impacts

Pembina's business and operations have been and may continue to be materially adversely affected by the COVID-19 pandemic, including ongoing uncertainty with respect to the extent and duration of the pandemic. The ongoing COVID-19 pandemic and actions that have, and may be, taken by governmental authorities in response thereto has resulted, and may continue to result in, among other things: an overall slowdown in the global economy; a decrease in global energy demand; increased volatility in financial and commodity markets; disruptions to global supply chains; labour shortages; significant impacts to the workforce; reductions in trade volumes; temporary operational restrictions and restrictions on gatherings of individuals, as well as shelter-in-place declarations and quarantine orders; business closures and travel bans; political and economic instability; and civil unrest. The occurrence of new variants thereof in certain geographic areas, including certain areas in which Pembina operates, and the possibility that a resurgence of the COVID-19 virus or the spread of such new or other variants or mutations thereof may occur in other areas, has resulted in the re-imposition of certain of the foregoing restrictions, and may result in further restrictions, by governmental authorities in certain jurisdictions, including certain jurisdictions in which Pembina operates. This further increases the risk and uncertainty as to the extent and duration of the COVID-19 pandemic and its ultimate impact of the global economy and other items noted above.

The risks to Pembina of the ongoing COVID-19 pandemic include, among other things: risks to the health and safety of Pembina's employees; a slowdown or temporary suspension of operations in certain geographic locations in which Pembina operates; additional delays in the completion, or deferral, of Pembina's growth and expansion projects; the availability of labour for projects; and supply chain disruptions, all or any of which could materially adversely impact Pembina's business operations and financial results.

The full extent and impact of the COVID-19 pandemic continues to be unknown at this time and the degree to which it may impact Pembina's business operations and financial results will depend on future developments, which are highly uncertain and cannot be predicted with any degree of certainty, including: the duration, severity and geographic spread of the COVID-19 virus and variants and mutations thereof, including in respect of the recent spread of new variants thereof in certain geographic areas, including certain areas in which Pembina operates; further actions that may be taken by governmental authorities, including in respect of travel restrictions and business disruptions; the effectiveness and timing of actions taken to contain and treat the COVID-19 virus and variants and mutations thereof, including the vaccines developed in response thereto; and how quickly and to what extent normal economic and operating conditions can resume.

Impact on General Risks

Depending on the extent and duration of the COVID-19 pandemic, it may also have the effect of heightening many of the other risks described herein, including the risks relating to Pembina's exposure to commodity prices; the successful completion of Pembina's growth and expansion projects, including the expected return on investment thereof; Pembina's ability to obtain required equipment, materials or labour; Pembina's ability to maintain its credit ratings; restricted access to capital and increased borrowing costs; Pembina's ability to pay dividends and service obligations under its debt securities and other debt obligations; and otherwise complying with the covenants contained in the agreements that govern Pembina's existing indebtedness.

Risk Factors Relating to the Securities of Pembina

Dilution of Shareholders

Pembina is authorized to issue, among other classes of shares, an unlimited number of Common Shares for consideration on terms and conditions as established by the Board of Directors without the approval of Shareholders in certain instances. Existing Shareholders have no pre-emptive rights in connection with such further issuances. Any issuance of Common Shares may have a dilutive effect on existing Shareholders.

Risk Factors Relating to the Activities of Pembina and the Ownership of Securities

The following is a list of certain risk factors relating to the activities of Pembina and the ownership of its securities:

- the level of Pembina's indebtedness from time to time could impair Pembina's ability to obtain additional financing on a timely basis to take advantage of business opportunities that may arise, which may have an adverse effect on the value of Pembina's securities;
- the uncertainty of future dividend payments by Pembina and the level thereof, as Pembina's dividend policy and the funds available for the payment of dividends from time to time will be dependent upon, among other things, operating cash flow generated by Pembina and its subsidiaries, financial requirements for Pembina's operations, the execution of its growth strategy and the satisfaction of solvency tests imposed by the ABCA for the declaration and payment of dividends;
- Pembina may make future acquisitions or may enter into financings or other transactions involving the issuance of securities of Pembina which may be dilutive to the holders of Pembina's securities;
- the inability of Pembina to manage growth effectively, and realize the anticipated growth opportunities from acquisitions and new projects, could have an adverse impact on Pembina's business, operations and prospects, which may also have an adverse effect on the value of Pembina's securities; and

- the market value of the Common Shares may deteriorate materially if Pembina is unable to meet its cash dividend targets or make cash dividends in the future.

Market Value of Common Shares and Other Securities

Pembina cannot predict at what price the Common Shares, Class A Preferred Shares or other securities issued by Pembina will trade in the future. Common Shares, Class A Preferred Shares and other securities of Pembina will not necessarily trade at values determined solely by reference to the underlying value of Pembina's assets. One of the factors that may influence the market price of the Common Shares and the Class A Preferred Shares is the annual dividend yield of such securities. An increase in interest rates may lead holders and/or purchasers of Common Shares or Class A Preferred Shares to demand a higher annual dividend yield, which could adversely affect the market price of the Common Shares or Class A Preferred Shares. In addition, the market price for Common Shares and the Class A Preferred Shares may be affected by announcements of new developments, changes in Pembina's operating results, failure to meet analysts' expectations, changes in credit ratings, changes in general market conditions, fluctuations in the market for equity or debt securities and other factors beyond the control of Pembina.

Shareholders are encouraged to obtain independent legal, tax and investment advice with respect to the holding of Common Shares or Class A Preferred Shares and other securities issued by Pembina.

General Risk Factors

Health and Safety

The operation of Pembina's business is subject to hazards of gathering, processing, transporting, fractionating, storing and marketing hydrocarbon products. Such hazards include, but are not limited to: blowouts; fires; explosions; gaseous leaks, including sour natural gas; migration of harmful substances; oil spills; corrosion; and acts of vandalism and terrorism. These hazards may interrupt operations, impact Pembina's reputation, cause loss of life or personal injury to the Company's workers or contractors, result in loss of or damage to equipment, property, information technology systems, related data and control systems or cause environmental damage that may include polluting water, land or air. Further, several of the Company's pipeline systems and related assets are operated in close proximity to populated areas and a major incident could result in injury or loss of life to members of the public. A public safety incident could also result in reputational damage to the Company, material repair costs or increased costs of operating and insuring Pembina's assets.

Additional Financing and Capital Resources

The timing and amount of Pembina's capital expenditures and contributions to equity accounted investees, and the ability of Pembina to repay or refinance existing debt as it becomes due, directly affects the amount of cash available for Pembina to pay dividends. Future acquisitions, expansions of Pembina's assets, other capital expenditures and the repayment or refinancing of existing debt as it becomes due may be financed from sources such as cash generated from operations, the issuance of additional Common Shares, Class A Preferred 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. During periods of weakness in the global economy, and in particular the commodity-related industry sectors, Pembina may experience restricted access to capital and increased borrowing costs. The ability of Pembina to raise capital depends on, among other factors, the overall state of capital markets, Pembina's credit rating, investor demand for investments in the energy industry and demand for Pembina's securities. To the extent that external sources of capital, including the issuance of additional Common Shares, Class A Preferred Shares or other securities or the availability of additional credit facilities, become limited or unavailable on acceptable 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 or to invest in assets, as the case may be, may be impaired. To the extent Pembina is required to use operating 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.

Counterparty Credit Risk

Counterparty credit risk represents the financial loss Pembina may experience if a counterparty to a financial instrument or commercial agreement fails to meet its contractual obligations to Pembina in accordance with the terms and conditions of such instruments or agreements with Pembina. Counterparty credit risk arises primarily from Pembina's short-term investments, trade and other receivables, advances to related parties and from counterparties to its derivative financial instruments.

Pembina continues to closely monitor and reassess the creditworthiness of its counterparties, including financial institutions. Pembina may reduce or mitigate its exposure to certain counterparties where it is deemed warranted and permitted under contractual terms. Pembina manages counterparty credit risk through established credit management techniques, including conducting comprehensive financial and other assessments on all new counterparties and regular reviews of existing counterparties to establish and monitor counterparties' creditworthiness, set exposure limits, monitor exposure to these limits and seek to obtain financial assurances where warranted and permitted under contractual terms. Pembina utilizes various sources of financial, credit and business information in assessing the creditworthiness of a counterparty, including external credit ratings, where available, and, in other cases, detailed financial statement analysis in order to generate an internal credit rating based on quantitative and qualitative factors. The establishment of counterparty exposure limits is governed by a Board-designated counterparty exposure limit matrix which represents the maximum dollar amounts of counterparty exposure by debt rating that can be approved for a particular counterparty.

Financial assurances from counterparties may include guarantees, letters of credit and cash. As at December 31, 2021, letters of credit totaling approximately \$100 million (December 31, 2020: \$130 million) were held primarily in respect of customer trade receivables.

Pembina has typically collected its receivables in full. At December 31, 2021, approximately 98 percent (December 31, 2020: 94 percent) of receivables were current. Pembina has a general lien and a continuing and first priority security interest in, and a secured charge on, all of a shipper's petroleum products in its custody. The risk of non-collection is considered to be low and no material impairment of trade and other receivables has been made as of the date hereof.

Pembina monitors and manages its concentration of counterparty credit risk on an ongoing basis. Pembina also evaluates counterparty risk from the perspective of future exposure with existing or new counterparties that support future capital expansion projects. Pembina believes these measures are prudent and allow for effective management of its counterparty credit risk but there is no certainty that they will protect Pembina against all material losses. As part of its ongoing operations, Pembina must balance its market and counterparty credit risks when making business decisions.

Debt Service

As at December 31, 2021, Pembina had exposure to floating interest rates on approximately \$594 million (2020: \$1.2 billion) in debt. Certain borrowings which occur under floating rates have been swapped to fixed rates 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 certain 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 or other financial obligations or expenditures in respect of such 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 dividends on Common Shares. Pembina 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 Credit Facilities have been provided with guarantees and subordination agreements. If Pembina becomes unable to pay its debt service charges or otherwise commits an event of default, payments to the lenders under its Credit Facilities will rank in priority to dividends.

Although Pembina believes its existing Credit Facilities are sufficient for its immediate liquidity requirements, there can be no assurance that the amount available thereunder will be adequate for the future financial obligations of Pembina or that additional funds will be able to be obtained on terms acceptable to Pembina, or at all.

Credit Ratings

Rating agencies regularly evaluate Pembina and base their ratings of Pembina's long-term and short-term debt and Class A Preferred Shares on a number of factors. These factors include Pembina's financial strength as well as factors not entirely within Pembina's 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. A credit rating downgrade could also limit Pembina's access to debt and preferred share markets.

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 with Pembina. A credit rating downgrade may impair Pembina's ability to enter into arrangements with suppliers or counterparties, engage in certain transactions, limit Pembina's access to private and public credit markets or increase the costs of borrowing under its existing Credit Facilities. A credit rating downgrade could also limit Pembina's access to debt and preferred share markets.

Reliance on Management, Key Individuals and a Skilled Workforce

Pembina is dependent on senior management and directors of the Company in respect of the governance, administration and management of all matters relating to Pembina and its operations and administration. The loss of the services of key individuals could have a detrimental effect on Pembina. In addition, Pembina's operations require the retention and recruitment of a skilled workforce, including engineers, technical personnel and other professionals. Pembina competes with other companies in the energy industry for this skilled workforce. If the Company is unable to retain current employees and/or recruit new employees or comparable skill, knowledge and experience, Pembina's business and operations could be negatively impacted. The costs associated with retaining and recruiting key individuals and a skilled workforce could adversely affect Pembina's business opportunities and financial results and there is no assurance that Pembina will continue to attract and retain all personnel necessary for the development and operation of its business.

Indigenous Land Claims and Consultation Obligations

Indigenous people have claimed title and rights to a considerable portion of the lands in western Canada. The successful assertion of Indigenous title or other Indigenous rights claims may have an adverse effect on western Canadian crude oil and natural gas production or oil sands development and may result in reduced demand for Pembina's assets and infrastructure that service those areas, which could have a material adverse effect on Pembina's business and operations.

In Canada, the federal and provincial governments (the "Crown") have a duty to consult and, when appropriate, accommodate Indigenous peoples when the interests of the Indigenous peoples may be affected by a Crown action or decision. Crown actions include the decision to issue a regulatory approval relating to activities that may impact Indigenous rights, interests or lands. The Crown may rely on steps undertaken by a regulatory agency to fulfill its duty to consult and accommodate in whole or in part. Therefore, the processes established by regulatory bodies, such as the AER, the BCOGC, the BCEAO and the CER, often include an assessment of Indigenous rights claims and consultation obligations. While the Crown holds ultimate responsibility for ensuring consultation is adequate, this issue is often a major aspect of regulatory permitting processes. If a regulatory body, or the Crown itself, determines that the duty to consult has not been appropriately discharged relative to the issuance of regulatory approvals required by Pembina, the issuance of such approvals may be delayed or denied, thereby impacting Pembina's Canadian operations.

As described in "*Regulation and Legislation*" above, the CER Act, IAA, and associated amendments to the *Fisheries Act* (Canada) and the *Canadian Navigable Waters Act* (Canada) replaced previously applicable regimes in 2019. A number of the federal regulatory process amendments pertain to the participation of Indigenous groups and the protection of Indigenous and treaty rights. The new legislation generally codifies existing law and practice with respect to these matters. For example, decision makers are now expressly required to consider the effects (positive or negative) of a proposed project on constitutionally-protected Indigenous rights, as well as Indigenous peoples themselves, and ensure that consultation is undertaken during the planning phase of impact assessment processes. The new legislation also creates a larger role for Indigenous governing bodies in the impact assessment process (enabling the delegation of certain aspects of the impact assessment process to such groups) and requires decision makers to consider Indigenous traditional knowledge in certain cases.

The federal government is advancing recognition of Indigenous rights across Canada. As part of these efforts, the federal government enacted the *United Nations Declaration on the Rights of Indigenous Peoples* ("UNDRIP") Act on June 21, 2021. The purpose of the legislation is to affirm the application of the UNDRIP in Canadian law, but the practical effects of the legislation are yet to be determined as it only requires the government to prepare and implement an action plan for this application, and annually report on its progress. Structurally similar legislation was enacted by British Columbia in 2019; the *Declaration on the Rights of Indigenous Peoples Act* ("DRIPA").

The recognition of Indigenous rights is also facilitated by the renewed British Columbia *Environmental Assessment Act* (the "EA Act") that came into force in late 2019. The EA Act is designed as a "consent-based" environmental assessment model and is intended to support reconciliation with Indigenous peoples and the implementation of the UNDRIP. The legislation requires the BCEAO to seek participating Indigenous groups' consent with respect to, among other things, the decision to issue an environmental assessment certificate to a given project. While the EA Act does not strictly require consent in most cases, the legislation creates significant new participation opportunities for Indigenous groups during environmental assessments, which may increase the time required to obtain regulatory approvals and thereby impact Pembina's operations in British Columbia.

Pembina continues to actively monitor the development of the regulations required to facilitate the implementation of the UNDRIP Act, DRIPA, EA Act and the impact that other federal and provincial government initiatives on Indigenous rights may have on its business.

In addition, Pembina is monitoring the impact of the recent judgment of the Supreme Court of British Columbia with respect to the claim brought by the Blueberry River First Nation ("BRFN") against British Columbia relating to the cumulative impact of industrial development within the BRFN treaty area. The judgment has created uncertainty and may result in the imposition of additional requirements to obtain regulatory approvals for developing pipelines or associated facilities in the area and could cause delays, suspensions, or deferrals in the development of such facilities. It may also impact the current and future activities of producers operating in the area and cause them to decrease production, which could, in turn, reduce such producers' demand for Pembina's existing pipeline capacity and processing assets, and may have an adverse effect on Pembina's business. On October 7, 2021, the government of British Columbia and BRFN reached an initial agreement which has been characterized as a first step in responding to the Court's decision. Pembina continues to actively monitor regulatory developments associated with this matter; however, Pembina cannot predict future regulatory changes that may arise to address the Court's decision and any such regulatory changes could impact the operations of Pembina and Pembina's customers.

Potential Conflicts of Interest

Shareholders and other security holders of Pembina are dependent on senior management and the directors of Pembina for the governance, administration and management of Pembina. Certain directors and officers of Pembina may be directors or officers of entities in competition to Pembina or may be directors or officers of certain entities in which Pembina holds an equity investment in. As such, certain directors or officers of Pembina may encounter conflicts of interest in the administration of their duties with respect to Pembina. Pembina mitigates this risk by requiring directors and officers to disclose the existence of potential conflicts in accordance with Pembina's Code of Ethics and in accordance with the ABCA.

Litigation

In the course of their business, Pembina and its various subsidiaries and affiliates may be subject to lawsuits and other claims, including with respect to Pembina's growth or expansion projects. Defence and settlement costs associated with such lawsuits and claims may be substantial, even with respect to lawsuits and claims that have no merit. Due to the inherent uncertainty of the litigation process, the resolution of any particular legal or other proceeding may have a material adverse effect on the financial position or operating results of Pembina.

Changes in Tax Legislation

Tax legislation that Pembina is subject to may be amended (or the interpretation of such legislation may change), retroactively or prospectively, resulting in tax consequences that materially differ from those contemplated by Pembina in the jurisdictions in which Pembina has operations, which may create a risk of non-compliance and re-assessment. While Pembina believes that its tax filing positions are appropriate and supportable, it is possible that governing tax authorities may: (i) amend tax legislation (or its interpretation of such legislation may change), or (ii) successfully challenge Pembina's interpretation of tax legislation, either of which could expose Pembina to additional tax liabilities and may affect Pembina's estimate of current and future income taxes and could have an adverse effect on the financial condition and prospects of Pembina and the distributable cash flow available to pay dividends and to service obligations under Pembina's debt securities and other debt obligations.

Foreign Exchange Risk

Pembina's cash flows, namely a portion of its commodity-related cash flows, certain cash flows from U.S.-based infrastructure assets, and distributions from U.S.-based investments in equity accounted investees, are subject to currency risk, arising from the denomination of specific cash flows in U.S. dollars. Additionally, a portion of Pembina's capital expenditures, and contributions or loans to Pembina's U.S.-based investments in equity accounted investees, may be denominated in U.S. dollars. Pembina monitors, assesses, and responds to these foreign currency risks using an active risk management program, which may include the exchange of foreign currency for domestic currency at a fixed rate.

Cyber Security

Pembina's infrastructure, technologies and data are becoming increasingly integrated. Such integration creates a risk that the failure of one system could lead to failure of other systems which may also have an impact on the Company's physical assets and its ability to safely operate such assets. Furthermore, Pembina and its third-party vendors collect and store sensitive data in the ordinary course of business, including personal identification information of employees as well as proprietary business information and that of the Company's customers, suppliers, investors and other stakeholders. Notable cybersecurity threats include unauthorized access to information technology systems due to hacking, viruses, cyber phishing attacks and other causes that can result in service disruptions, system failures and unauthorized access to confidential business information. Due to Pembina's high level of integration, such an attack on the information technology systems of one segment or asset of Pembina could have a material adverse effect on the broader business, operations or financial results of the Company.

As a result of the critical nature of energy infrastructure, the industry has experienced an increasing risk of cyber-attacks. Any breach in the security or failure of Pembina'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 for which Pembina could be held liable, all of which could adversely affect Pembina's reputation, business, operations or financial results. As a result of a cyber-attack or security breach, Pembina could also be liable under laws that protect the privacy of personal information or subject to regulatory penalties.

Political Uncertainty

Recent political and social events and decisions made in Canada, the U.S. and elsewhere, including changes to federal, provincial, state or municipal governments in Canada and the U.S., have, and can continue to create future uncertainty on global financial and economic markets. This uncertainty may impact the energy industry in Canada and may have an adverse effect on Pembina's business and financial results.

Risks Relating to Breach of Confidentiality

Pembina regularly enters into confidentiality agreements with third parties prior to the disclosure of any confidential information when discussing potential business relationships or other transactions. Breaches of confidentiality could put Pembina at competitive risk and may cause significant damage to its business. There is no assurance that, in the event of a breach of confidentiality, Pembina will be able to obtain equitable remedies from a court of competent jurisdiction in a timely manner, if at all, in order to prevent or mitigate any damage to its business that such a breach of confidentiality may cause.

Concentration of Assets in the Western Canadian Sedimentary Basin

The majority of Pembina's assets are concentrated in the WCSB, which leaves the company exposed to the economic conditions of that area. Pembina mitigates this risk through a diversity of business activities within the area and by owning and operating assets in the U.S.

Risks Related to Climate Change

Risks Relating to Changing Investor Sentiment in the Oil and Gas Industry

A number of factors, including the concerns of the effects of the use of fossil fuels on climate change, concerns of the impact of oil and gas operations on the environment, concerns of environmental damage relating to spills of petroleum products during transportation and concerns of Indigenous rights, have affected certain investors' sentiments towards investing in the oil and gas industry. As a result of these concerns, some institutional, retail and public investors have announced that they are no longer willing to fund or invest in oil and gas properties or companies and/or are reducing the amount of such investments over time. In addition, certain institutional investors are requesting that issuers develop and implement more robust social, environmental and governance policies and practices. Developing and implementing such policies and practices can involve significant costs and require a significant time commitment from Pembina's Board of Directors, management and employees. Failure to implement the policies and practices as requested by institutional investors may result in such investors reducing their investment in Pembina or not investing in Pembina at all. Any reduction in the investor base interested or willing to invest in the oil and gas industry and, more specifically, Pembina may result in limits on Pembina's ability to access capital, increases to the cost of capital, a downgrade in Pembina's credit ratings and outlooks, and a decrease in the price and liquidity of Pembina's securities even if Pembina's operating results, underlying asset values or prospects have not changed. Additionally, these factors, as well as other related factors, may cause a decrease in the value of an asset which may result in an impairment charge.

Energy Market Transition

Changing consumer preferences, new technologies, government regulation or other external factors may result in a rapid transition from fossil-based sources of energy, including energy derived from crude oil and natural gas, to renewable and other alternative sources of energy. This may lead to lower global demand for crude oil and natural gas and related commodities and, in turn, may lead to lower prices for crude oil, natural gas and NGL and related commodities. This could negatively impact the Company's producing customers and lead to less demand for Pembina's services, which could negatively impact the revenue the Company receives from, and the value of, its pipelines, facilities and other infrastructure assets, the useful life of those assets and accelerate the timing of decommissioning.

In addition, Pembina may invest in opportunities related to an energy transition, which may involve investments in businesses, operations or assets relating to renewable or other alternative forms of energy. Such investments may involve certain risks and uncertainties in addition to those identified herein in respect of Pembina's existing businesses, operations and assets, including the obligation to comply with additional regulatory and other legal requirements associated with such businesses, operations or assets and the potential requirement for additional sources of capital to make, develop and/or maintain such investments and Pembina's ability to access such sources of capital. In the event Pembina were to complete such investments, there can be no guarantee that Pembina will realize a return on those investments or businesses, operations or assets that is similar to the returns it receives in respect of its existing business, operations and assets or that would offset any loss in revenue from, or the value of, the Company's existing pipeline, facilities and other infrastructure assets resulting from the impact of the potential energy transition. As a result, any such investment could reduce the level of cash available for dividends and to service obligations under Pembina's debt securities and other debt obligations and may also negatively impact the trading price of Pembina's securities.

Greenhouse Gas Emissions and Targets

Among other sustainability goals, Pembina has committed to reducing GHG emissions intensity of its operations by 30 percent by 2030 (based on a 2019 baseline year). The Company's ability to lower GHG emissions in respect of its 2030 emissions intensity reduction target is subject to numerous risks and uncertainties, and Pembina's actions taken in to implement these objectives may also expose the Company to certain additional and/or heightened financial and operational risks. A reduction in GHG emissions intensity relies on, among other things, Pembina's ability to implement and improve energy efficiency at all facilities, future development and growth opportunities, development and deployment of new technologies, investment in lower-carbon power and transition to greater use of renewable and lower emission energy sources. In the event that the Company is unable to implement these strategies and technologies as planned without negatively impacting its expected operations or business plans, or in the event that such strategies or technologies do not perform as expected, the Company may be unable to meet its GHG emissions intensity reduction targets or goals on the current timelines, or at all.

In addition, achieving the Company's GHG emissions intensity reductions target and goals could require significant capital expenditures and resources, with the potential that the costs required to achieve such target and goals materially differ from Pembina's original estimates and expectations, which differences may be material. In addition, while the intent is to improve efficiency and increase the use of renewable and lower-carbon energy, the shift in resources and focus towards GHG emissions reduction could have a negative impact on Pembina's operating results. The overall final cost of investing in and implementing a GHG emissions intensity reduction strategy and technologies in furtherance of such strategy, and the resultant change in the deployment of the Company's resources and focus, could have a material adverse effect on Pembina's business, financial condition and results of operations.

Risks Relating to Weather Conditions

Weather conditions (including those associated with climate change) can affect the demand for and price of natural gas and NGL. As a result, changes in weather patterns may affect Pembina's gas processing business. For example, colder winter temperatures generally increase demand for natural gas and NGL used for heating which tends to result in increased throughput volume on the Alliance Pipeline and at the Company's gas processing facilities and higher prices in the processing and storage businesses. Pembina has capacity to handle any such increased volume of throughput and storage at its facilities to meet changes in seasonal demand; however, at any given time, processing and storage capacity is finite.

Weather conditions (including those associated with climate change) may impact Pembina's ability to complete capital projects, repairs or facility turnarounds on time, potentially resulting in delays and increased costs. Weather may also affect access to Pembina's facilities, and the operations and projects of Pembina's customers or shippers, which may impact the supply and/or demand for Pembina's services. With respect to construction activities, in areas where construction can be conducted in non-winter months, Pembina attempts to schedule its construction timetables so as to minimize potential delays due to cold winter weather.

Changes and/or extreme variability in weather patterns, as well as increases in the frequency of extreme weather events, such as floods, cyclones, hurricanes, droughts and forest fires, increases the potential risk for Pembina's assets, including operational disruptions, transportation difficulties, supply chain disruptions, employee safety incidents, and damage to assets, which may result in lower revenues, higher costs or project delays.

See also "*Risk Factors – Risks Inherent in Pembina's Business – Environmental Costs and Liabilities*"; and "*Risk Factors – Risks Inherent in Pembina's Business – Reputation*".

12. NON-GAAP & OTHER FINANCIAL MEASURES

Throughout this MD&A, Pembina has disclosed certain financial measures that are not specified, defined or determined in accordance with GAAP and which are not disclosed in Pembina's financial statements. Non-GAAP financial measures either exclude an amount that is included in, or include an amount that is excluded from, the composition of the most directly comparable financial measure specified, defined and determined in accordance with GAAP. These non-GAAP financial measures and ratios, together with financial measures and ratios specified, defined and determined in accordance with GAAP, are used by management to evaluate the performance and cash flows of Pembina and its businesses and to provide additional useful information respecting Pembina's financial performance and cash flows to investors and analysts.

In this MD&A, Pembina has disclosed the following non-GAAP financial measures, non-GAAP ratios and other supplementary financial measures: net revenue, adjusted EBITDA from equity accounted investees, adjusted EBITDA, adjusted EBITDA per common share, adjusted cash flow from operating activities and adjusted cash flow from operating activities per common share.

Non-GAAP financial measures and ratios disclosed in this MD&A do not have any standardized meaning under IFRS and may not be comparable to similar financial measures disclosed by other issuers. The financial measures and ratios should not, therefore, be considered in isolation or as a substitute for, or superior to, measures and ratios of Pembina's financial performance, or cash flows specified, defined or determined in accordance with IFRS, including revenue, earnings, share of profit from equity accounted investees and cash flow from operating activities.

Except as otherwise described herein, these non-GAAP financial measures and non-GAAP ratios are calculated on a consistent basis from period to period. Specific reconciling items may only be relevant in certain periods.

Below is a description of each non-GAAP financial measure, non-GAAP ratio and supplementary financial measure disclosed in this MD&A, together with, as applicable, disclosure of: the most directly comparable financial measure that is specified, defined and determined in accordance with GAAP to which each non-GAAP financial measure relates; a quantitative reconciliation of each non-GAAP financial measure to such directly comparable GAAP financial measure; the composition of each non-GAAP financial measure, non-GAAP ratio and supplementary financial measure; an explanation of how each non-GAAP financial measure and non-GAAP ratio provides useful information to investors and the additional purposes, if any, for which management uses each non-GAAP financial measure and non-GAAP ratio; and an explanation of the reason for any change in the label or composition of each non-GAAP financial measure and non-GAAP ratio from what was previously disclosed.

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 in Marketing & New Ventures and Facilities, to aggregate revenue generated by each of the Company's divisions and to set comparable objectives. The most directly comparable financial measure to net revenue that is specified, defined and determined in accordance with GAAP and disclosed in the Pembina's financial statements is revenue.

3 Months Ended December 31 (\$ millions)	Pipelines		Facilities		Marketing & New Ventures		Corporate & Inter-segment Eliminations		Total	
	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020
	Revenue	606	603	349	326	1,750	882	(145)	(131)	2,560
Cost of goods sold, including product purchases	—	—	(1)	4	1,554	809	(77)	(87)	1,476	726
Net revenue	606	603	350	322	196	73	(68)	(44)	1,084	954

12 Months Ended December 31 (\$ millions)	Pipelines		Facilities		Marketing & New Ventures		Corporate & Inter-segment Eliminations		Total	
	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020
	Revenue	2,279	2,251	1,363	1,231	5,577	2,956	(592)	(485)	8,627
Cost of goods sold, including product purchases	—	—	6	11	5,017	2,815	(334)	(317)	4,689	2,509
Net revenue	2,279	2,251	1,357	1,220	560	141	(258)	(168)	3,938	3,444

Adjusted Earnings Before Interest, Taxes, Depreciation and Amortization ("adjusted EBITDA") and adjusted EBITDA per Common Share

Adjusted EBITDA is a non-GAAP financial measure and is calculated as earnings before 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 to earnings for losses (gains) on disposal of assets, transaction costs incurred in respect of acquisitions, dispositions and restructuring, impairment charges or reversals in respect of goodwill, intangible assets, investments in equity accounted investees and property, plant and equipment, certain non-cash provisions and other amounts not reflective of ongoing operations. In addition, Pembina's proportionate share of results from investments in equity accounted investees with a preferred interest is presented in adjusted EBITDA as a 50 percent common interest. 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 and equity accounted investees. Management also believes that adjusted EBITDA provides an indicator of operating income generated from capital expenditures, which includes operational finance income from lessor lease arrangements. 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.

Adjusted EBITDA per common share is a non-GAAP financial ratio which is calculated by dividing adjusted EBITDA by the weighted average number of common shares outstanding.

3 Months Ended December 31 (\$ millions, except per share amounts)	Pipelines		Facilities		Marketing & New Ventures		Corporate & Inter-segment Eliminations		Total	
	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020
	Earnings (loss) before income tax	(70)	(992)	160	143	224	(684)	(181)	(114)	133
Adjustments to share of profit from equity accounted investees and other	65	60	36	32	5	28	—	—	106	120
Net finance costs	6	7	5	8	(1)	(15)	97	59	107	59
Depreciation and amortization	101	102	56	50	12	13	11	15	180	180
Unrealized loss (gain) on commodity-related derivative financial instruments	—	—	24	10	(54)	76	—	—	(30)	86
Canadian Emergency Wage Subsidy	—	—	—	—	—	—	—	(2)	—	(2)
Transformation and restructuring costs	—	—	—	—	—	—	21	—	21	—
Transaction costs incurred in respect of acquisitions	—	—	—	—	—	—	5	2	5	2
Impairment charges and non-cash provisions	446	1,400	4	12	(3)	657	1	(1)	448	2,068
Adjusted EBITDA	548	577	285	255	183	75	(46)	(41)	970	866
Adjusted EBITDA per common share – basic (dollars)									1.76	1.57

12 Months Ended December 31										
<i>(\$ millions, except per share amounts)</i>										
	Pipelines		Facilities		Marketing & New Ventures		Corporate & Inter-segment Eliminations		Total	
	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020
Earnings (loss) before income tax	917	128	715	642	391	(646)	(358)	(540)	1,665	(416)
Adjustments to share of profit from equity accounted investees and other	286	240	135	135	23	43	—	—	444	418
Net finance costs	29	31	35	24	(8)	(13)	394	378	450	420
Depreciation and amortization	413	402	214	199	50	50	46	49	723	700
Unrealized (gain) loss on commodity-related derivative financial instruments	—	—	(38)	(4)	(35)	88	—	—	(73)	84
Canadian Emergency Wage Subsidy	—	—	—	—	—	—	3	(39)	3	(39)
Transformation and restructuring costs	—	3	—	2	—	1	47	4	47	10
Transaction costs incurred in respect of acquisitions	—	—	—	—	—	—	31	18	31	18
Arrangement Termination Payment	—	—	—	—	—	—	(350)	—	(350)	—
Impairment charges and non-cash provisions	457	1,404	36	14	(1)	670	1	(2)	493	2,086
Adjusted EBITDA	2,102	2,208	1,097	1,012	420	193	(186)	(132)	3,433	3,281
Adjusted EBITDA per common share – basic <i>(dollars)</i>									6.24	5.97

Adjusted EBITDA from Equity Accounted Investees

In accordance with IFRS, Pembina's jointly controlled investments are accounted for using equity accounting. Under equity accounting, the assets and liabilities of the investment are presented net in a single line item in the Consolidated Statement of Financial Position, "Investments in Equity Accounted Investees". Net earnings from investments in equity accounted investees are recognized in a single line item in the Consolidated Statement of Earnings and Comprehensive Income "Share of Profit from Equity Accounted Investees". The adjustments made to earnings, in adjusted EBITDA above, are also made to share of profit from investments in equity accounted investees. Cash contributions and distributions from investments in equity accounted investees represent Pembina's share paid and received in the period to and from the investments in equity accounted investees.

To assist in understanding and evaluating the performance of these investments, Pembina is supplementing the IFRS disclosure with non-GAAP proportionate consolidation of Pembina's interest in the investments in equity accounted investees. Pembina's proportionate interest in equity accounted investees has been included in adjusted EBITDA.

3 Months Ended December 31										
<i>(\$ millions)</i>										
	Pipelines		Facilities		Marketing & New Ventures		Total			
	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020
Share of profit (loss) from equity accounted investees - operations	29	54	21	14	33	(312)	83			(244)
Adjustments to share of profit (loss) from equity accounted investees:										
Net finance costs	26	17	7	8	(1)	20	32			45
Depreciation and amortization	(4)	56	29	24	6	6	31			86
Unrealized loss on commodity-related derivative financial instruments	—	—	—	—	—	2	—			2
Share of earnings (loss) in excess of equity interest ⁽¹⁾	43	(13)	—	—	—	—	43			(13)
Total adjustments to share of profit from equity accounted investees	65	60	36	32	5	28	106			120
Impairment charges and non-cash provisions	—	3	—	—	—	295	—			298
Adjusted EBITDA from equity accounted investees	94	117	57	46	38	11	189			174

⁽¹⁾ Pembina's proportionate share of results from investments in equity accounted investees with a preferred interest is presented in adjusted EBITDA as a 50 percent common interest.

12 Months Ended December 31								
(\$ millions)								
	Pipelines		Facilities		Marketing & New Ventures		Total	
	2021	2020	2021	2020	2021	2020	2021	2020
Share of profit (loss) from equity accounted investees - operations	124	227	80	55	77	(314)	281	(32)
Adjustments to share of profit (loss) from equity accounted investees:								
Net finance costs	72	75	31	39	1	16	104	130
Depreciation and amortization	156	218	104	96	22	21	282	335
Unrealized loss on commodity-related derivative financial instruments	—	—	—	—	—	6	—	6
Share of earnings (loss) in excess of equity interest ⁽¹⁾	58	(53)	—	—	—	—	58	(53)
Total adjustments to share of profit from equity accounted investees	286	240	135	135	23	43	444	418
Impairment charges and non-cash provisions	—	—	—	—	—	295	—	295
Adjusted EBITDA from equity accounted investees	410	467	215	190	100	24	725	681

⁽¹⁾ Pembina's proportionate share of results from investments in equity accounted investees with a preferred interest is presented in adjusted EBITDA as a 50 percent common interest.

Adjusted Cash Flow from Operating Activities 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 adjusting for the change in non-cash operating working capital, adjusting for current tax and share-based compensation payment, and deducting preferred share dividends paid. Adjusted cash flow from operating activities deducts preferred share dividends paid because they are not attributable to common shareholders. The calculation has been modified to include current tax and share-based compensation payment 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. Adjusted cash flow from operating activities per common share is a non-GAAP financial ratio which is calculated by dividing adjusted cash flow from operating activities by the weighted average number of common shares outstanding.

(\$ millions, except per share amounts)	3 Months Ended December 31		12 Months Ended December 31	
	2021	2020	2021	2020
Cash flow from operating activities	697	766	2,650	2,252
Cash flow from operating activities per common share – basic (dollars)	1.27	1.39	4.82	4.10
Add (deduct):				
Change in non-cash operating working capital	30	(75)	100	93
Current tax expense	(31)	(45)	(286)	(240)
Taxes paid, net of foreign exchange	90	7	355	296
Accrued share-based payment expense	(20)	(13)	(76)	(7)
Share-based compensation payment	—	—	32	45
Preferred share dividends paid	(32)	(37)	(135)	(150)
Adjusted cash flow from operating activities	734	603	2,640	2,289
Adjusted cash flow from operating activities per common share – basic (dollars)	1.33	1.10	4.80	4.16

13. ABBREVIATIONS

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

Other	
AECO	Alberta Energy Company benchmark price for natural gas
B.C.	British Columbia
GAAP	Canadian generally accepted accounting principles
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
Kinder Acquisition	Pembina's acquisition of Kinder Morgan Canada Limited and the U.S. portion of the Cochin Pipeline system on December 16, 2019
Volumes	Volumes for Pipelines and Facilities are revenue volumes, defined as physical volumes plus volumes recognized from take-or-pay commitments. Volumes for Marketing & New Ventures are marketed NGL volumes. Volumes are stated in mboe/d, with natural gas volumes converted to mboe/d from MMcf/d at a 6:1 ratio.

Measurement		Regulators & Acts	
bpd	barrels per day	ABCA	<i>Business Corporations Act</i> (Alberta)
mbls	thousands of barrels	AER	Alberta Energy Regulator
mbpd	thousands of barrels per day	BCEAO	British Columbia Environmental Assessment Office
mmbpd	millions of barrels per day	BCOGC	British Columbia Oil and Gas Commission
mmbbls	millions of barrels	BCUC	British Columbia Utilities Commission
mboe/d	thousands of barrels of oil equivalent per day	CER	Canadian Energy Regulator
mmboe/d	millions of barrels of oil equivalent per day	FERC	United States Federal Energy Regulatory Commission
MMcf/d	millions of cubic feet per day	ICA	<i>Interstate Commerce Act of 1887</i> (United States)
bcf/d	billions of cubic feet per day	NEB	National Energy Board
km	kilometer	NGA	<i>Natural Gas Act of 1938</i> (United States)
		PHMSA	Pipeline and Hazardous Material Safety Administration
		IAAC	Impact Assessment Agency of Canada

Investments in Equity Accounted Investees	
Pipelines:	
Alliance	50 percent interest in both Alliance Pipeline Limited Partnership and Alliance Pipeline L.P.
Ruby	50 percent convertible, cumulative preferred interest in Ruby Pipeline Holding Company L.L.C.
Grand Valley	75 percent jointly controlled interest in Grand Valley 1 Limited Partnership wind farm ("Grand Valley")
Facilities:	
Veresen Midstream	45 percent interest in Veresen Midstream Limited Partnership, which owns assets in western Canada serving the Montney geological play in northwestern Alberta and northeastern B.C. including gas processing plants and gas gathering pipelines and compression
Fort Corp	50 percent interest in Fort Saskatchewan Ethylene Storage Limited Partnership and Fort Saskatchewan Ethylene Corporation
Marketing & New Ventures:	
Aux Sable	An ownership interest in Aux Sable (approximately 42.7 percent in Aux Sable U.S. and 50 percent in Aux Sable Canada), which includes an NGL fractionation facility and gas processing capacity near Chicago, Illinois and other natural gas and NGL processing facilities, logistics and distribution assets in the U.S. and Canada, as well as transportation contracts on Alliance
CKPC	50 percent interest in the PDH/PP Facility
Cedar LNG	49.9 percent interest in the proposed floating LNG facility in Kitimat, British Columbia, Canada

Readers are referred to the AIF dated February 24, 2022 on www.sedar.com for additional descriptions.

14. 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 forward-looking 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", "purpose", "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 forward-looking statements speak only as of the date of the MD&A.

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

- future levels and sustainability of cash dividends that Pembina intends to pay to its shareholders and the dividend payment dates;
- planning, construction, locations, capital expenditure estimates, schedules, regulatory and environmental applications and anticipated approvals, expected capacity, incremental volumes, completion and in-service dates, rights, sources of product, activities, benefits and operations with respect to new construction of, or expansions on existing, pipelines, systems, gas services facilities, processing and fractionation facilities, terminalling, storage and hub facilities and other facilities or energy infrastructure, as well as the impact of Pembina's new projects on its future financial performance;
- future pipeline, processing, fractionation and storage facility and system operations and throughput levels;
- Pembina's commitment to, and the effectiveness and impact of, its sustainability goals and targets and its risk management policies;
- treatment under existing and proposed governmental regulatory regimes, including taxes, environmental, project assessment and GHG laws and regulations and related abandonment and reclamation obligations, and Indigenous, landowner and other stakeholder consultation requirements;
- 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 acceptable rates, future contractual obligations, future financing options, future renewal of credit facilities, availability of capital for capital expenditures, operating obligations, dividends, debt maturities and the use of proceeds from financings;
- Pembina's capital structure, including the sufficiency of the amount of leverage employed therein and future actions that may be taken with respect thereto, including expectations regarding the repurchase or redemption of common shares, repayments of existing debt, new borrowings, equity or hybrid securities issuances and the timing thereof;
- Pembina's expectations regarding the creditworthiness of its counterparties;
- tolls and tariffs and processing, transportation, fractionation, storage and services commitments and contracts;
- operating risks (including the amount of future liabilities related to pipelines spills and other environmental incidents) and related insurance coverage and inspection and integrity programs;
- the expected demand for, and prices and inventory levels of, crude oil and other petroleum products, including NGL;
- the potential impacts of the COVID-19 pandemic on Pembina, and Pembina's response thereto; and
- the impact of current market conditions on Pembina.

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, carbon prices, tax rates and exchange rates;
- 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 Pembina's 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 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 acceptable 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 and new developments; future operating costs; that counterparties to agreements will continue to perform their obligations 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 regimes, including with respect to taxes, environmental, project assessment and GHG 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 Indigenous and landowner consultation requirements;
- the impact of competitive entities and pricing;
- labour and material shortages;
- reliance on third parties to successfully operate and maintain certain assets;
- reliance on key relationships, joint venture partners, 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 joint venture partners or other partners which hold interests in certain of Pembina's assets;
- adverse actions by governmental or regulatory authorities including changes in tax laws and treatment, changes in project assessment regulations, royalty rates, climate change initiatives or policies or increased environmental regulation;
- fluctuations in operating results;
- adverse changes in general economic and market conditions in Canada, North America and Internationally, including changes, or prolonged weakness, as applicable, in interest rates, foreign currency exchange rates, commodity prices, supply/demand trends and overall industry activity levels;
- risks related to the current and potential adverse impacts of the COVID-19 pandemic;
- constraints on, or the unavailability of adequate infrastructure;
- the political environment, in Canada, North America and Internationally, and public opinion;
- ability to access various sources of debt and equity capital, and on acceptable terms;
- adverse changes in credit ratings;
- technology and security risks;
- natural catastrophes; and
- the other factors discussed under "Risk Factors" herein and in Pembina's MD&A and AIF for the year ended December 31, 2021, which are available at www.sedar.com, www.sec.gov and through Pembina's website at www.pembina.com.

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.

CONSOLIDATED FINANCIAL STATEMENTS AND NOTES

Table of Contents

CONSOLIDATED STATEMENT OF FINANCIAL POSITION	76
CONSOLIDATED STATEMENTS OF EARNINGS (LOSS) AND COMPREHENSIVE INCOME (LOSS)	77
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY	78
CONSOLIDATED STATEMENTS OF CASH FLOWS	79
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS	80
1. REPORTING ENTITY	80
2. BASIS OF PREPARATION	80
3. SIGNIFICANT ACCOUNTING POLICIES	83
4. DETERMINATION OF FAIR VALUES	94
5. TRADE RECEIVABLES AND OTHER	96
6. INVENTORY	96
7. PROPERTY, PLANT AND EQUIPMENT	96
8. INTANGIBLE ASSETS AND GOODWILL	97
9. INVESTMENTS IN EQUITY ACCOUNTED INVESTEES	99
10. IMPAIRMENT EXPENSE	105
11. INCOME TAXES	106
12. TRADE PAYABLES AND ACCRUED LIABILITIES	108
13. LEASES	108
14. LONG-TERM DEBT	109
15. DECOMMISSIONING PROVISION	110
16. SHARE CAPITAL	111
17. REVENUE	113
18. OTHER INCOME	114
19. NET FINANCE COSTS	114
20. OPERATING SEGMENTS	115
21. EARNINGS PER COMMON SHARE	117
22. PENSION PLAN	118
23. SHARE-BASED PAYMENTS	120
24. ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)	122
25. FINANCIAL INSTRUMENTS	123
26. CAPITAL MANAGEMENT	131
27. GROUP ENTITIES	131
28. RELATED PARTIES	132
29. COMMITMENTS AND CONTINGENCIES	133

MANAGEMENT'S REPORT

The audited consolidated financial statements of Pembina Pipeline Corporation (the "Company" or "Pembina") are the responsibility of Pembina's management. The financial statements have been prepared in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board, using management's best estimates and judgments, where appropriate.

Management is responsible for the reliability and integrity of the financial statements, the notes to the financial statements and other financial information contained in this report. In the preparation of these financial statements, estimates are sometimes necessary because a precise determination of certain assets and liabilities is dependent on future events. Management believes such estimates have been based on careful judgments and have been properly reflected in the accompanying financial statements.

Management's Assessment of Internal Control over Financial Reporting

Management is responsible for establishing and maintaining disclosure controls and procedures ("DC&P") and internal control over financial reporting, as defined in Rule 13a – 15(e) and 15(d) – 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 Issuers' Annual and Interim Filings*.

Under the supervision and with the participation of the President and Chief Executive Officer ("CEO") and the interim Chief Financial Officer ("CFO"), management has conducted an evaluation of Pembina's internal control over financial reporting based on the framework set forth in Internal Control – Integrated Framework issued in 2013 by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). Based on management's assessment as at December 31, 2021, the CEO and CFO have concluded that Pembina's internal control over financial reporting is effective.

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 at a specific date, and continued effectiveness in future periods is subject to the risks that controls may become inadequate.

The Board of Directors of Pembina (the "Board") is responsible for ensuring management fulfills its responsibilities for financial reporting and internal control. The Board is assisted in exercising its responsibilities through the Audit Committee, which consists of five non-management directors. The Audit Committee meets periodically with management and the internal and external auditors to satisfy itself that management's responsibilities are properly discharged, to review the financial statements and to recommend approval of the financial statements to the Board.

KPMG LLP, the independent auditors, have audited Pembina's consolidated financial statements and the effectiveness of internal control over financial reporting as of December 31, 2021 in accordance with the standards of the Public Company Accounting Oversight Board (United States). The independent auditors have full and unrestricted access to the Audit Committee to discuss their audit and their related findings.

Changes in Internal Control over Financial Reporting

Other than the remediation of the material weakness described below, there has been no change in Pembina's internal control over financial reporting that occurred during the year ended December 31, 2021 that has materially affected, or are reasonably likely to materially affect, Pembina's internal control over financial reporting.

Remediation of Material Weakness

As at September 30, 2021, management identified a material weakness related to controls over contract assessment in its Marketing business. Specifically, the Company did not have controls to identify all contracts where an accounting assessment was required and as a result lacked analysis of all relevant contract terms required to make the assessment in the Marketing business. Because of the deficiency, the Company presented revenue and cost of goods sold for certain crude contracts in the Marketing and New Ventures Division on a gross basis that should have been recorded on a net basis.

Management restated revenue and cost of goods sold for the comparative years ended December 31, 2020 and December 31, 2019 with no impact on earnings, cash flows or financial position. Refer to Note 3 to the Consolidated Financial Statements as at and for the year ended December 31, 2020 for details of the restatement.

Over the course of the fourth quarter of 2021, the Company has remediated the control deficiency by designing and implementing controls associated with enhanced contract analysis and revising the processes to assess accounting implications for complex contracts and to identify contracts requiring consultation with internal experts to assist in the evaluation of technical accounting matters. Management has supervised an evaluation of the remedial measures implemented by the Company in the fourth quarter of 2021. Based on this evaluation, including testing the operating effectiveness of the controls addressing the material weakness, management have concluded that the previously identified material weakness relating to the operating effectiveness of the Company's disclosure controls and procedures and its internal controls over financial reporting has been remediated as at December 31, 2021.

"J. Scott Burrows"

J. Scott Burrows

President and Chief Executive Officer

"Cameron J. Goldade"

Cameron J. Goldade

Interim Chief Financial Officer

February 24, 2022

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and Board of Directors of Pembina Pipeline Corporation

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated statements of financial position of Pembina Pipeline Corporation and subsidiaries (the "Company") as of December 31, 2021 and 2020, the related consolidated statements of earnings (loss) and comprehensive income (loss), changes in equity, and cash flows for each of the years then ended, and the related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2021 and 2020, and its financial performance and its cash flows for the years then ended, in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2021, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated February 24, 2022 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of a critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Goodwill impairment

As discussed in Note 8 to the consolidated financial statements, the goodwill balance as of December 31, 2021 was \$4,693 million and the carrying amount of goodwill allocated to the Marketing & New Ventures operating segment was \$1,439 million. For the purpose of the impairment test, goodwill has been allocated to the Company's operating segments which represents the lowest level within the Company at which the goodwill is monitored for management purposes. As discussed in Note 3 to the consolidated financial statements, the Company performs goodwill impairment testing on an annual basis and whenever events or changes in circumstances indicate that the carrying value of an operating segment exceeds its recoverable amount. The recoverable amounts were determined using a fair value less costs of disposal approach which is based on a discounted cash flow model.

We identified the assessment of the goodwill impairment for the Marketing & New Ventures operating segment as a critical audit matter. A high degree of subjective auditor judgment was required to evaluate the significant revenue assumptions such as projected commodity volumes and pricing, growth rate ("forecasted cash flow assumptions") and discount rate used in the discounted cash flow model. Changes to those assumptions could have had a significant impact on the Company's assessment of the recoverable amount of the operating segment.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls related to the critical audit matter, including controls related to forecasted cash flow assumptions and the discount rate used in the determination of the recoverable amount. We evaluated the Company's projected commodity pricing assumptions by comparing to publicly available forward price curves. We compared the Company's historical forecasted results to actual results to assess the Company's ability to accurately forecast and to assess the growth rate. We evaluated the Company's forecasted cash flow assumptions by comparing them to actual results. In addition, we involved a valuation professional with specialized skills and knowledge, who assisted in:

- testing the recoverable amount for the operating segment using the operating segment's forecasted cash flow assumptions and discount rate, and comparing the result to the Company's calculated recoverable amount
- evaluating the discount rate used in the valuation for the operating segment by comparing the inputs against publicly available market data for comparable entities and assessing the resulting discount rate
- evaluating the historical and forecasted cash flow multiples implied in the valuation for the operating segment by comparing them against publicly available historical and forecasted cash flow multiples for comparable entities.

KPMG LLP

Chartered Professional Accountants

We have served as the Company's auditor since 1997.

Calgary, Canada
February 24, 2022

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and Board of Directors of Pembina Pipeline Corporation

Opinion on Internal Control Over Financial Reporting

We have audited Pembina Pipeline Corporation's (and subsidiaries') (the "Company") internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company has maintained, in all material respects, effective internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated statements of financial position of the Company as of December 31, 2021 and 2020, the related consolidated statements of earnings (loss) and comprehensive income (loss), changes in equity, and cash flows for the years then ended, and the related notes (collectively, the consolidated financial statements), and our report dated February 24, 2022 expressed an unqualified opinion on those consolidated financial statements.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Annual Report on Internal Control over Financial Reporting included in Management's Discussion and Analysis. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

KPMG LLP

Chartered Professional Accountants

Calgary, Canada
February 24, 2022

CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

As at December 31		
(\$ millions)	2021	2020
Assets		
Current assets		
Cash and cash equivalents	43	81
Trade receivables and other (Note 5)	812	662
Inventory (Note 6)	376	221
Derivative financial instruments (Note 25)	14	25
	1,245	989
Non-current assets		
Property, plant and equipment (Note 7)	18,193	18,549
Intangible assets and goodwill (Note 8)	6,238	6,340
Investments in equity accounted investees (Note 9)	4,622	4,377
Right-of-use assets (Note 13)	581	651
Finance lease receivable (Note 13)	211	138
Deferred tax assets (Note 11)	257	322
Derivative financial instruments and other assets (Note 28)	109	50
	30,211	30,427
Total assets	31,456	31,416
Liabilities and equity		
Current liabilities		
Trade payables and other (Note 12)	1,063	780
Loans and borrowings (Note 14)	1,000	600
Dividends payable	115	115
Lease liabilities	88	99
Contract liabilities (Note 17)	71	62
Taxes payable	—	56
Derivative financial instruments (Note 25)	53	69
	2,390	1,781
Non-current liabilities		
Loans and borrowings (Note 14)	9,645	10,276
Subordinated hybrid notes (Note 14)	594	—
Lease liabilities	635	675
Decommissioning provision (Note 15)	412	348
Contract liabilities (Note 17)	220	230
Deferred tax liabilities (Note 11)	3,011	2,925
Other liabilities	186	166
	14,703	14,620
Total liabilities	17,093	16,401
Equity		
Attributable to shareholders	14,303	14,955
Attributable to non-controlling interest	60	60
Total equity	14,363	15,015
Total liabilities and equity	31,456	31,416

See accompanying notes to the audited consolidated financial statements

Approved on behalf of the Board of Directors:

"Maureen E. Howe"
Maureen E. Howe
 Director

"Randall J. Findlay"
Randall J. Findlay
 Director

CONSOLIDATED STATEMENTS OF EARNINGS (LOSS) AND COMPREHENSIVE INCOME (LOSS)

For the years ended December 31		
<i>(\$ millions, except per share amounts)</i>	2021	2020
Revenue (Note 17)	8,627	5,953
Cost of sales (Note 20)	6,134	3,883
Loss on commodity-related derivative financial instruments (Note 25)	127	30
Share of profit from equity accounted investees - operations (Note 9)	281	282
Impairment in share of profit from equity accounted investees (Note 9)	—	(314)
Gross profit	2,647	2,008
General and administrative	306	246
Other income (Note 18)	(248)	(18)
Impairment expense (Note 10)	474	1,776
Results from operating activities	2,115	4
Net finance costs (Note 19)	450	420
Earnings (loss) before income tax	1,665	(416)
Current tax expense (Note 11)	286	240
Deferred tax expense (recovery) (Note 11)	137	(340)
Income tax expense (recovery) (Note 11)	423	(100)
Earnings (loss)	1,242	(316)
Other comprehensive income (loss), net of tax (Note 24 & 25)		
Exchange loss on translation of foreign operations	(18)	(117)
Impact of hedging activities	10	31
Re-measurement of defined benefit liability (Note 22)	34	(10)
Total comprehensive income (loss) attributable to shareholders	1,268	(412)
Earnings (loss) attributable to common shareholders, net of preferred share dividends (Note 21)	1,098	(476)
Earnings (loss) per common share – basic (dollars) (Note 21)	2.00	(0.86)
Earnings (loss) per common share – diluted (dollars) (Note 21)	1.99	(0.86)
Weighted average number of common shares (millions)		
Basic	550	550
Diluted	551	550

See accompanying notes to the audited consolidated financial statements

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

(\$ millions)	Attributable to Shareholders of the Company					Non-Controlling Interest	Total Equity
	Common Share Capital	Preferred Share Capital	Deficit	AOCI ⁽¹⁾	Total		
December 31, 2020	15,644	2,946	(3,637)	2	14,955	60	15,015
Total comprehensive income							
Earnings	—	—	1,242	—	1,242	—	1,242
Other comprehensive income (Note 24)	—	—	—	26	26	—	26
Total comprehensive income	—	—	1,242	26	1,268	—	1,268
Transactions with shareholders of the Company (Note 16)							
Part VI.1 tax on preferred shares	—	(9)	—	—	(9)	—	(9)
Repurchase of common shares	(13)	—	(4)	—	(17)	—	(17)
Preferred shares redemption	—	(420)	—	—	(420)	—	(420)
Share-based payment transactions	47	—	—	—	47	—	47
Dividends declared – common	—	—	(1,386)	—	(1,386)	—	(1,386)
Dividends declared – preferred	—	—	(135)	—	(135)	—	(135)
Total transactions with shareholders of the Company	34	(429)	(1,525)	—	(1,920)	—	(1,920)
December 31, 2021	15,678	2,517	(3,920)	28	14,303	60	14,363
December 31, 2019	15,539	2,956	(1,785)	98	16,808	60	16,868
Total comprehensive loss							
Loss	—	—	(316)	—	(316)	—	(316)
Other comprehensive loss (Note 24)	—	—	—	(96)	(96)	—	(96)
Total comprehensive loss	—	—	(316)	(96)	(412)	—	(412)
Transactions with shareholders of the Company (Note 16)							
Part VI.1 tax on preferred shares	—	(10)	—	—	(10)	—	(10)
Share-based payment transactions	105	—	—	—	105	—	105
Dividends declared – common	—	—	(1,385)	—	(1,385)	—	(1,385)
Dividends declared – preferred	—	—	(151)	—	(151)	—	(151)
Total transactions with shareholders of the Company	105	(10)	(1,536)	—	(1,441)	—	(1,441)
December 31, 2020	15,644	2,946	(3,637)	2	14,955	60	15,015

⁽¹⁾ Accumulated Other Comprehensive Income (loss) ("AOCI").

See accompanying notes to the audited consolidated financial statements

CONSOLIDATED STATEMENTS OF CASH FLOWS

For the years ended December 31		
(\$ millions)	2021	2020
Cash provided by (used in)		
Operating activities		
Earnings (loss)	1,242	(316)
Adjustments for:		
Share of profit from equity accounted investees - operations (Note 9)	(281)	(282)
Impairment in share of profit from equity accounted investees (Note 10)	—	314
Distributions from equity accounted investees (Note 9)	461	459
Depreciation and amortization	723	700
Impairment expense (Note 10)	474	1,776
Unrealized (gain) loss on commodity-related derivative financial instruments (Note 25)	(73)	84
Net finance costs (Note 19)	450	420
Net interest paid (Note 19)	(418)	(383)
Income tax expense (recovery) (Note 11)	423	(100)
Taxes paid	(355)	(295)
Share-based compensation expense (Note 23)	100	28
Share-based compensation payment	(32)	(45)
Other	36	(15)
Change in non-cash operating working capital	(100)	(93)
Cash flow from operating activities	2,650	2,252
Financing activities		
Net decrease in bank borrowings (Note 14)	(623)	(567)
Proceeds from issuance of long-term debt, net of issue costs (Note 14)	1,587	1,567
Repayment of long-term debt	(600)	(273)
Repayment of lease liability	(87)	(94)
Exercise of stock options	16	88
Repurchase of common shares (Note 16)	(17)	—
Redemption of preferred shares (Note 16)	(420)	—
Common share dividends paid (Note 16)	(1,386)	(1,380)
Preferred share dividends paid (Note 16)	(135)	(150)
Cash flow used in financing activities	(1,665)	(809)
Investing activities		
Capital expenditures	(658)	(1,029)
Contributions to equity accounted investees (Note 9)	(335)	(202)
Acquisitions (Note 9)	(41)	—
Receipt of finance lease payments	11	9
Interest paid during construction (Note 19)	(25)	(46)
Advances to related parties	(9)	(32)
Changes in non-cash investing working capital and other	18	(183)
Cash flow used in investing activities	(1,039)	(1,483)
Change in cash and cash equivalents	(54)	(40)
Effect of movement in exchange rates on cash held	16	(8)
Cash and cash equivalents, beginning of period	81	129
Cash and cash equivalents, end of period	43	81

See accompanying notes to the audited consolidated financial statements

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

1. REPORTING ENTITY

Pembina Pipeline Corporation ("Pembina" or the "Company") is a Calgary-based, leading transportation and midstream service provider serving North America's energy industry. The audited consolidated financial statements ("Consolidated Financial Statements") include the accounts of Pembina, its subsidiary companies, partnerships and any investments in associates and joint arrangements as at and for the year ended December 31, 2021.

Pembina owns an integrated network of hydrocarbon liquids and natural gas pipelines, gas gathering and processing facilities, oil and natural gas liquids infrastructure and logistics services, and a growing export terminals 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.

2. BASIS OF PREPARATION

The Consolidated Financial Statements are presented in Canadian dollars, Pembina's functional currency, with all values presented in millions, unless otherwise indicated.

The Consolidated Financial Statements have been prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB"). The significant accounting policies applied in preparation of the Consolidated Financial Statements are set out below in Note 3 and have been applied consistently to all periods presented.

Certain insignificant comparative amounts have been reclassified to conform to the presentation adopted in the current year.

The Consolidated Financial Statements were authorized for issue by Pembina's Board of Directors on February 24, 2022.

a. Basis of Measurement

The Consolidated Financial Statements have been prepared on a historical cost basis with some exceptions, as detailed in the accounting policies set out below.

b. Basis of Consolidation

These Consolidated Financial Statements include the results of the Company and its subsidiaries together with its interest in joint arrangements.

i) Subsidiaries

Subsidiaries are entities, including unincorporated entities such as partnerships, controlled by Pembina. The financial results of subsidiaries are included in the consolidated financial statements from the date that control commences until the date that control ceases. The accounting policies of subsidiaries are aligned with the policies adopted by Pembina.

Non-controlling interests represent existing outside owned equity interests in a subsidiary. The non-controlling interests were recognized at fair value on the acquisition date and are presented as a separate component of equity. The equity interests bear conditional non-discretionary distributions and will continue to be held as a non-controlling interest in equity at their acquisition date fair value until derecognition, either when the conditions are met for reclassification from equity to financial liabilities, or when the equity interests are cancelled or on a loss of control of the relevant subsidiary.

ii) Joint Arrangements

Joint arrangements represent activities where Pembina has joint control established by a contractual agreement. Joint control requires unanimous consent for the relevant financial and operational decisions. A joint arrangement is either a joint operation, whereby the parties have rights to the assets and obligations for the liabilities, or a joint venture, whereby the parties have rights to the net assets.

For a joint operation, the Consolidated Financial Statements include Pembina's proportionate share of the assets, liabilities, revenues, expenses and cash flows of the arrangement with items of a similar nature on a line-by-line basis, from the date that joint control commences until the date that joint control ceases.

Joint ventures are accounted for using the equity method of accounting and are initially recognized at cost, or fair value if acquired as part of a business combination. Joint ventures are adjusted thereafter for the post-acquisition change in the Company's share of the equity accounted investment's net assets. Pembina's Consolidated Financial Statements include its share of the equity accounted investment's profit or loss and other comprehensive income, or income equal to preferred distributions for certain preferred share interests in equity accounted investees, until the date that joint control ceases. When Pembina's share of losses exceeds its interest in an equity accounted investee, the carrying amount of that interest, including any long-term investments, is reduced to nil, and the recognition of further losses is discontinued except to the extent that Pembina has an obligation or has made payments on behalf of the investee. Distributions from and contributions to investments in equity accounted investees are recognized when received or paid.

Acquisition of an incremental ownership in a joint arrangement where Pembina maintains joint control is recorded at cost or fair value if acquired as part of a business combination. Where Pembina has a partial disposal, including a deemed disposal, of a joint arrangement and maintains joint control, the resulting gains or losses are recorded in earnings at the time of disposal.

iii) Transactions Eliminated on Consolidation

Balances and transactions, and any revenue and expenses arising from transaction with or between subsidiaries are eliminated in preparing the consolidated financial statements. Gains arising from transactions with investments in equity accounted investees are eliminated against the investment to the extent of Pembina's interest in the investee. Losses are eliminated in the same way as unrealized gains, but only to the extent that there is no evidence of impairment.

iv) Foreign Currency

Transactions in foreign currencies are translated to Pembina's functional currency at exchange rates at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies at the reporting date are retranslated to Pembina's functional currency at the exchange rate at that date, with exchange differences recognized in earnings.

Non-monetary assets and liabilities denominated in foreign currencies that are measured at fair value are retranslated to the functional currency at the exchange rate at the date that the fair value was determined. Non-monetary items that are measured at historical cost in a foreign currency are translated using the exchange rate at the date of the transaction.

The assets and liabilities of subsidiaries, and investments in equity accounted investees, whose functional currencies are other than Canadian dollars are translated into Canadian dollars at the foreign exchange rate at the balance sheet date, while revenues and expenses of such subsidiaries are translated using average monthly foreign exchange rates, which approximate the foreign exchange rates on the dates of the transactions. Foreign exchange differences arising on translation of subsidiaries and investments in equity accounted investees with a functional currency other than the Canadian dollar are included in other comprehensive income.

c. Use of Estimates and Judgments

The preparation of the Consolidated Financial Statements in conformity with IFRS requires management to make judgments, estimates and assumptions that are based on the facts and circumstances and estimates at the date of the Consolidated 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.

Ongoing Impact of the COVID-19 Pandemic

Following the World Health Organization declaring the COVID-19 outbreak a pandemic in March 2020, many governments have imposed restrictions on individuals and businesses to contain the spread of the virus, which adversely impacted global commercial activity and significantly increased economic uncertainty. Although restrictions have largely been relaxed and vaccination programs implemented, there continues to be uncertainty and the potential for continued volatility in the global economy as a result of the possible resurgence of the virus, including variants, while the COVID-19 pandemic remains. Management considered these uncertainties when applying judgment to estimates and assumptions in the Consolidated Financial Statements.

The following judgments and estimation uncertainties are those management considers material to the Consolidated Financial Statements:

Judgments

(i) Impairment

Assessment of impairment of non-financial assets is based on management's judgment of whether or not events or changes in circumstances indicate that the carrying value of an asset, investment, cash generating unit ("CGU") or group of CGUs exceeds its recoverable amount. The determination of a CGU is based on management's judgment and is an assessment of the smallest group of assets that generate cash inflows independently of other assets. When an impairment test is performed, the carrying value of a CGU or group of CGUs is compared to its recoverable amount, defined as the greater of fair value less costs of disposal and value in use. As such, the asset composition of a CGU or group of CGUs directly impacts both the carrying value and recoverability of the assets included therein.

(ii) Joint Control Over Joint Arrangements

The determination of joint control requires judgment about the influence Pembina has over the financial and operating decisions of an arrangement and the extent of the benefits it obtains based on the facts and circumstances of the arrangement during the reporting period. Joint control exists when decisions about the relevant activities require the unanimous consent of the parties that control the arrangement collectively. Ownership percentage alone may not be a determinant of joint control.

Estimates

(i) 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. Deferred income tax assets are recognized to the extent that it is probable that the deductible temporary differences will be recoverable in future periods, and estimates and judgement are used in assessing the recognition. Estimates including, but not limited to, the timing of reversal and future taxability may differ on actual realization, and may result in an income tax charge or credit in future periods.

(ii) Impairment of Non-Financial Assets

In determining the recoverable amount of a CGU, a group of CGUs or an individual asset, management uses its best estimates of future cash flows, including considerations related to climate change, and assesses discount rates to reflect management's best estimate of a rate that reflects a current market assessment of the time value of money and the specific risks associated with the underlying assets and cash flows.

3. SIGNIFICANT ACCOUNTING POLICIES

a. Cash and Cash Equivalents

Cash and cash equivalents comprise cash balances, call deposits and short-term investments with original maturities of ninety days or less, and are used by Pembina in the management of its short-term commitments.

b. Inventories

Inventories are measured at the lower of cost and net realizable value and consist primarily of crude oil, natural gas liquids ("NGL") and spare parts that are expected to be used within one year of the year-end date. The cost of inventories is determined using the weighted average costing method and includes direct purchase costs and when applicable, costs of production, extraction, fractionation, and transportation. Net realizable value is the estimated selling price in the ordinary course of business less the estimated selling costs. All changes in the value of inventories are reflected in earnings.

c. Financial Instruments

Financial assets and liabilities are offset and the net amount presented in the consolidated statement of financial position when, and only when, Pembina has a legal right to offset the amounts and intends either to settle on a net basis or to realize the asset and settle the liability simultaneously.

i) Non-Derivative Financial Assets

Pembina initially recognizes loans, receivables, advances to related parties and deposits on the date that they are originated. All other financial assets are recognized on the trade date at which Pembina becomes a party to the contractual provisions of the instrument.

Pembina derecognizes a financial asset when the contractual rights to the cash flows from the asset expire, or it transfers the rights to receive the contractual cash flows on the financial asset in a transaction in which substantially all the risks and rewards of ownership of the financial asset are transferred. Any interest in transferred financial assets that is created or retained by Pembina is recognized as a separate asset or liability. On derecognition, the difference between the carrying amount of the financial asset and the consideration received is recognized in earnings.

Pembina classifies non-derivative financial assets into the following categories:

Financial Assets at Amortized Cost

A financial asset is classified in this category if the asset is held within a business model whose objective is to collect contractual cash flows on specified dates that are solely payments of principal and interest. At initial recognition, financial assets at amortized cost are recognized at fair value plus directly attributable transaction costs. Subsequent to initial recognition, these financial assets are recorded at amortized cost using the effective interest method less any expected credit losses that will be realized and impairment loss allowances.

Financial Assets at Fair Value Through Other Comprehensive Income

A financial asset is classified in this category if the asset is held within a business model whose objective is met by both collecting contractual cash flows and selling financial assets. Pembina did not have any financial assets classified at fair value through other comprehensive income during the years covered in these financial statements.

Financial Assets at Fair Value Through Earnings

A financial asset is classified in this category if it is not classified as a financial asset at amortized cost or a financial asset at fair value through other comprehensive income, or it is an equity instrument designated as such on initial recognition. At initial recognition, and subsequently, these financial assets are recognized at fair value.

ii) Non-Derivative Financial Liabilities

Pembina initially recognizes financial liabilities on the trade date at which Pembina becomes a party to the contractual provisions of the instrument.

Non-derivative financial liabilities are recognized initially at fair value plus any directly attributable transaction costs. Subsequent to initial recognition these financial liabilities are measured at amortized cost using the effective interest method.

Pembina derecognizes a financial liability when its contractual obligations are discharged, cancelled or expire. On derecognition, the difference between the carrying value of the liability and the consideration paid, including any non-cash assets transferred or liabilities assumed, is recognized in earnings.

Pembina records a modification or exchange of an existing liability as a derecognition of the financial liability if the terms are substantially different, resulting in a difference of more than 10 percent when comparing the present value of the remaining cash flows of the existing liability to the present value of the discounted cash flows under the new terms using the original effective interest rate.

If a modification to an existing liability causes a revision to the estimated payments of the liability but is not treated as a derecognition, Pembina adjusts the gross carrying amount of the liability to the present value of the estimated contractual cash flows using the instrument's original effective interest rate, with the difference recorded in earnings.

Pembina's non-derivative financial liabilities are comprised of: bank overdrafts, trade payables and accrued liabilities, taxes payable, dividends payable, loans and borrowings, lease liabilities and other liabilities.

Bank overdrafts that are repayable on demand and form an integral part of Pembina's cash management are included as a component of cash and cash equivalents for the purpose of the consolidated statements of cash flows.

iii) Common Share Capital

Common shares are classified as equity. Incremental costs directly attributable to the issue of common shares and share options are recognized as a deduction from equity, net of any tax effects. When the company repurchases its own common shares, share capital is reduced by the average carrying value of the shares repurchased. The excess of the purchase price over the average carrying value is recognized as an increase in deficit. Shares are cancelled upon repurchase.

iv) Preferred Share Capital

Preferred shares are classified as equity because they bear discretionary dividends and do not contain any obligations to deliver cash or other financial assets. Discretionary dividends are recognized as equity distributions on approval by Pembina's Board of Directors. Incremental costs directly attributable to the issue of preferred shares are recognized as a deduction from equity, net of any tax effects.

v) Derivative Financial Instruments and Hedge Accounting

Pembina holds derivative financial instruments to manage its interest rate, commodity, power costs and foreign exchange risk exposures. Derivatives are recognized initially at fair value. Subsequent to initial recognition, derivatives are measured at fair value with changes recognized immediately in earnings, unless hedge accounting is applied.

Pembina applies hedge accounting to certain financial instruments that qualify for and are designated for hedge accounting treatment. At inception of a designated hedging relationship, formal documentation is prepared and includes the risk management objective and strategy for undertaking the hedge, identification of the hedged item and the hedging instrument, the nature of the risk being hedged and how Pembina will assess the hedging instrument's effectiveness in offsetting the exposure to changes in the hedged item.

For derivatives that are designated and qualified cash flow hedges, the effective portion of changes in fair value is accumulated in other comprehensive income. The amount accumulated is reclassified to earnings in the same period or periods during which the hedged expected future cash flows occur. Any ineffective portion of changes in fair value of hedges are recorded in earnings.

For non-derivative financial liabilities designated as hedging instruments in a hedge of the net investment in foreign operations, the effective portion of foreign exchange gains and losses arising on translation of the financial liability is recognized in other comprehensive income. Any ineffective portion of the foreign exchange gains and losses arising from the translation of the financial liability is recognized immediately in earnings. The amount accumulated in other comprehensive income is reclassified to earnings on disposal of the foreign operation.

Hedge accounting is discontinued prospectively when the hedging relationship no longer qualifies for hedge accounting or the hedging instrument is sold or terminated.

d. Property, Plant and Equipment

i) Recognition and Measurement

Items of property, plant and equipment are measured initially at cost. Thereafter, property, plant and equipment are recorded net of accumulated depreciation and accumulated impairment losses.

Cost includes expenditures that are directly attributable to the acquisition of the asset. The cost of self-constructed assets includes the cost of materials and direct labour, any other costs directly attributable to bringing the assets to a working condition for their intended use, estimated decommissioning provisions and borrowing costs on qualifying assets.

Cost may also include any gain or loss realized on foreign currency transactions directly attributable to the purchase or construction of property, plant and equipment. Purchased software that is integral to the functionality of the related equipment is capitalized as part of that equipment.

When parts of an item of property, plant and equipment have different useful lives, they are accounted for as separate components of property, plant and equipment.

The gain or loss on disposal of an item of property, plant and equipment is determined by comparing the proceeds from disposal with the carrying amount of property, plant and equipment, and is recognized in earnings.

ii) Subsequent Costs

The cost of replacing a part of an item of property, plant and equipment is recognized in the carrying amount of the item if it is probable that the future economic benefits embodied within the part will flow to Pembina, and its cost can be measured reliably. The carrying amount of the replaced part is derecognized and recorded as depreciation expense. The cost of maintenance and repair expenses of the property, plant and equipment are recognized in earnings as incurred.

iii) Depreciation

Depreciation is based on the cost of an asset less its residual value. Significant components of individual assets are assessed and if a component has a useful life that is different from the remainder of the asset, that component is depreciated separately. Land and linefill are not depreciated.

Depreciation is recognized in earnings over an asset's useful life on a straight line or declining balance basis, which most closely reflects the expected pattern of consumption of the future economic benefits embodied in the asset. An asset's useful life is determined as the lower of its physical life and economic life. Estimated useful lives are based on management's assumptions and estimates of the physical useful lives of the assets, the economic lives, which maybe associated with the reserve lives and commodity type of the production area, in addition to the estimated residual value. Useful lives over which costs should be depreciated may be impacted by changes in our strategy, process or operations as a result of climate change initiatives. Depreciation commences once an asset is available for use.

Depreciation methods, useful lives and residual values are reviewed annually and adjusted if appropriate.

e. Intangible Assets

i) Goodwill

Goodwill is measured at cost less accumulated impairment losses.

In respect of investments in equity accounted investees, goodwill is included in the carrying amount of the investment, and an impairment loss on such an investment is allocated to the investment and not to any asset, including goodwill, that forms the carrying amount of the investment in equity accounted investee.

ii) Other Intangible Assets

Other intangible assets acquired individually by Pembina are initially recognized and measured at cost. Thereafter, intangible assets with finite useful lives are recorded net of accumulated amortization and accumulated impairment losses.

iii) Subsequent Expenditures

Subsequent expenditures are capitalized only when they increase the future economic benefits embodied in the specific asset to which they relate. All other expenditures are recognized in earnings as incurred.

iv) Amortization

Amortization is based on the cost of an asset less its residual value.

Amortization is recognized in earnings over the estimated useful lives of intangible assets, other than goodwill, from the date that they are available for use. Amortization is included in cost of sales and general and administrative expense.

Amortization methods, useful lives and residual values are reviewed annually and adjusted if appropriate.

f. Leases

A specific asset is the subject of a lease if the contract conveys the right to control the use of that identified asset for a period of time in exchange for consideration. This determination is made at inception of a contract, and is reassessed when the terms and conditions of the contract are amended.

At inception or on reassessment of a contract that contains a lease component, Pembina allocates contract consideration to the lease and non-lease components on the basis of their relative stand-alone prices. The consideration allocated to the lease components is recognized in accordance with the policies for lessee and lessor leases, as described below. The consideration allocated to non-lease components is recognized in accordance with its nature.

i) Lessee

Leased assets are recognized as right-of-use assets, with corresponding lease liabilities recognized on the statement of financial position at the lease commencement date.

Right-of-use assets are initially recognized at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of costs to dismantle and remove the underlying asset and restore the site of an underlying asset to the condition required by the terms of the lease, less any lease incentives received. Right-of-use assets are subsequently measured at cost less any accumulated depreciation and accumulated impairment losses, adjusted for remeasurements of the lease liability. The right-of-use asset is depreciated over the lesser of the asset's useful life and the lease term on a straight-line basis.

The lease liability is initially measured at the present value of the lease payments, discounted using the interest rate implicit in the lease if readily determinable, or at a rate Pembina would be required to pay to borrow over a similar term with a similar security to obtain an asset of a similar value to the right-of-use asset. Lease payments in an optional renewal period are included in the lease liability if Pembina is reasonably certain to exercise such option. In measuring lease liabilities, management makes assessments of the stand-alone selling prices of each lease and non-lease component for the purposes of allocating consideration to each component. Management applies its best estimate with respect to the likelihood of renewal, extension and termination option exercising in determining the lease term. The lease liability is subsequently increased by interest expense on the lease liability and decreased by lease payments made. Interest expense is recorded in earnings at an amount that represents a constant periodic rate of interest on the remaining balance of the lease liability.

The lease liability is remeasured when there is a change in future lease payments arising from a change in an index or rate, a change in the estimated guaranteed residual value to be paid, or a change in the assessment of whether a purchase option, extension option or termination option is reasonably certain to be exercised. A corresponding adjustment is made to the right of use asset when a liability is remeasured, or the adjustment is recorded in earnings if the right of use asset has been reduced to zero.

Pembina has elected to apply the recognition exemptions for short-term and low value leases. Pembina recognizes lease payments associated with these leases as an expense on a straight-line basis over the lease term.

ii) Lessor

Lessor leases are classified as either operating leases or finance leases according to the substance of the contract. Leases transferring substantially all of the risks incidental to asset ownership are classified as finance leases, while all other leases are classified as operating leases. Subleases are classified as either operating or finance leases in reference to the right-of-use asset arising from the head lease.

Assets under finance lease are recognized in finance lease receivables at the value of the net investment in the lease. The net investment in the lease is measured at the net present value of the future lease payments and the unguaranteed residual values of the underlying assets, discounted using the interest rate implicit in the lease. Finance income is recognized over the lease term in a pattern reflecting a consistent rate of return on the finance lease receivable. Finance lease income generated from physical assets in the normal course of operations is recorded as a component of revenue. All other finance lease income is recorded in net finance costs.

Lease payments from operating leases are recognized in revenue on either a straight-line basis or a systematic basis representative of the pattern of economic benefit transfer.

g. Impairment

i) Non-Derivative Financial Assets

Impairment of financial assets carried at amortized cost is assessed using the lifetime expected credit loss of the financial asset at initial recognition and throughout the life of the financial asset, except where credit risk has not increased significantly since initial recognition, in which case impairment is assessed at the 12 month expected credit loss of the financial asset at the reporting date.

Impairment losses are recognized in earnings and reflected as a reduction in the related financial asset.

ii) Non-Financial Assets

The carrying amounts of Pembina's non-financial assets, other than: inventory, assets arising from employee benefits and deferred tax assets, are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, the asset's recoverable amount is estimated.

For goodwill and intangible assets that have indefinite useful lives or that are not yet available for use, the recoverable amount is estimated annually in connection with the annual goodwill impairment test.

For the purpose of impairment testing, assets that cannot be tested individually are grouped together into CGUs, the smallest group of assets that generates cash inflows from continuing use that are largely independent of the cash inflows of other assets. CGUs may incorporate integrated assets from multiple operating segments. For the purpose of goodwill impairment testing, CGUs are aggregated to the operating segment level, which reflects the lowest level at which goodwill is monitored for management purposes. Goodwill acquired in a business combination is allocated to CGUs or groups of CGUs that are expected to benefit from the synergies of the combination.

An impairment loss is recognized if the carrying amount of an asset, CGU or group of CGUs exceeds its estimated recoverable amount.

The recoverable amount of an asset, CGU or group of CGUs is the greater of its value in use and its fair value less costs of disposal. In assessing the recoverable amount, the estimated future cash flows are discounted to their present value using a discount rate that reflects current market assessments of the time value of money and the risks specific to the asset, CGU or group of CGUs.

Pembina's corporate assets do not generate separate cash inflows and are utilized by more than one CGU. Corporate assets are allocated to CGUs on a reasonable and consistent basis and tested for impairment as part of the testing of the CGU to which the corporate asset is allocated. If there is an indication that a corporate asset may be impaired, then the recoverable amount is determined for the CGU to which the corporate asset has been allocated.

Impairment losses are recognized in earnings. Impairment losses recognized in respect of a CGU (group of CGUs) are allocated first to reduce the carrying amount of any goodwill allocated to the CGU (group of CGUs), and then to reduce the carrying amounts of the other assets in the CGU (group of CGUs) on a pro rata basis.

An impairment loss in respect of goodwill is not reversed. In respect of other assets, impairment losses recognized in prior periods are assessed at each reporting date for any indications that the loss has decreased or no longer exists. An impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, if no impairment loss had been recognized.

Goodwill that forms part of the carrying amount of an investment in an equity accounted investee is not recognized separately, and therefore is not tested for impairment separately. Instead, the entire amount of the investment is tested for impairment as a single asset when there is objective evidence that the equity accounted investee may be impaired, unless the equity accounted investee does not generate cash flows that are largely independent of those from other assets of the entity in which case it is combined in a CGU with the related assets.

h. Employee Benefits

i) Defined Contribution Plans

A defined contribution plan is a post-employment benefit plan under which an entity pays fixed contributions into a separate entity and will have no legal or constructive obligation to pay further amounts. Obligations for contributions to defined contribution pension plans are recognized as an employee benefit expense in earnings in the periods during which services are rendered by employees. Prepaid contributions are recognized as an asset to the extent that a cash refund or a reduction in future payments is available.

ii) Defined Benefit Pension Plans

A defined benefit pension plan is a post-employment benefit plan other than a defined contribution plan. Pembina's net obligation in respect of defined benefit pension plans is calculated separately for each plan by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods, discounted to determine its present value, less the fair value of any plan assets. The discount rate used to determine the present value is established by referencing market yields on high-quality corporate bonds on the measurement date with cash flows that match the timing and amount of expected benefits.

The calculation is performed, at a minimum, every three years by a qualified actuary using the actuarial cost method. The actuarial valuation is prepared using management's best estimates with respect to longevity, discount and inflation rates, compensation increases, market returns on plan assets, retirement and termination rates. When the calculation results in a benefit to Pembina, the recognized asset is limited to the present value of economic benefits available in the form of future expenses payable from the plan, any future refunds from the plan or reductions in future contributions to the plan. To calculate the present value of economic benefits, consideration is given to any minimum funding requirements that apply to any plan in Pembina. An economic benefit is available to Pembina if it is realizable during the life of the plan or on settlement of the plan liabilities.

When the benefits of a plan are improved, the portion of the increased benefit relating to past service by employees is recognized in earnings immediately.

Pembina recognizes all actuarial gains and losses arising from defined benefit plans in other comprehensive income and expenses related to defined benefit plans in earnings.

Pembina recognizes gains or losses on the termination or settlement of a defined benefit plan when the termination or settlement occurs. The gain or loss on termination comprises any resulting change in the fair value of plan assets, change in the present value of defined benefit obligation and any related actuarial gains or losses and past service cost that had not previously been recognized.

iii) Short-Term Employee Benefits

Short-term employee benefit obligations are measured on an undiscounted basis and are expensed as the related service is provided.

A liability is recognized for the amount expected to be paid if Pembina has a present legal or constructive obligation to pay this amount as a result of past service provided by the employee, and the obligation can be estimated reliably.

iv) Share-Based Payment Transactions

For equity settled share-based payment plans, the fair value of the share-based payment at grant date is recognized as an expense, with a corresponding increase in equity, over the period that the employees unconditionally become entitled to the awards. The amount recognized as an expense is adjusted to reflect the number of awards for which the related service and non-market vesting conditions are expected to be met, such that the amount ultimately recognized as an expense is based on the number of awards that meet the related service conditions at the vesting date.

For cash settled share-based payment plans, the fair value of the amount payable to employees is recognized as an expense with a corresponding increase in liabilities, over the period that the employees unconditionally become entitled to payment. The liability is remeasured at each reporting date and at settlement date. Any changes in the fair value of the liability are recognized as an expense in earnings.

i. Provisions

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 resources will be required to settle the obligation. With regards to these potential obligations, Pembina considers environmental laws, regulations and interpretations by regulatory authorities in determining expected cash flows. Updates to those laws and regulations, including those related to climate change, could impact the estimate. Provisions are measured at each reporting date based on the best estimate of the settlement amount. Where the effect of the time value of money is material, provisions are discounted at a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability. The unwinding of the discount rate is recognized as accretion in finance costs.

i) Decommissioning Provision

Pembina's activities give rise to certain dismantling, decommissioning, environmental reclamation and remediation obligations at the end of an asset's economic life. A provision is made for the estimated cost of site restoration and capitalized as part of the cost of the underlying asset to which the provision relates. Based on the long-term nature of the decommissioning provision, the most significant uncertainties in estimating the provision are the determination of whether a present obligation exists, the discount and inflation rates used, the costs that will be incurred, the timing of when these costs will occur and the impact of climate change.

Decommissioning obligations are measured at the present value, based on a credit-adjusted risk-free rate, of management's best estimate of what is reasonably expected to be incurred to settle the obligation at the end of an asset's economic life. Subsequent to the initial measurement, the obligation is adjusted at the end of each period to reflect the passage of time, changes in the credit-adjusted risk-free rate and changes in the estimated future cash flows underlying the obligation. The increase in the provision due to the passage of time is recognized as accretion in finance costs whereas increases or decreases due to changes in the estimated future cash flows or credit adjusted risk-free rate are added to or deducted from the cost of the related asset.

j. Revenue

i) Take-or-Pay

Pembina provides transportation, gas processing, fractionation, terminalling, and storage services under take-or-pay contracts. In a take-or-pay contract, Pembina is entitled to a minimum fee for the firm service promised to a customer over the contract period, regardless of actual volumes transported, processed, terminalled, or stored. This minimum fee can be represented as a set fee for an annual minimum volume, or an annual minimum revenue requirement. In addition, these contracts may include variable consideration for operating costs that are flow through to the customer. In estimating the contract value, management makes assessments as to whether variable consideration is constrained or not reasonably estimable, such that an amount or portion of an amount cannot be included in the estimate of the contract value. Managements estimates of the likelihood of a customer's ability to use outstanding make-up rights may impact the timing of revenue recognition. In addition, in determining the amount of consideration to be allocated to performance obligations that are not sold on a stand-alone basis, management estimates the stand-alone selling price of each performance obligation under the contract, taking into consideration the location and volume of goods and services being provided, the market environment and customer specific considerations.

Pembina satisfies its performance obligations and recognizes revenue for services under take-or-pay commitments when volumes are transported, processed, terminalled, or stored. Make-up rights may arise when a customer does not fulfill their minimum volume commitment in a certain period, but is allowed to use the delivery of past or future volumes to meet this commitment. These make-up rights are subject to expiry and have varying conditions associated with them. When contract terms allow a customer to exercise their make-up rights using firm volume commitments, revenue is not recognized until these make-up rights are used, expire, or management determines that it is remote that they will be utilized. If Pembina bills a customer for unused service in an earlier period and the customer utilizes available make-up rights, Pembina records a refund liability for the amount to be returned to the customer through an annual adjustment process. For contracts where no make-up rights exist, revenue is recognized to take-or-pay levels once Pembina has an enforceable right to payment for the take-or-pay volumes. Make-up rights generally expire within a contract year, and a majority of the related contract years follow the calendar year.

When customers are transporting, processing, terminalling, or storing volumes below their take-or-pay commitments early in a contract year, and the customer has the right to exercise make up rights against future firm volume commitments, the timing of revenue recognition may not be even throughout the year. Where Pembina has a right to invoice to take-or-pay levels throughout the contract year, revenue is deferred and a contract liability is recorded for the volumes invoiced that were not utilized by the customer. Once the customer has used its make-up rights or it is determined to be remote that a customer will use them, the previously deferred revenue is recognized. In these instances, there will be a deferral of revenue in early quarters of the year, with subsequent recognition occurring in later quarters although there is no impact on cash flows.

For certain arrangements where the customer does not have make-up rights, where the make-up rights have been determined to be insignificant, and for cost of service agreements, revenue is recognized using the practical expedient to recognize revenue in an amount equal to Pembina's right to invoice. For these arrangements, the consideration Pembina is entitled to invoice in each period is representative of the value provided to the customer.

When up-front payments or non-cash consideration is received in exchange for future services to be performed, revenue is deferred as a contract liability and recognized over the period the performance obligation is expected to be satisfied. Non-cash consideration is measured at the fair value of the non-cash consideration received.

ii) Fee-for-Service

Fee-for-service revenue includes firm contracted revenue that are not subject to take-or-pay commitments and interruptible revenue. Pembina satisfies its performance obligations for transportation, gas processing, fractionation, terminalling, and storage as volumes of product are transported, processed, fractionated, terminalled, or stored. Revenue is based on a contracted fee and consideration is variable with respect to volumes. Payment is due in the month following Pembina's provision of service.

iii) Product Sales

Pembina satisfies its performance obligation on product sales at the time control of product is transferred to the customer. Control of product is not necessarily held by the party with legal title, but by the party with the rights to the remaining economic benefits of the commodity being transferred. Certain commodity buy/sell arrangements where control of the product has not transferred to Pembina are recognized on a net basis in revenue.

For product sales, revenue is recognized using the practical expedient to recognize revenue in an amount equal to Pembina's right to invoice as the consideration Pembina is entitled to invoice in each period is representative of the value provided to the customer.

k. Government Grants

Government grants are recognized in earnings as other income on a systematic basis over the periods in which Pembina recognizes expenses for the related costs for which the grant is intended to compensate. Government grants are recognized only when there is reasonable assurance that Pembina will comply with the conditions attached to the grant, and the grant will be received. Government grants received during 2020 associated with the Canadian Emergency Wage Subsidy ("CEWS") were recognized in other income.

l. Finance Income and Finance Costs

Finance income comprises interest income on funds deposited and invested, finance lease receivables, advances to related parties, gains on non-commodity-related derivatives measured at fair value through earnings and foreign exchange gains. Interest income is recognized as it accrues in earnings, using the effective interest rate method.

Finance costs comprise interest expense on loans and borrowings and lease liabilities, accretion on provisions, losses on disposal of available for sale financial assets, losses on non-commodity-related derivatives and foreign exchange losses.

Borrowing costs that are not directly attributable to the acquisition or construction of a qualifying asset are recognized in earnings using the effective interest rate method.

m. Income Tax

Income tax expense comprises current and deferred tax. Current and deferred taxes are recognized in earnings except to the extent that they relate to a business combination, or items are recognized directly in equity or in other comprehensive income.

Current tax is the expected tax payable or receivable on the taxable income or loss for the period, using tax rates enacted or substantively enacted at the reporting date, and any adjustment to tax payable in respect of previous years.

Deferred tax is recognized in respect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. Deferred tax is not recognized for:

- temporary differences on the initial recognition of assets or liabilities in a transaction that is not a business combination and that affects neither accounting nor taxable earnings;
- temporary differences relating to investments in subsidiaries and joint arrangements to the extent that it is probable that they will not reverse in the foreseeable future; and
- taxable temporary differences arising on the initial recognition of goodwill.

The measurement of deferred tax reflects the tax consequences that would follow the manner in which Pembina expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities.

Deferred tax is measured at the tax rates that are expected to be applied to temporary differences when they reverse, based on the laws that have been enacted or substantively enacted by the reporting date.

Deferred tax assets and liabilities are offset only if there is a legally enforceable right to offset, and they relate to income taxes levied by the same taxation authority on either: i) the same taxable entity; or ii) different tax entities where the intent is to settle current tax liabilities and assets on a net basis, or where tax liabilities and assets will be realized simultaneously in each future period.

A deferred tax asset is recognized for unused tax losses, tax credits and deductible temporary differences, to the extent that it is probable that future taxable profits will be available against which they can be utilized. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the related tax benefit will be realized.

In determining the amount of current and deferred tax, Pembina takes into account income tax exposures and whether additional taxes and interest may be due. This assessment relies on estimates and assumptions and may involve a series of judgments about future events. New information may become available that causes Pembina to change its judgment regarding the adequacy of existing tax liabilities, such changes to tax liabilities will impact tax expense in the period that such a determination is made.

n. Earnings Per Common Share

Pembina presents basic and diluted earnings per common share ("EPS") data for its common shares. Basic EPS is calculated by dividing the earnings attributable to common shareholders of Pembina by the weighted average number of common shares outstanding during the period. To calculate earnings attributable to common shareholders, earnings are adjusted for accumulated preferred dividends. Diluted EPS is determined by adjusting the earnings attributable to common shareholders and the weighted average number of common shares outstanding, for the effects of all potentially dilutive common shares, which comprise share options granted to employees. Only outstanding share options that will have a dilutive effect are included in fully diluted calculations.

The dilutive effect of share options is determined whereby outstanding share options at the end of the period are assumed to have been converted at the beginning of the period or at the time issued if issued during the year. Amounts charged to earnings relating to the outstanding share options are added back to earnings for the diluted calculations. The shares issued upon conversion are included in the denominator of per share basic calculations for the date of issue.

o. Segment Reporting

An operating segment is a component of Pembina that engages in business activities from which it may earn revenues and incur expenses, including revenues and expenses that relate to transactions with any of the Company's other components. All operating segments' operating results are reviewed regularly by Pembina's President and Chief Executive Officer ("CEO"), interim Chief Financial Officer ("CFO") and other Senior Vice Presidents ("SVPs") to make decisions about resources to be allocated to the segment and assess its performance, and for which discrete financial information is available.

Segment results that are reported to the CEO, CFO and other SVPs include items directly attributable to a segment as well as those that can be allocated on a reasonable basis.

p. New Standards and Interpretations Not Yet Adopted

The IASB has issued a standard and amendments to existing standards that are effective for periods on or after January 1, 2022, with early application permitted. Assessment of the impacts of these standards is ongoing, however, no material impacts on Pembina's Consolidated Financial Statements have been identified.

- Onerous Contracts - Cost of Fulfilling a Contract (Amendments to IAS 37);
- Updating a Reference to the Conceptual Framework (Amendments to IFRS 3);
- Annual Improvements to IFRS Standards 2018-2020;
- Disclosure Initiative – Accounting Policies (Amendments to IAS 1);
- Definition of Accounting Estimates (Amendments to IAS 8);
- Classification of Liabilities as Current or Non-Current (Amendments to IAS 1); and
- IFRS 17: Insurance Contracts.

4. DETERMINATION OF FAIR VALUES

A number of Pembina's accounting policies and disclosures require the determination of fair value, for both financial and non-financial assets and liabilities. When measuring fair value, Pembina uses observable market data to the extent possible. Fair value measurements are categorized into levels in a fair value hierarchy based on the degree to which inputs are observable and significant.

Level 1: Unadjusted quoted prices are available in active markets for identical assets or liabilities as the reporting date.

Level 2: Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices).

Level 3: Inputs for the asset or liability that are not based on observable market data (unobservable inputs). Level 3 valuations use unobservable inputs, such as a financial forecast developed using the entity's own data for expected cash flows and risk adjusted discount rates, to measure fair value to the extent that relevant observable inputs are not available. The unobservable inputs reflect the assumptions that market participants would use when pricing the asset or liability, including assumptions about risk. In developing unobservable inputs, the entity's own data is used and adjusted for reasonably available information that would be used by other market participants.

For level 2 valued financial instruments, management makes assumptions and estimates value based on observable inputs such as quoted forward prices, time value and volatility factors. For level 3 valued financial instruments, management uses estimates of financial forecasts, expected cash flows and risk adjusted discount rates to measure fair value.

Ongoing Impact of the COVID-19 Pandemic

Measuring fair values using significant unobservable inputs has become more challenging in the current environment, where events and conditions related to the COVID-19 pandemic are driving significant disruption of business operations and a significant increase in economic uncertainty. Management applied its judgment in determining the impact of the significant uncertainties created by these events and conditions on the assessed fair values of assets and liabilities in the Consolidated Financial Statements.

Fair values have been determined for measurement and/or disclosure purposes based on the following methods. When applicable, further information about the assumptions made in determining fair values is disclosed in the notes specific to that asset or liability.

i) Property, Plant and Equipment

The fair value of property, plant and equipment recognized as a result of a business combination or transferred from a customer is based on market values when available, income approach and depreciated replacement cost when appropriate. Depreciated replacement cost reflects adjustments for physical deterioration as well as functional and economic obsolescence.

When the recoverable value of an item of property, plant and equipment is estimated for impairment purposes, fair value is determined using comparable market transactions if available, or using a combination of internal and external estimates of the value that the assets could be sold for in an orderly manner.

ii) Equity Investments

When the recoverable value of the Company's equity investments is estimated for impairment purposes, fair value is determined using comparable market transactions if available, or using estimates of the discounted cash flows a market participant would expect to derive from the use and eventual sale of the investments.

iii) Derivative Financial Instruments

Pembina's derivative financial instrument fair value measurements are categorized in Level 2 and Level 3 of the fair value hierarchy. Further information about the methods used and assumptions made in determining fair values is disclosed in Note 25 to the Consolidated Financial Statements.

Fair values reflect the credit risk of the instrument and include adjustments to take account of the credit risk of the company, entity and counterparty when appropriate.

iv) Non-Derivative Financial Assets and Liabilities

The fair value of non-derivative financial assets and liabilities is determined on initial recognition, on a recurring basis, or for disclosure purposes. Fair values of financial assets at amortized cost are calculated based on the present value of estimated future principal and interest cash flows, discounted at the market rate of interest at the reporting date. Fair values of financial assets held at fair value are calculated using a probability-weighted income approach based on current market expectations for future cash flows. For other financial liabilities where market rates are not readily available, a risk adjusted market rate is used which incorporates the nature of the instrument as well as the risk associated with the underlying cash payments.

vi) Share-Based Compensation Transactions

The fair value of employee share options is measured using the Black-Scholes formula on grant date. Measurement inputs include share price on measurement date, exercise price of the instrument, expected volatility (based on weighted average historic volatility adjusted for changes expected due to publicly available information), weighted average expected life of the instruments (based on historical experience and general option holder behaviour), expected dividends, expected forfeitures and the risk-free interest rate (based on government bonds). Service and non-market performance conditions attached to the transactions are not taken into account in determining fair value.

The fair value of the long-term share unit award incentive plan and associated distribution units are measured based on the volume-weighted average price of Pembina's shares for 20 days ending December 31, 2021.

5. TRADE RECEIVABLES AND OTHER

As at December 31 <i>(\$ millions)</i>	2021	2020
Trade receivables from customers	750	578
Other receivables	30	60
Prepayments	32	24
Total trade receivables and other	812	662

6. INVENTORY

As at December 31 <i>(\$ millions)</i>	2021	2020
Crude oil and NGL	276	127
Materials, supplies and other	100	94
Total inventory	376	221

7. PROPERTY, PLANT AND EQUIPMENT

<i>(\$ millions)</i>	Land and Land Rights	Pipelines	Facilities and Equipment	Cavern Storage and Other	Assets Under Construction ⁽¹⁾	Total
Cost						
Balance at December 31, 2019	440	8,790	8,333	1,937	1,493	20,993
Additions and transfers	8	454	622	57	(40)	1,101
Impairment (Note 10)	(17)	—	—	—	(340)	(357)
Change in decommissioning provision	—	(10)	(17)	16	—	(11)
Foreign exchange adjustments	(2)	(18)	(9)	(1)	(7)	(37)
Disposals and other	—	(10)	(22)	(16)	3	(45)
Balance at December 31, 2020	429	9,206	8,907	1,993	1,109	21,644
Additions and transfers	28	92	469	144	(177)	556
Change in decommissioning provision	—	8	25	6	—	39
Disposals and other	(1)	(22)	(19)	(59)	(17)	(118)
Foreign exchange	—	(5)	2	—	—	(3)
Balance at December 31, 2021	456	9,279	9,384	2,084	915	22,118
Depreciation						
Balance at December 31, 2019	16	1,365	967	283	—	2,631
Depreciation	5	187	156	135	—	483
Disposals and other	—	(5)	(5)	(9)	—	(19)
Balance at December 31, 2020	21	1,547	1,118	409	—	3,095
Depreciation	5	192	232	82	—	511
Impairment (Note 10)	—	283	85	12	—	380
Disposals and other	—	(7)	(14)	(40)	—	(61)
Balance at December 31, 2021	26	2,015	1,421	463	—	3,925
Carrying amounts						
Balance at December 31, 2020	408	7,659	7,789	1,584	1,109	18,549
Balance at December 31, 2021	430	7,264	7,963	1,621	915	18,193
Assets subject to operating leases						
December 31, 2020	8	300	496	170	—	974
December 31, 2021	8	297	466	163	—	934

⁽¹⁾ At December 31, 2021, the movement in Assets Under Construction includes \$90 million in assets transferred to net investment lease.

Property, Plant and Equipment Under Construction

For the year ended December 31, 2021, included in additions and transfers are capitalized borrowing costs related to the construction of new pipelines or facilities amounting to \$25 million (2020: \$46 million), with capitalization rates ranging from 3.60 percent to 3.81 percent (2020: 3.63 percent to 3.91 percent).

Depreciation

Pipeline assets, facilities and equipment are depreciated using the straight-line method over three to 75 years with the majority of assets depreciated over 40 years. Cavern storage and other assets are depreciated using the straight-line method over three to 40 years with the majority of assets depreciated over 40 years. These rates are established to depreciate remaining net book value over the shorter of their useful lives or economic lives.

8. INTANGIBLE ASSETS AND GOODWILL

(\$ millions)	Intangible Assets				Total Goodwill & Intangible Assets
	Goodwill	Purchase and Sale Contracts and Other	Customer Relationships ⁽¹⁾	Total	
Cost					
Balance at December 31, 2019	4,699	240	1,881	2,121	6,820
Additions and other	—	22	—	22	22
Foreign exchange adjustments	(5)	(1)	(12)	(13)	(18)
Balance at December 31, 2020	4,694	261	1,869	2,130	6,824
Additions	—	26	—	26	26
Disposals and other	(1)	1	(8)	(7)	(8)
Balance at December 31, 2021	4,693	288	1,861	2,149	6,842
Amortization					
Balance at December 31, 2019	—	174	202	376	376
Amortization	—	6	102	108	108
Balance at December 31, 2020	—	180	304	484	484
Amortization	—	7	93	100	100
Impairment (Note 10)	—	1	23	24	24
Disposals and other	—	1	(5)	(4)	(4)
Balance at December 31, 2021	—	189	415	604	604
Carrying amounts					
Balance at December 31, 2020	4,694	81	1,565	1,646	6,340
Balance at December 31, 2021	4,693	99	1,446	1,545	6,238

⁽¹⁾ The net book value includes purchase price allocations associated with the acquisition of Kinder Morgan on December 16, 2019 of \$1.1 billion that have definite lives. The remaining lives of these allocations varies from 14-36 years.

Intangible assets have a finite useful life and are amortized using the straight-line method over 8 to 40 years.

The aggregate carrying amount of goodwill allocated to each operating segment is as follows:

As at December 31	2021	2020
(\$ millions)		
Pipelines	2,714	2,713
Facilities	540	541
Marketing & New Ventures	1,439	1,440
Total goodwill	4,693	4,694

Goodwill Impairment Testing

For the purpose of impairment testing, goodwill is allocated to Pembina's operating segments which represent the lowest level within Pembina at which goodwill is monitored for management purposes. Consistent with prior year, impairment testing for goodwill is performed in the fourth quarter.

The recoverable amount was determined using a fair value less costs of disposal approach by discounting each operating segment's expected future cash flows (Level 3). The key assumptions that influence the calculation of the recoverable amounts include:

- Cash flows for the first five years are projected based on past experience, actual operating results and the business plan approved by management. Cash flows for Pipelines and Facilities incorporate assumptions regarding contracted volumes and rates, which are based on market expectations. In addition, revenue and cost of product projections for Marketing & New Ventures incorporate assumptions regarding commodity volumes and pricing, which are sensitive to changes in the commodity price environment.
- Cash flows for the remaining years of the useful lives of the assets within each operating segment are extrapolated for periods up to 75 years (2020: 75 years) using a long-term growth rate, except where contracted, long-term cash flows indicate that no growth rate should be applied or a specific reduction in cash flows was more appropriate.
- After-tax discount rates were applied in determining the recoverable amount of operating segments. Discount rates were estimated based on past experience, the risk free rate and average cost of debt, targeted debt to equity ratio, in addition to estimates of the specific operating segment's equity risk premium, size premium, projection risk and betas.

For each operating segment, key assumptions and discount rate sensitivity are presented below:

As at December 31, 2021 (Percent)	Operating Segments		
	Pipelines	Facilities	Marketing & New Ventures
Key assumptions used			
After-tax discount rate	6.5	6.4	8.9
Long-term growth rate	1.3	1.8	1.9
Incremental change in rates that would result in carrying value equal to recoverable amount			
Increase in after-tax discount rate	2.9	4.1	2.5

9. INVESTMENTS IN EQUITY ACCOUNTED INVESTEEES

(\$ millions)	Ownership Interest at December 31 (percent)		Share of Profit (Loss) from Equity Investments		Investment in Equity Accounted Investees at December 31	
			For the years ended December 31			
	2021	2020	2021	2020	2021	2020
Alliance	50	50	111	105	2,686	2,498
Aux Sable	42.7 - 50	42.7 - 50	77	—	377	401
Ruby ⁽¹⁾	—	—	12	122	—	—
Veresen Midstream	45	45	77	50	1,349	1,374
CKPC ⁽²⁾	50	50	—	(314)	—	—
Cedar LNG	49.9	—	—	—	130	—
Other	50 - 75	50 - 75	4	5	80	104
Total			281	(32)	4,622	4,377

⁽¹⁾ Pembina owns a 50 percent convertible, cumulative preferred interest in Ruby.

⁽²⁾ Includes nil (2020: \$314 million) impairment in share of profit from equity accounted investees.

Investments in equity accounted investees include the unamortized excess of the purchase price over the underlying net book value of the investee's assets and liabilities at the purchase date, which is comprised of \$223 million (2020: \$98 million) Goodwill, \$2.7 billion (2020: \$2.8 billion) in property, plant and equipment and intangibles and nil in long-term debt (2020: \$33 million). In 2021, the long-term debt purchase price adjustment was fully amortized as an equity accounted investee redeemed its outstanding debt and entered into a new financing arrangement.

Pembina has U.S. \$1.3 billion in Investments in Equity Accounted Investees that is held by entities whose functional currency is the U.S. dollar. The resulting foreign exchange loss for the year ended December 31, 2021 of \$11 million (2020: \$51 million loss) has been included in Other Comprehensive Income.

Cedar LNG Acquisition

On June 4, 2021, Pembina acquired a 49.9 percent interest in a joint venture with the Haisla Nation to develop the Cedar LNG Project, a LNG facility located on the coast of British Columbia within the Douglas Channel on Haisla-owned land. The purchase price of \$125 million was allocated to goodwill as the net fair value of the identifiable assets and liabilities is nil. Pembina's investment of \$130 million at December 31, 2021 includes \$70 million of accrued contingent consideration payable on achievement of certain conditions. Under the terms of the agreements, Pembina has commitments to make additional payments on a positive final investment decision as well as contributions to fund development costs and annual operating budgets.

Impairment of Equity Accounted Investees

During 2021, Pembina recognized U.S. \$8 million in impairment associated with an advance made to Ruby in January of 2021 and during June 2021, Pembina recognized an impairment charge of \$22 million on its interest in Fort Corp. The impairment charge was the result of an assessment triggered by a reduction in the contracted capacity by a key customer on certain Fort Corp assets.

In December 2020, Pembina recognized an impairment on its 50 percent convertible, cumulative preferred interest in Ruby and within its investment in CKPC. Refer to Note 10 for further information on impairments.

Distributions and Contributions

The following table summarizes distributions from and contributions to Pembina's investments in equity accounted investees:

For the years ended December 31 (\$ millions)	Distributions		Contributions	
	2021	2020	2021	2020
Alliance	212	217	299	—
Aux Sable	100	19	2	3
Ruby	13	122	—	—
Veresen Midstream	131	97	29	69
CKPC	—	—	—	152
Cedar LNG	—	—	5	—
Other	5	4	—	—
Total	461	459	335	224

Distributions received from equity investments are included in operating activities in the Consolidated Statement of Cash Flows. Distributions from Alliance and Veresen Midstream are subject to satisfying certain financing conditions including complying with financial covenants.

Contributions made to investments in equity accounted investees are included in investing activities in the Consolidated Statement of Cash Flows. Contributions for 2020 include a \$22 million non-cash financial guarantee liability associated with CKPC's credit facility.

Financing Activities

On April 19, 2021, Ruby fully repaid the \$16 million outstanding on its term loan.

A wholly-owned subsidiary of Ruby has debt obligations in the form of non-recourse, asset level financing. Specifically, the subsidiary has U.S. \$475 million of senior notes outstanding, which come due April 1, 2022. Pembina presently does not expect the subsidiary to have adequate funds on hand to retire the senior notes when they come due. Management is currently evaluating options to satisfy this debt upon maturity.

On December 10, 2021, Alliance redeemed all of its issued and outstanding senior notes, for a total of \$367 million and U.S. \$175 million.

On December 10, 2021, Alliance issued a new syndicated unsecured credit agreement comprising of a \$315 million non-revolving term loan facility, a \$30 million revolving facility, a U.S. \$250 million non-revolving term loan facility and a U.S. \$30 million revolving facility. The credit facilities have a maturity date of December 10, 2024.

Summarized Financial Information

Financial information for Pembina's equity accounted investees (presented at 100 percent) is presented in the following tables and is prepared under the financial reporting framework adopted by each equity accounted investee (U.S. GAAP except for CKPC and Cedar). Differences between the equity accounted investee's earnings (loss) and earnings (loss) attributable to Pembina relate to the different accounting standards applied and amortization of the excess of the purchase price over the underlying net book value of the investee's assets and liabilities at the purchase date, with the exception of Ruby which Pembina owns a 50 percent convertible, cumulative preferred interest and recognizes its share of earnings based on its distribution.

Alliance

For the years ended December 31 <i>(\$ millions)</i>	2021	2020
Earnings and Comprehensive Income		
Revenue	905	840
Expenses	(353)	(296)
Depreciation and amortization	(138)	(141)
Finance costs and other ⁽¹⁾⁽²⁾	(115)	(61)
Earnings	299	342
Earnings attributable to Pembina	111	105

⁽¹⁾ Includes interest income of nil (2020:\$2 million).

⁽²⁾ Includes interest expense of \$118 million (2020: \$66 million).

As at December 31 <i>(\$ millions)</i>	2021	2020
Statements of Financial Position		
Current assets ⁽¹⁾	264	122
Non-current assets	1,690	1,816
Current liabilities ⁽²⁾	67	206
Non-current liabilities ⁽³⁾	814	1,121

⁽¹⁾ Includes cash and cash equivalents of \$168 million (2020:\$25 million).

⁽²⁾ Includes trade, other payables and provisions of \$48 million (2020: \$71 million).

⁽³⁾ Includes trade, other payables and provisions of \$9 million (2020:\$128 million).

Aux Sable

For the years ended December 31 <i>(\$ millions)</i>	2021	2020
Earnings and Comprehensive Income (Loss)		
Revenue	1,967	1,059
Expenses	(1,747)	(1,019)
Depreciation and amortization	(43)	(49)
Earnings (loss)	177	(9)
Earnings attributable to Pembina	77	—

As at December 31 <i>(\$ millions)</i>	2021	2020
Statements of Financial Position		
Current assets ⁽¹⁾	196	162
Non-current assets	707	757
Current liabilities ⁽²⁾	143	107
Non-current liabilities ⁽³⁾	164	155

⁽¹⁾ Includes cash and cash equivalents of \$24 million (2020: \$50 million).

⁽²⁾ Includes trade, other payables and provisions of \$98 million (2020: \$103 million).

⁽³⁾ Includes trade, other payables and provisions of \$5 million (2020: \$5 million).

Ruby

For the years ended December 31 <i>(\$ millions)</i>	2021	2020
Earnings and Comprehensive Income (Loss)		
Revenue	286	432
Expenses	(8)	(29)
Depreciation and amortization	(26)	(143)
Impairment	—	(2,953)
Finance costs and other ⁽¹⁾	(21)	(130)
Earnings (loss)	231	(2,823)
Earnings attributable to Pembina	12	122

⁽¹⁾ Includes interest expense of \$79 million (2020: \$104 million).

As at December 31 <i>(\$ millions)</i>	2021	2020
Statements of Financial Position		
Current assets ⁽¹⁾	137	50
Non-current assets	662	688
Current liabilities ⁽²⁾	622	77
Non-current liabilities ⁽³⁾	302	928

⁽¹⁾ Includes cash and cash equivalents of \$113 million (2020: \$6 million).

⁽²⁾ Includes trade, other payables and provisions of \$1 million (2020: \$2 million).

⁽³⁾ Includes trade, other payables and provisions of \$296 million (2020: \$278 million).

Veresen Midstream

For the years ended December 31 <i>(\$ millions)</i>	2021	2020
Earnings and Comprehensive Income		
Revenue ⁽⁴⁾	661	565
Expenses	(216)	(177)
Depreciation and amortization ⁽⁴⁾	(191)	(177)
Finance costs and other ⁽¹⁾	(67)	(84)
Earnings	187	127
Earnings attributable to Pembina	77	50

⁽¹⁾ Includes interest expense of \$71 million (2020: \$80 million).

As at December 31 <i>(\$ millions)</i>	2021	2020
Statements of Financial Position		
Current assets ⁽¹⁾	211	167
Non-current assets ⁽⁴⁾	4,605	4,671
Current liabilities ⁽²⁾⁽⁴⁾	147	114
Non-current liabilities ⁽³⁾⁽⁴⁾	2,674	2,689

⁽¹⁾ Includes cash and cash equivalents of \$1 million (2020: nil).

⁽²⁾ Includes trade, other payables and provisions of \$63 million (2020: \$80 million).

⁽³⁾ Includes trade, other payables and provisions of \$61 million (2020: \$56 million).

⁽⁴⁾ Prior year information has been restated.

CKPC

For the years ended December 31 <i>(\$ millions)</i>	2021	2020
Earnings (Loss) and Comprehensive Income (Loss)		
Expenses	(6)	(4)
Impairment	—	(589)
Finance costs ⁽¹⁾	(1)	(33)
Earnings (loss)	(7)	(626)
Earnings (loss) attributable to Pembina	—	(314)

⁽¹⁾ Includes interest income of nil (2020: \$1 million).

As at December 31 <i>(\$ millions)</i>	2021	2020
Statements of Financial Position		
Current assets ⁽¹⁾	33	83
Non-current assets	—	—
Current liabilities ⁽²⁾	57	99
Non-current liabilities ⁽³⁾	10	11

⁽¹⁾ Includes cash and cash equivalents of \$29 million (2020: \$75 million).

⁽²⁾ Includes trade, other payables and provisions of \$57 million (2020: \$99 million).

⁽³⁾ Includes trade, other payables and provisions of \$10 million (2020: \$11 million).

Cedar LNG

Cedar LNG was formed in June 2021 and has not yet commenced operations and therefore has not recognized material revenues or expenses.

As at December 31 <i>(\$ millions)</i>	2021	2020
Statements of Financial Position		
Current assets	2	—
Non-current assets	50	—
Current liabilities ⁽¹⁾	6	—
Non-current liabilities ⁽²⁾	36	—

⁽¹⁾ Includes trade, other payables and provisions of \$3 million (2020: nil).

⁽²⁾ Includes trade, other payables and provisions of \$34 million (2020: nil).

Other

For the years ended December 31 <i>(\$ millions)</i>	2021	2020
Earnings and Comprehensive Income		
Revenue	57	51
Expenses	(23)	(16)
Depreciation and amortization	(15)	(16)
Finance costs and other ⁽¹⁾	—	(5)
Earnings	19	14
Earnings attributable to Pembina	4	5

⁽¹⁾ Includes interest expense of \$1 million (2020: \$2 million).

As at December 31 <i>(\$ millions)</i>	2021	2020
Statements of Financial Position		
Current assets ⁽¹⁾	6	6
Non-current assets	104	117
Current liabilities ⁽²⁾	25	25
Non-current liabilities ⁽³⁾	42	64

⁽¹⁾ Includes cash and cash equivalents of \$1 million (2020: \$1 million).

⁽²⁾ Includes trade, other payables and provisions of \$4 million (2020: \$3 million).

⁽³⁾ Includes trade, other payables and provisions of \$1 million (2020: \$1 million).

10. IMPAIRMENTS

For the year ended December 31, 2021 (\$ millions)	Property, Plant & Equipment (Note 7)	Intangible Assets and Goodwill (Note 8)	Right-of-use Assets (Note 13)	Equity Accounted Investees (Note 9)	Other	Total Impairment Expense
Oil Sands Assets	368	24	27	—	5	424
Other	12	—	—	22	16	50
Total impairments	380	24	27	22	21	474

During the year ended December 31, 2021, Pembina recognized an impairment charge of \$474 million (\$361 million net of tax), of which \$424 million related to the impairment of the Nipisi and Mitsue Pipeline systems and the Edmonton South Rail Terminal as a result of contract expirations. The remaining charge related to partial impairments of equity accounted investees, discussed in Note 9.

For the year ended December 31, 2020 (\$ millions)	Property, Plant & Equipment (Note 7)	Equity Accounted Investees (Note 9)	Other	Total Impairment Expense
Jordan Cove	344	—	5	349
Investment in Ruby	—	1,257	139	1,396
Investment in CKPC	—	323	(2)	321
Other	13	11	—	24
Total impairments	357	1,591	142	2,090
Recognized through impairment in share of profit from equity accounted investees				314
Recognized as impairment expense				1,776
Total				2,090

Jordan Cove

In December 2020, as a result of increased regulatory and political uncertainty, Pembina recognized an impairment on the assets associated with Jordan Cove. The impairment charge of \$349 million (\$258 million net of tax) includes all previously capitalized amounts related to Jordan Cove, except for land with a recoverable carrying amount of \$21 million which approximates its fair value (Level 3).

Ruby

In December 2020, Pembina recognized an impairment for the full amount of its convertible, cumulative preferred interest in Ruby (\$1.3 billion) and its associated related party advance (\$139 million). The total impairment charge of \$1.4 billion (\$1.0 billion net of tax) was the result of an assessment triggered by upcoming contract expirations in mid-2021 with existing tariff rates well in excess of prevailing interruptible tariff rates, along with declining Rockies basin fundamentals and reduced expected future volumes resulting from the uncertainty with Jordan Cove. The recoverable amount of Ruby was determined using a value in use approach by discounting expected cash flows resulting from Pembina's convertible, cumulative preferred share interest. Key assumptions that influenced the calculation of the recoverable amount include no future volumes associated with Jordan Cove, incremental future contracted volumes and tolls. Pembina applied a discount rate of 8 percent (2019: 8 percent) in calculating the recoverable amount, which was determined using comparable preferred share yields adjusted for the specific risk profile of the investment.

CKPC

On December 14, 2020, Pembina announced that it, along with its joint venture partner in CKPC, would be indefinitely suspending execution of the integrated propane dehydration plant and polypropylene upgrading facility project. The suspension is the result of the significant risks arising from the ongoing COVID-19 pandemic, most notably with respect to costs under the lump sum contract for construction of the PDH plant, which was terminated in April 2021. As a result of the suspension, Pembina recognized an impairment for the full amount of its investment in CKPC, resulting in a total impairment charge of \$323 million (\$252 million net of tax) which includes Pembina's share of CKPC's loss resulting from an impairment charge recognized in the joint venture of \$314 million plus an incremental impairment of the remaining investment value, based on a fair value less costs of disposal approach which determined the recoverable amount of the investment to be nil (Level 3).

11. INCOME TAXES

The movements of the components of the deferred tax assets and deferred tax liabilities are as follows:

(\$ millions)	Balance at December 31, 2020	Recognized in Earnings (Loss)	Recognized in Other Comprehensive Loss	Equity	Other	Balance at December 31, 2021
Deferred income tax assets						
Derivative financial instruments	4	(20)	—	—	—	(16)
Employee benefits	11	2	(11)	—	—	2
Share-based payments	14	10	—	—	—	24
Provisions	83	17	—	—	—	100
Benefit of loss carryforwards	275	110	—	—	—	385
Other deductible temporary differences	51	(41)	—	—	(3)	7
Deferred income tax liabilities						
Property, plant and equipment	2,091	159	—	—	—	2,250
Intangible assets	260	(9)	—	—	—	251
Investments in equity accounted investees	692	17	—	—	—	709
Taxable limited partnership income deferral	(2)	48	—	—	—	46
Total net deferred tax liabilities ⁽¹⁾	2,603	137	11	—	3	2,754

(\$ millions)	Balance at December 31, 2019	Recognized in Earnings (Loss)	Recognized in Other Comprehensive Income (Loss)	Equity	Other	Balance at December 31, 2020
Deferred income tax assets						
Derivative financial instruments	(13)	21	(4)	—	—	4
Employee benefits	9	(2)	4	—	—	11
Share-based payments	24	(10)	—	—	—	14
Provisions	79	4	—	—	—	83
Benefit of loss carryforwards	400	(125)	—	—	—	275
Other deductible temporary differences	52	16	—	(2)	—	66
Deferred income tax liabilities						
Property, plant and equipment	2,036	55	—	—	—	2,091
Intangible assets	263	(3)	—	—	—	260
Investments in equity accounted investees	1,109	(417)	—	—	—	692
Taxable limited partnership income deferral	101	(103)	—	—	—	(2)
Other taxable temporary differences	(13)	32	—	—	(4)	15
Total net deferred tax liabilities ⁽¹⁾	2,945	(340)	—	2	(4)	2,603

⁽¹⁾ Comprised of deferred tax liabilities of \$3.0 billion (2020: \$2.9 billion) net of deferred tax assets of \$257 million (2020: \$322 million).

Reconciliation of Effective Tax Rate

For the years ended December 31 <i>(\$ millions, except as noted)</i>	2021	2020
Earnings (loss) before income tax	1,665	(416)
Canadian statutory tax rate <i>(percent)</i>	23.3	24.6
Income tax at statutory rate	388	(102)
Tax rate changes and foreign rate differential	(19)	(5)
Changes in estimate and other	21	(5)
Permanent items	12	12
Unrecognized tax attribute	21	—
Income tax expense (recovery)	423	(100)

Income Tax Expense

For the years ended December 31 <i>(\$ millions)</i>	2021	2020
Current tax expense	286	240
Deferred tax expense		
Origination and reversal of temporary differences	235	(485)
Tax rate changes on deferred tax balances	14	32
(Increase) decrease in tax loss carry forward	(112)	113
Total deferred tax expense (recovery)	137	(340)
Total income tax expense (recovery)	423	(100)

Deferred Tax Items Recovered Directly in Equity

For the years ended December 31 <i>(\$ millions)</i>	2021	2020
Share issue costs	—	(2)
Other comprehensive income (loss) <i>(Note 24)</i> :		
Change in fair value of net investment hedges	—	(4)
Remeasurements of defined benefit (asset) liability	(11)	4
Deferred tax items recovered directly in equity	(11)	(2)

Pembina has temporary differences associated with its investments in subsidiaries. At December 31, 2021, Pembina has not recorded a deferred tax asset or liability for these temporary differences (2020: nil) as Pembina controls the timing of the reversal and it is not probable that the temporary differences will reverse in the foreseeable future.

At December 31, 2021, Pembina had U.S. \$1.1 billion (2020: U.S. \$758 million) of U.S. tax losses that do not expire and \$42 million (2020: \$43 million) of Canadian tax losses that will expire after 2036. Pembina has determined that it is probable that future taxable profits will be sufficient to utilize these losses. The amount of unrecognized deferred tax asset as at December 31, 2021 was \$21 million (2020: nil).

12. TRADE PAYABLES AND OTHER

As at December 31		
<i>(\$ millions)</i>		
	2021	2020
Trade payables	652	434
Other payables & accrued liabilities	411	346
Total trade payables and other	1,063	780

13. LEASES

Lessee Leases

Pembina enters into arrangements to secure access to assets necessary for operating the business. Leased (right-of-use) assets include terminals, rail, buildings, land and other assets. Total cash outflows related to leases were \$127 million for the year ended December 31, 2021 (2020: \$131 million).

Right-of-Use Assets

<i>(\$ millions)</i>	Terminals	Rail	Buildings	Land & Other	Total
Balance at January 1, 2020	225	238	118	110	691
Additions	—	24	22	—	46
Depreciation	(12)	(41)	(19)	(14)	(86)
Balance at December 31, 2020	213	221	121	96	651
Additions and adjustments	2	1	40	18	61
Disposals and other	—	(4)	—	(9)	(13)
Depreciation	(20)	(41)	(18)	(12)	(91)
Impairment	(27)	—	—	—	(27)
Balance at December 31, 2021	168	177	143	93	581

Lessor Leases

Pembina has entered into contracts for the use of its assets that have resulted in lease treatment for accounting purposes. Assets under operating leases include pipelines, terminals and storage assets. See Note 7 for carrying value of property, plant and equipment under operating leases. Assets under finance leases include pipelines, terminals, storage assets and office sub-leases.

Maturity of Lease Receivables

As at December 31	2021		2020	
	Operating Leases	Finance Leases	Operating Leases	Finance Leases
<i>(\$ millions)</i>				
Less than one year	146	31	146	23
One to two years	140	31	142	23
Two to three years	121	31	139	22
Three to four years	109	32	121	22
Four to five years	108	31	109	22
More than five years	725	319	874	224
Total undiscounted lease receipts	1,349	475	1,531	336
Unearned finance income on lease receipts		(270)		(199)
Discounted unguaranteed residual value		15		8
Finance lease receivable		220		145
Less current portion ⁽¹⁾		(9)		(7)
Total non-current		211		138

⁽¹⁾ Included in trade receivables and other on the Consolidated Statement of Financial Position.

14. LONG-TERM DEBT

This note provides information about the contractual terms of Pembina's interest-bearing long-term debt, which are measured at amortized cost.

Carrying Value, Terms and Conditions, and Debt Maturity Schedule

(\$ millions)	Authorized at December 31, 2021	Nominal Interest Rate	Year of Maturity	Carrying Value	
				December 31, 2021	December 31, 2020
Loans and borrowings					
Senior unsecured credit facilities ⁽¹⁾⁽³⁾⁽⁴⁾	3,336	1.20 ⁽²⁾	Various ⁽¹⁾	907	1,530
Senior unsecured medium-term notes series 1	—	4.89	2021	—	250
Senior unsecured medium-term notes series 2	450	3.77	2022	450	449
Senior unsecured medium-term notes series 3	450	4.75	2043	447	447
Senior unsecured medium-term notes series 4	600	4.81	2044	597	597
Senior unsecured medium-term notes series 5	450	3.54	2025	449	449
Senior unsecured medium-term notes series 6	500	4.24	2027	499	498
Senior unsecured medium-term notes series 7	600	3.71	2026	602	603
Senior unsecured medium-term notes series 8	650	2.99	2024	648	647
Senior unsecured medium-term notes series 9	550	4.74	2047	542	542
Senior unsecured medium-term notes series 10	650	4.02	2028	660	661
Senior unsecured medium-term notes series 11	800	4.75	2048	841	842
Senior unsecured medium-term notes series 12	650	3.62	2029	654	654
Senior unsecured medium-term notes series 13	700	4.54	2049	712	713
Senior unsecured medium-term notes series 14	600	2.56	2023	599	599
Senior unsecured medium-term notes series 15	600	3.31	2030	597	597
Senior unsecured medium-term notes series 16	400	4.67	2050	397	397
Senior unsecured medium-term notes series 17	500	3.53	2031	497	—
Senior unsecured medium-term notes series 18	500	4.49	2051	497	—
Senior unsecured medium-term notes series 3A	50	5.05	2022	50	51
Senior unsecured medium-term notes series 5A	—	3.43	2021	—	350
Total loans and borrowings				10,645	10,876
Less current portion loans and borrowings				(1,000)	(600)
Total non-current loans and borrowings				9,645	10,276
Subordinated hybrid notes					
Subordinated notes, series 1	600	4.80	2081	594	—

⁽¹⁾ Pembina's unsecured credit facilities include a \$2.5 billion revolving facility that matures in June 2026, a \$500 million non-revolving term loan that matures in August 2022, a U.S. \$250 million non-revolving term loan that matures in May 2025 and a \$20 million operating facility that matures in May 2022, which is typically renewed on an annual basis.

⁽²⁾ The nominal interest rate is the weighted average of all drawn credit facilities based on Pembina's credit rating at December 31, 2021. Borrowings under the credit facilities bear interest at prime, Bankers' Acceptance, or LIBOR rates, plus applicable margins.

⁽³⁾ Includes U.S. \$250 million variable rate debt outstanding at December 31, 2021 (December 31, 2020: U.S. \$250 million).

⁽⁴⁾ The U.S. dollar denominated non-revolving term loan is designated as a hedge of the Company's net investment in selected foreign operations with a U.S. dollar functional currency. Refer to Note 25 for foreign exchange risk management.

On January 25, 2021, Pembina closed a \$600 million offering of Fixed-to-Fixed Rate Subordinated Hybrid Notes (the "Series 1 Subordinated Notes"). The Series 1 Subordinated Notes have a fixed 4.80 percent interest rate, payable semi-annually, which resets on January 25, 2031, and on every fifth anniversary thereafter, based on the five-year Government of Canada yield plus: (i) 4.17 percent for the period from, and including, January 25, 2031 to, but excluding January 25, 2051; and (ii) 4.92 percent for the period from, and including, January 25, 2051 to, but excluding January 25, 2081. The Series 1 Subordinated Notes are subject to optional redemption by Pembina from October 25, 2030 to January 25, 2031 and on any interest payment date or any interest reset date, as applicable. Pembina may also redeem the Series 1 Subordinated Notes in certain other limited circumstances. Following the occurrence of certain bankruptcy or insolvency events in respect of Pembina, subject to certain exceptions, the Series 2021-A Class A Preferred Shares (as defined below) will be delivered to the holders of the Series 1 Subordinated Notes to satisfy Pembina's obligations under the indenture governing the Series 1 Subordinated Notes. Upon delivery of the Series 2021-A Class A Preferred Shares, the Series 1 Subordinated Notes will be immediately and automatically surrendered and cancelled and all rights of any holders of the Series 1 Subordinated Notes will automatically cease. The fair value of the automatic delivery feature was assessed as nominal at inception.

On March 25, 2021, Pembina cancelled its \$800 million revolving credit facility. No balance was outstanding on the cancellation date.

On April 30, 2021, Pembina completed an extension on its \$2.5 billion revolving credit facility, which now matures on June 1, 2026.

On December 10, 2021, Pembina closed an offering of \$1.0 billion of senior unsecured medium-term notes. The offering was conducted in two tranches, consisting of the issuance of \$500 million in senior unsecured medium-term notes, series 17, having a fixed coupon of 3.53 percent per annum, payable semi-annually and maturing on December 10, 2031; and \$500 million in senior unsecured medium-term notes, series 18, having a fixed coupon of 4.49 percent per annum, payable semi-annually and maturing on December 10, 2051.

For more information about Pembina's exposure to interest rate, foreign currency and liquidity risk, see Note 25 *Financial Instruments*.

15. DECOMMISSIONING PROVISION

The decommissioning provision reflects the discounted cash flows expected to be incurred to decommission Pembina's pipeline systems, gas processing and fractionation plants, storage and terminalling hubs, including estimated environmental reclamation and remediation costs. Changes in the measurement of the decommissioning provision are added to, or deducted from, the cost of the related property, plant and equipment or right of use asset. When a re-measurement of the decommissioning provision relates to a retired asset, the amount is recorded in earnings (loss).

The undiscounted cash flows at the time of decommissioning are calculated using an estimated timing of economic outflows ranging from one to 83 years, with the majority estimated at 50 years. The estimated economic lives of the underlying assets form the basis for determining the timing of economic outflows. Pembina applied credit-adjusted risk-free rates of 3.3 percent to 4.7 percent (2020: 3.3 percent to 4.7 percent) and an inflation rate of 1.8 percent (2020: 1.8 percent).

<i>(\$ millions)</i>	2021	2020
Balance at January 1	348	337
Unwinding of discount rate	16	15
Additions	29	11
Change in cost estimates and other	19	(15)
Balance at December 31	412	348

16. SHARE CAPITAL

Pembina is authorized to issue an unlimited number of common shares, without par value, 254,850,850 Class A preferred shares, issuable in series and an unlimited number of Class B preferred shares. The holders of the common shares are entitled to receive notice of, attend and vote at any meeting of the shareholders of Pembina, receive dividends declared and share in the remaining property of Pembina upon distribution of the assets of Pembina among its shareholders for the purpose of winding-up its affairs.

Common Share Capital

<i>(\$ millions, except as noted)</i>	Number of Common Shares <i>(millions)</i>	Common Share Capital
Balance at December 31, 2019	548	15,539
Share-based payment transactions	2	105
Balance at December 31, 2020	550	15,644
Share-based payment transactions	—	47
Repurchased	—	(13)
Balance at December 31, 2021	550	15,678

Share Repurchase Program

On February 25, 2021, the Toronto Stock Exchange ("TSX") accepted the Company's notice of intention to commence a normal course issuer bid ("NCIB") that allows the Company to repurchase, at its discretion, up to approximately 27.5 million common shares through the facilities of the TSX, the New York Stock Exchange and/or alternative Canadian trading systems or as otherwise permitted by applicable securities law, subject to certain restrictions on the number of common shares that may be purchased on a single day. Common shares purchased by the Company will be cancelled. The NCIB commenced March 2, 2021 and will terminate on March 1, 2022 or on such earlier date as the Company has purchased the maximum number of common shares permitted pursuant to the notice of intention.

The following table summarizes Pembina's share repurchases under its NCIB:

For the years ended December 31 <i>(millions, except as noted)</i>	2021	2020
Number of common shares repurchased for cancellation <i>(thousands)</i>	450	—
Average price per share	\$37.77	—
Total cost ⁽¹⁾	17	—

⁽¹⁾ Total cost includes \$13 million (2020: nil) charged to share capital and \$4 million (2020: nil) charged to deficit.

Preferred Share Capital

<i>(\$ millions, except as noted)</i>	Number of Preferred Shares <i>(millions)</i>	Preferred Share Capital
Balance at December 31, 2019	122	2,956
Part VI.1 tax	—	(10)
Balance at December 31, 2020	122	2,946
Class A, Series 11 Preferred shares redeemed, net of issue costs	(7)	(170)
Class A, Series 13 Preferred shares redeemed, net of issue costs	(10)	(250)
Part VI.1 tax	—	(9)
Balance at December 31, 2021	105	2,517

On June 15, 2020, none of the eight million Cumulative Redeemable Rate Reset Class A Preferred Series 19 shares outstanding were converted into Cumulative Redeemable Floating Rate Class A Preferred Series 20 shares.

On November 16, 2020, none of the nine million Cumulative Redeemable Rate Reset Class A Preferred Series 9 shares outstanding were converted into Cumulative Redeemable Floating Rate Class A Preferred Series 10 shares.

On January 25, 2021, in connection with the offering of the Series 1 Subordinated Notes, Pembina issued 600,000 Series 2021-A Class A Preferred Shares, to Computershare Trust Company of Canada, to be held in trust as treasury shares to satisfy Pembina's obligations under the indenture governing the Series 1 Subordinated Notes.

On March 1, 2021, Pembina redeemed all of the 6.8 million issued and outstanding Cumulative Redeemable Minimum Rate Reset Class A Preferred Shares, Series 11 (the "Series 11 Class A Preferred Shares") for a redemption price equal to \$25.00 per Series 11 Class A Preferred Share.

On June 1, 2021, Pembina redeemed all of the 10 million issued and outstanding Cumulative Redeemable Minimum Rate Reset Class A Preferred Shares, Series 13 (the "Series 13 Class A Preferred Shares") for a redemption price equal to \$25.00 per Series 13 Class A Preferred Shares, less taxes required to be deducted or withheld by the Company.

Dividends

The following dividends were declared by Pembina:

For the years ended December 31 <i>(\$ millions)</i>	2021	2020
Common shares		
\$2.52 per common share (2020: \$2.52)	1,386	1,385
Class A preferred shares		
\$1.23 per Series 1 Class A Preferred Share (2020: \$1.23)	12	12
\$1.12 per Series 3 Class A Preferred Share (2020: \$1.12)	7	7
\$1.14 per Series 5 Class A Preferred Share (2020: \$1.14)	11	11
\$1.10 per Series 7 Class A Preferred Share (2020: \$1.10)	11	11
\$1.08 per Series 9 Class A Preferred Share (2020: \$1.18)	10	11
\$0.36 per Series 11 Class A Preferred Share (2020: \$1.44)	2	10
\$0.72 per Series 13 Class A Preferred Share (2020: \$1.44)	7	14
\$1.12 per Series 15 Class A Preferred Share (2020: \$1.12)	9	9
\$1.21 per Series 17 Class A Preferred Share (2020: \$1.21)	7	7
\$1.17 per Series 19 Class A Preferred Share (2020: \$1.21)	10	10
\$1.23 per Series 21 Class A Preferred Share (2020: \$1.23)	20	20
\$1.31 per Series 23 Class A Preferred Share (2020: \$1.31)	16	16
\$1.30 per Series 25 Class A Preferred Share (2020: \$1.30)	13	13
	135	151

On January 6, 2022, Pembina announced that its Board of Directors had declared a dividend of \$0.21 per common share in the total amount of \$116 million, payable on February 15, 2022 to shareholders of record on January 25, 2022.

On February 3, 2022, Pembina announced that its Board of Directors had declared a dividend of \$0.21 per common share in the total amount of \$116 million, payable on March 15, 2022 to shareholders of record on February 25, 2022.

Pembina's Board of Directors also declared quarterly dividends for Pembina's Class A preferred shares on January 6, 2022 as outlined in the following table:

Series	Record Date	Payable Date	Per Share Amount	Dividend Amount (\$ millions)
Series 1	February 1, 2022	March 1, 2022	\$0.306625	3
Series 3	February 1, 2022	March 1, 2022	\$0.279875	2
Series 5	February 1, 2022	March 1, 2022	\$0.285813	3
Series 7	February 1, 2022	March 1, 2022	\$0.273750	3
Series 9	February 1, 2022	March 1, 2022	\$0.268875	2
Series 15	March 15, 2022	March 31, 2022	\$0.279000	2
Series 17	March 15, 2022	March 31, 2022	\$0.301313	2
Series 19	March 15, 2022	March 31, 2022	\$0.292750	2
Series 21	February 1, 2022	March 1, 2022	\$0.306250	5
Series 23	January 31, 2022	February 15, 2022	\$0.328125	4
Series 25	January 31, 2022	February 15, 2022	\$0.325000	3

17. REVENUE

Revenue has been disaggregated into categories to reflect how the nature, timing and uncertainty of revenue and cash flows are affected by economic factors.

a. Revenue Disaggregation

For the years ended December 31 (\$ millions)	2021				2020			
	Pipelines	Facilities	Marketing & New Ventures	Total	Pipelines	Facilities	Marketing & New Ventures	Total
Take-or-pay ⁽¹⁾	1,642	754	—	2,396	1,664	740	—	2,404
Fee-for-service ⁽¹⁾	348	138	—	486	295	117	—	412
Product sales ⁽²⁾	—	—	5,577	5,577	—	—	2,956	2,956
Revenue from contracts with customers	1,990	892	5,577	8,459	1,959	857	2,956	5,772
Operational finance lease income	17	2	—	19	15	—	—	15
Fixed operating lease income	116	33	—	149	131	35	—	166
Total external revenue	2,123	927	5,577	8,627	2,105	892	2,956	5,953

⁽¹⁾ Revenue recognized over time.

⁽²⁾ Revenue recognized at a point in time.

b. Contract Liabilities

Significant changes in the contract liabilities balances during the period are as follows:

For the years ended December 31 (\$ millions)	2021			2020		
	Take-or-Pay	Other Contract Liabilities	Total Contract Liabilities	Take-or-Pay	Other Contract Liabilities	Total Contract Liabilities
Opening balance	3	289	292	8	223	231
Additions (net in the period)	—	64	64	3	117	120
Revenue recognized from contract liabilities ⁽¹⁾	—	(65)	(65)	(8)	(51)	(59)
Closing balance	3	288	291	3	289	292
Less current portion ⁽²⁾	(3)	(68)	(71)	(3)	(59)	(62)
Ending balance	—	220	220	—	230	230

⁽¹⁾ Recognition of revenue related to performance obligations satisfied in the current period that were included in the opening balance of contract liabilities.

⁽²⁾ As at December 31, 2021, the balance includes \$3 million of cash collected under take-or-pay contracts which will be recognized within one year as the customer chooses to ship, process, or otherwise forego the associated service.

Contract liabilities depict Pembina's obligation to perform services in the future for cash and non-cash consideration which has been received from customers. Contract liabilities include up-front payments or non-cash consideration received from customers for future transportation, processing and storage services. Contract liabilities also include consideration received from customers for take-or-pay commitments where the customer has a make-up right to ship or process future volumes under a firm contract. These amounts are non-refundable should the customer not use its make-up rights.

Pembina does not have any contract assets. In all instances where goods or services have been transferred to a customer in advance of the receipt of customer consideration, Pembina's right to consideration is unconditional and has therefore been presented as a receivable.

c. Revenue Allocated to Remaining Performance Obligations

Pembina expects to recognize revenue in future periods that includes current unsatisfied remaining performance obligations totaling \$14.5 billion (2020: \$16.1 billion as restated). Over the next five years, this remaining performance obligation will be recognized annually ranging from \$2.0 billion (2020: \$1.9 billion as restated) declining to \$1.3 billion (2020: \$1.5 billion as restated). Subsequently, up to 2047 (2020: 2047), Pembina will recognize from \$1.1 billion (2020: \$1.3 billion as restated) to \$7 million (2020: \$7 million as restated) per year.

In preparing the above figures, Pembina has taken the practical expedient to exclude contracts that have original expected durations of one year or less. Variable consideration relating to flow through costs are not included in the amounts presented. These flow through costs do not impact net income or cash flow, and due to the long-term nature of the contracts there is significant uncertainty in estimating these amounts. In addition, Pembina excludes contracted revenue amounts for assets not yet in-service unless both Board of Directors approval and regulatory approval for the asset has been obtained.

Effective December 31, 2021, Pembina elected to change its policy for preparing the above figures to include contracts that are accounted for using the practical expedient to recognize revenue in an amount equal to Pembina's right to invoice. The inclusion of these contracts results in reliable and more relevant information for readers of the Company's Consolidated Financial Statements as this methodology results in a more complete value of Pembina's revenue allocated to remaining performance obligations. This change in policy was applied retrospectively and the prior period restated figures are shown above.

18. OTHER INCOME

For the year ended December 31, 2021, other income includes \$350 million associated with Pembina's termination of the arrangement agreement providing for the proposed acquisition by Pembina of Inter Pipeline Ltd.

19. NET FINANCE COSTS

For the years ended December 31 <i>(\$ millions)</i>	2021	2020
Interest expense on financial liabilities measured at amortized cost:		
Loans and borrowings	362	362
Subordinated hybrid notes	27	—
Leases	35	39
Unwinding of discount rate	16	15
Loss (gain) in fair value of non-commodity-related derivative financial instruments	19	(5)
Foreign exchange (gains) losses and other	(9)	9
Net finance costs	450	420

Net interest paid of \$443 million (2020: \$429 million) includes interest paid during construction and capitalized of \$25 million (2020: \$46 million).

20. OPERATING SEGMENTS

Pembina determines its reportable segments based on the nature of operations and includes three operating segments: Pipelines, Facilities and Marketing & New Ventures.

The Pipelines segment includes conventional, oil sands and transmission pipeline systems, crude oil storage and terminalling business and related infrastructure serving various markets and basins across North America.

The Facilities segment includes processing and fractionation facilities and related infrastructure, and a liquefied propane export facility on Canada's West Coast, which provide Pembina's customers with natural gas and NGL services that are highly integrated with Pembina's other businesses. In addition, the Facilities segment includes a bulk marine terminal in the Port of Vancouver, Canada.

The Marketing & New Ventures segment undertakes value-added commodity marketing activities including buying and selling products and optimizing storage opportunities, by contracting capacity on Pembina's and various third-party pipelines and utilizing Pembina's rail fleet and rail logistics capabilities. Marketing activities also include identifying commercial opportunities to further develop other Pembina assets. Pembina's Marketing business also includes results from Aux Sable's NGL extraction facility near Chicago, Illinois and other natural gas and NGL processing facilities, logistics and distribution assets in the United States and Canada.

The financial results of the operating segments are included below. Performance is measured based on results from operating activities, net of depreciation and amortization, as included in the internal management reports that are reviewed by Pembina's President and Chief Executive Officer, interim Chief Financial Officer and other Senior Vice Presidents. These results are used to measure performance as management believes that such information is the most relevant in evaluating results of certain segments relative to other entities that operate within these industries. Inter-segment transactions are recorded at market value and eliminated under corporate and inter-segment eliminations.

For the year ended December 31, 2021 <i>(\$ millions)</i>	Pipelines⁽¹⁾	Facilities	Marketing & New Ventures⁽²⁾	Corporate & Inter-segment Eliminations	Total
Revenue from external customers	2,123	927	5,577	—	8,627
Inter-segment revenue	156	436	—	(592)	—
Total revenue⁽³⁾	2,279	1,363	5,577	(592)	8,627
Operating expenses ⁽⁴⁾	556	471	—	(266)	761
Cost of goods sold, including product purchases	—	6	5,017	(334)	4,689
Depreciation and amortization included in operations	413	214	50	7	684
Cost of sales	969	691	5,067	(593)	6,134
Realized (gain) loss on commodity-related derivative financial instruments	—	(10)	210	—	200
Unrealized gain on commodity-related derivative financial instruments	—	(38)	(35)	—	(73)
Share of profit from equity accounted investees	124	80	77	—	281
Gross profit	1,434	800	412	1	2,647
Depreciation included in general and administrative	—	—	—	39	39
Other general and administrative ⁽⁴⁾	30	14	29	194	267
Other expense (income)	11	14	(5)	(268)	(248)
Impairment expense	447	22	5	—	474
Reportable segment results from operating activities	946	750	383	36	2,115
Net finance costs (income)	29	35	(8)	394	450
Reportable segment earnings (loss) before tax	917	715	391	(358)	1,665
Capital expenditures	475	136	21	26	658
Contributions to equity accounted investees	299	29	7	—	335

For the year ended December 31, 2020					
<i>(\$ millions)</i>	Pipelines⁽¹⁾	Facilities	Marketing & New Ventures⁽²⁾	Corporate & Inter-segment Eliminations	Total
Revenue from external customers	2,105	892	2,956	—	5,953
Inter-segment revenue	146	339	—	(485)	—
Total revenue⁽³⁾	2,251	1,231	2,956	(485)	5,953
Operating expenses ⁽⁴⁾	498	392	—	(178)	712
Cost of goods sold, including product purchases	—	11	2,815	(317)	2,509
Depreciation and amortization included in operations	402	199	50	11	662
Cost of sales	900	602	2,865	(484)	3,883
Realized gain on commodity-related derivative financial instruments	—	—	(54)	—	(54)
Unrealized (gain) loss on commodity-related derivative financial instruments	—	(4)	88	—	84
Share of profit from equity accounted investees - operations	227	55	—	—	282
Adjusted gross profit (loss)	1,578	688	57	(1)	2,322
Impairment in share of profit from equity accounted investees	—	—	(314)	—	(314)
Gross profit (loss)	1,578	688	(257)	(1)	2,008
Depreciation included in general and administrative	—	—	—	38	38
Other general and administrative ⁽⁴⁾	24	10	28	146	208
Other (income) expense	(1)	2	4	(23)	(18)
Impairment expense	1,396	10	370	—	1,776
Reportable segment results from operating activities	159	666	(659)	(162)	4
Net finance costs (income)	31	24	(13)	378	420
Reportable segment earnings (loss) before tax	128	642	(646)	(540)	(416)
Capital expenditures	587	370	38	34	1,029
Contributions to equity accounted investees	—	69	155	—	224

⁽¹⁾ Pipelines transportation revenue includes \$207 million (2020: \$228 million) associated with U.S. pipeline revenue.

⁽²⁾ Marketing & New Ventures includes revenue of \$265 million (2020: \$143 million) associated with U.S. midstream sales.

⁽³⁾ During 2021 and 2020, no one customer accounted for 10 percent or more of total revenues reported throughout all segments.

⁽⁴⁾ Pembina incurred \$440 million (2020: \$370 million) of employee costs, of which \$265 million (2020: \$244 million) was recorded in operating expenses and \$175 million (2020: \$126 million) in general and administrative expenses. Employee costs include salaries, benefits and share-based compensation.

Geographical Information

Non-Current Assets

For the years ended December 31		
<i>(\$ millions)</i>	2021	2020
Canada	26,128	26,504
United States	3,826	3,601
Total non-current assets⁽¹⁾	29,954	30,105

⁽¹⁾ Excludes deferred income tax assets.

21. EARNINGS (LOSS) PER COMMON SHARE

Basic Earnings (Loss) Per Common Share

The calculation of basic earnings per common share at December 31, 2021 was based on the earnings attributable to common shareholders of \$1.1 billion (2020: \$476 million loss) and a weighted average number of common shares outstanding of 550 million (2020: 550 million).

Diluted Earnings (Loss) Per common Share

The calculation of diluted earnings per common share at December 31, 2021 was based on earnings attributable to common shareholders of \$1.1 billion⁽¹⁾ (2020: \$476 million loss), and weighted average number of common shares outstanding after adjustment for the effects of all dilutive potential common shares of 551 million (2020: 550 million).

Earnings (Loss) Attributable to Common Shareholders

For the years ended December 31		
<i>(\$ millions)</i>	2021	2020
Earnings (loss)	1,242	(316)
Dividends on preferred shares	(135)	(148)
Cumulative dividends on preferred shares, not yet declared	(9)	(12)
Basic and diluted earnings (loss) attributable to common shareholders	1,098	(476)

Weighted Average Number of Common Shares

<i>(In millions of shares, except as noted)</i>	2021	2020
Issued common shares at January 1	550	548
Effect of shares issued on exercise of options	—	2
Basic weighted average number of common shares at December 31	550	550
Dilutive effect of share options on issue ⁽¹⁾	1	—
Diluted weighted average number of common shares at December 31	551	550
Basic earnings (loss) per common share (dollars)	2.00	(0.86)
Diluted earnings (loss) per common share (dollars)	1.99	(0.86)

⁽¹⁾ The average market value of Pembina's shares for purposes of calculating the dilutive effect of share options for the year ended December 31, 2021 was based on quoted market prices for the period during which the options were outstanding.

For the year ended December 31, 2021, no stock options (2020: 277 thousand) were excluded from the calculation of diluted earnings (loss) per common share as the impact of these options are anti-dilutive.

22. PENSION PLAN

As at December 31 <i>(\$ millions)</i>	2021	2020
Registered defined benefit net (asset) obligation	(11)	26
Supplemental defined benefit net obligation	17	18
Net employee benefit obligations	6	44

Pembina maintains defined contribution plans and non-contributory defined benefit pension plans covering its employees. Pembina contributes five to 10 percent of an employee's earnings to the defined contribution plan until the employee's age plus years of service equals 50, at which time they become eligible for the defined benefit plans. Pembina recognized \$11 million in expense for the defined contribution plan during the year (2020: \$12 million). The defined benefit plans include a funded registered plan for all eligible employees and an unfunded supplemental retirement plan for those employees affected by the Canada Revenue Agency maximum pension limits. The defined benefit plans are administered by separate pension funds that are legally separated from Pembina. Benefits under the plans are based on the length of service and the annual average best three years of earnings during the last 10 years of service of the employee. Benefits paid out of the plans are not indexed. Pembina measures its accrued benefit obligations and the fair value of plan assets for accounting purposes as at December 31 of each year. The most recent actuarial funding valuation was at December 31, 2020. The defined benefit plans expose Pembina to actuarial risks such as longevity risk, interest rate risk, and market (investment) risk.

Effective January 1, 2021, Pembina revised the eligibility requirements for the defined benefit plan. Employees with an age plus years of service of 40 at January 1, 2021 will remain eligible for the defined benefit plan, when their age plus years of service reaches 50. All other employees will remain in the defined contribution plan.

Defined Benefit Obligations

As at December 31 <i>(\$ millions)</i>	2021		2020	
	Registered Plans	Supplemental Plan	Registered Plan	Supplemental Plan
Present value of unfunded obligations	—	17	—	18
Present value of funded obligations	257	—	278	—
Total present value of obligations	257	17	278	18
Fair value of plan assets	268	—	252	—
Recognized defined benefit assets (obligations)	11	(17)	(26)	(18)

Pembina funds the defined benefit obligation plans in accordance with government regulations by contributing to trust funds administered by an independent trustee. The funds are invested primarily in equities and bonds. Defined benefit plan contributions totaled \$23 million for the year ended December 31, 2021 (2020: \$23 million).

Pembina has determined that, in accordance with the terms and conditions of the defined benefit plans, and in accordance with statutory requirements of the plans, the present value of refunds or reductions in future contributions is not lower than the balance of the total fair value of the plan assets less the total present value of obligations. As such, no decrease in the defined benefit asset is necessary at December 31, 2021 (December 31, 2020: nil).

Registered Defined Benefit Pension Plan Assets Comprise

As at December 31 <i>(Percent)</i>	2021	2020
Equity securities	61	63
Debt	39	37
	100	100

Movement in the Present Value of the Defined Benefit Pension Obligation

(\$ millions)	2021		2020	
	Registered Plans	Supplemental Plan	Registered Plan	Supplemental Plan
Defined benefits obligations at January 1	278	18	250	16
Benefits paid by the plan	(28)	(1)	(28)	(2)
Current service costs	27	1	18	1
Interest expense	7	1	8	1
Actuarial (gains) losses in other comprehensive income	(27)	(2)	30	2
Defined benefit obligations at December 31	257	17	278	18

Movement in the Present Value of Registered Defined Benefit Pension Plan Assets

(\$ millions)	2021	2020
Fair value of plan assets at January 1	252	231
Contributions paid into the plan	23	23
Benefits paid by the plan	(28)	(28)
Return on plan assets	15	18
Interest income	6	8
Fair value of registered plan assets at December 31	268	252

Expense Recognition in Earnings (Loss)

For the years ended December 31	2021	2020
(\$ millions)		
Registered Plan		
Current service costs	28	19
Interest on obligation	8	9
Interest on plan assets	(6)	(8)
	30	20

The expense is recognized in the following line items in the consolidated statement of comprehensive income (loss):

For the years ended December 31	2021	2020
(\$ millions)		
Registered Plan		
Operating expenses	16	10
General and administrative expense	14	10
	30	20

Expense recognized for the Supplemental Plan was less than \$2 million for each of the years ended December 31, 2021 and 2020.

Actuarial Gains and Losses Recognized in Other Comprehensive Income (Loss)

(\$ millions)	2021			2020		
	Registered Plans	Supplemental Plan	Total	Registered Plan	Supplemental Plan	Total
Balance at January 1	(41)	(4)	(45)	(33)	(2)	(35)
Remeasurements:						
Financial assumptions	19	2	21	(13)	(1)	(14)
Experience adjustments	2	—	2	(10)	(1)	(11)
Return on plan assets excluding interest income	11	—	11	15	—	15
Recognized gain (loss) during the period after tax	32	2	34	(8)	(2)	(10)
Balance at December 31	(9)	(2)	(11)	(41)	(4)	(45)

Principal actuarial assumptions used:

As at December 31 <i>(weighted average percent)</i>	2021	2020
Discount rate	3.2	2.6
Future pension earning increases	4.0	4.0

Assumptions regarding future mortality are based on published statistics and mortality tables. The current longevities underlying the values of the liabilities in the defined plans are as follows:

As at December 31 <i>(years)</i>	2021	2020
Longevity at age 65 for current pensioners		
Males	22.0	21.9
Females	24.3	24.3
Longevity at age 65 for current member aged 45		
Males	23.0	22.9
Females	25.3	25.2

The calculation of the defined benefit obligation is sensitive to the discount rate, compensation increases, retirements and termination rates as set out above. A change in the estimated discount rate of 3.2 percent by 100 basis points at December 31, 2021 is considered reasonably possible in the next financial year. An increase by 100 basis points would result in a \$37 million reduction to the obligation whereas, a decrease would lead to a \$46 million increase to the obligation.

Pembina expects to contribute \$22 million to the defined benefit plans in 2022.

23. SHARE-BASED PAYMENTS

At December 31, 2021, Pembina has the following share-based payment arrangements:

Share Option Plan (Equity-Settled)

Pembina has a share option plan under which employees are eligible to receive options to purchase shares in Pembina.

Long-Term Share Unit Award Incentive Plan (Cash-Settled)

Pembina has a long-term share unit award incentive plan. Under the share-based compensation plan, awards of restricted ("RSU") and performance ("PSU") share units are made to officers and employees. The plan results in participants receiving cash compensation based on the value of the underlying notional shares granted under the plan. Payments are based on a trading value of Pembina's common shares plus notional dividends and performance of Pembina.

Pembina also has a deferred share unit ("DSU") plan. Under the DSU plan, directors are required to take at least 50 percent of total director compensation as DSUs, until such time that they have met certain share ownership guidelines. A DSU is a notional share that has the same value as one Pembina common share. Its value changes with Pembina's share price. DSUs do not have voting rights but they accrue dividends as additional DSU units, at the same rate as dividends paid on Pembina's common shares. DSUs are paid out when a director retires from the board and are redeemed for cash using the weighted average of trading price of common shares on the Toronto Stock Exchange ("TSX") for the last five trading days before the redemption date, multiplied by the number of DSUs the director holds.

Terms and Conditions of Share Option Plan and Share Unit Award Incentive Plan

Share Option Plan

Share options vest one-third on the first anniversary of the grant date, one-third on the second anniversary of the grant date and one-third on the third anniversary of the grant date and have a contractual life of seven years. In 2021, Pembina granted select executive officers and non-officers stock options that vest after a four-year period and expire seven years after issuance.

Long-Term Share Unit Award Incentive Plan⁽¹⁾

Grant date RSUs, PSUs and DSUs to Officers, Employees and Directors (thousands of units, except as noted)	PSUs ⁽²⁾	RSUs ⁽²⁾	DSUs	Total
2020	469	487	31	987
2021	704	1,429	44	2,177

⁽¹⁾ Distribution Units are granted in addition to RSU and PSU grants based on notional accrued dividends from RSU and PSU granted but not paid.

⁽²⁾ Contractual life of 3 years.

PSUs vest on the third anniversary of the grant date. RSUs vest one-third on the first anniversary of the grant date, one-third on the second anniversary of the grant date and one-third on the third anniversary of the grant date. In 2021, Pembina granted additional RSUs that vest on the third anniversary of the grant date. Actual units awarded are based on the trading value of the shares and performance of Pembina.

Disclosure of Share Option Plan

The number and weighted average exercise prices of share options as follows:

(thousands of options, except as noted)	Number of Options	Weighted Average Exercise Price (dollars)
Outstanding at December 31, 2019	18,584	\$44.65
Granted	7,316	\$37.55
Exercised	(2,188)	\$40.17
Forfeited	(1,103)	\$44.86
Expired	(833)	\$45.24
Outstanding at December 31, 2020	21,776	\$42.68
Granted	2,695	\$36.36
Exercised	(464)	\$34.41
Forfeited	(835)	\$39.23
Expired	(3,201)	\$47.87
Outstanding at December 31, 2021	19,971	\$41.33

As of December 31, 2021, the following options are outstanding:

(thousands of options, except as noted) Exercise Price (dollars)	Number Outstanding at December 31, 2021	Options Exercisable	Weighted Average Remaining Life
\$26.83 – \$35.25	3,517	1,102	5.2
\$35.26 – \$41.38	4,149	1,700	4.6
\$41.39 – \$43.41	2,677	2,677	2.7
\$43.42 – \$46.00	4,618	2,722	4.5
\$46.01 – \$49.78	5,010	3,575	4.3
Total	19,971	11,776	4.4

Options are exercised regularly throughout the year. Therefore, the weighted average share price during the year of \$40.17 (2020: \$49.79) is representative of the weighted average share price at the date of exercise.

Expected volatility is estimated by considering historic average share price volatility. The weighted average inputs used in the measurement of the fair values at grant date of share options are the following:

Share Options Granted

For the years ended December 31 (dollars, except as noted)	2021 Graded Vesting	2021 Cliff Vesting	2020 Graded Vesting
Weighted average			
Fair value at grant date	7.78	6.59	3.82
Expected volatility (percent)	49.06	40.01	36.61
Expected option life (years)	3.67	5.00	3.67
Expected annual dividends per option	2.52	2.52	2.52
Expected forfeitures (percent)	7.1	7.1	6.9
Risk-free interest rate (based on government bonds)(percent)	0.6	1.0	0.5

Disclosure of Long-Term Share Unit Award Incentive Plan

The long-term share unit award incentive plans were valued using the volume weighted average price for 20 days ending December 31, 2021 of \$37.99 (2020: \$32.53). Actual payment may differ from amount valued based on market price and company performance.

Employee Expenses

For the years ended December 31 ((\$ millions)	2021	2020
Share option plan, equity settled	31	17
Long-term share unit award incentive plan	69	11
Share-based compensation expense	100	28
Total carrying amount of liabilities for cash settled arrangements	88	60
Total intrinsic value of liability for vested benefits	56	39

24. ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)

(\$ millions)	Currency Translation Reserve	Cash Flow Hedge Reserve	Pension and other Post-Retirement Benefit Plan Adjustments ⁽²⁾	Total
Balance at December 31, 2019	134	—	(36)	98
Other comprehensive loss before hedging activities	(117)	—	(10)	(127)
Other comprehensive gain resulting from hedging activities ⁽¹⁾	32	—	—	32
Tax impact	(1)	—	—	(1)
Balance at December 31, 2020	48	—	(46)	2
Other comprehensive (loss) gain before hedging activities	(18)	—	34	16
Other comprehensive gain resulting from hedging activities ⁽¹⁾	2	8	—	10
Balance at December 31, 2021	32	8	(12)	28

⁽¹⁾ Amounts relate to hedges of the Company's net investment in foreign operations (reported in Currency Translation Reserve) and interest rate derivatives designated as cash flow hedges (reported in Cash Flow Hedge Reserve)(Note 25).

⁽²⁾ Pension and other Post-Retirement Benefit Plan Adjustments will not be reclassified into earnings.

25. FINANCIAL INSTRUMENTS & RISK MANAGEMENT

Risk Management Overview

Pembina has exposure to counterparty credit risk, liquidity risk and market risk. Pembina recognizes that effective management of these risks is a critical success factor in managing organization and shareholder value.

Risk management strategies, policies and limits ensure risks and exposures are aligned to Pembina's business strategy and risk tolerance. Pembina's Board of Directors is responsible for providing risk management oversight at Pembina and oversees how management monitors compliance with Pembina's risk management policies and procedures and reviews the adequacy of this risk framework in relation to the risks faced by Pembina. Internal audit personnel assist the Board of Directors in its oversight role by monitoring and evaluating the effectiveness of the organization's risk management system.

Counterparty Credit Risk

Counterparty credit risk represents the financial loss Pembina may experience if a counterparty to a financial instrument or commercial agreement failed to meet its contractual obligations to Pembina in accordance with the terms and conditions of the financial instruments or agreements with Pembina. Counterparty credit risk arises primarily from Pembina's cash and cash equivalents, trade and other receivables, advances to related parties and from counterparties to its derivative financial instruments. The carrying amount of Pembina's cash and cash equivalents, trade and other receivables, advances to related parties, derivative financial instruments and certain financial guarantees represents the maximum counterparty credit exposure, without taking into account security held.

Pembina manages counterparty credit risk through established credit management techniques, including conducting comprehensive financial and other assessments for all new counterparties and regular reviews of existing counterparties to establish and monitor a counterparty's creditworthiness, setting exposure limits, monitoring exposures against these limits, entering into master netting arrangements and obtaining financial assurances where warranted. Pembina utilizes various sources of financial, credit and business information in assessing the creditworthiness of a counterparty including external credit ratings, where available, and in other cases, detailed financial statement analysis in order to generate an internal credit rating based on quantitative and qualitative factors. The Board of Directors has approved a counterparty exposure limit matrix which establishes the maximum exposure that can be approved for a counterparty based on debt rating. Pembina continues to closely monitor and reassess the creditworthiness of its counterparties, which has resulted in Pembina reducing or mitigating its exposure to certain counterparties where it was deemed warranted and permitted under contractual terms.

Financial assurances from counterparties may include guarantees, letters of credit and cash. At December 31, 2021 letters of credit totaling \$100 million (December 31, 2020: \$130 million) were held primarily in respect of customer trade receivables.

Pembina typically has collected its trade receivables in full and at December 31, 2021, 98 percent were current (2020: 94 percent). Management defines current as outstanding accounts receivable under 30 days past due. Pembina has a general lien and a continuing and first priority security interest in, and a secured charge on, all of a shipper's petroleum products in its custody.

At December 31, the aging of past due trade and other receivables was as follows:

<i>(\$ millions)</i>	2021	2020
31-60 days past due	2	3
Greater than 61 days past due	2	8
	4	11

Pembina uses a loss allowance matrix to measure lifetime expected credit losses at initial recognition and throughout the life of the receivable. The loss allowance matrix is determined based on Pembina's historical default rates over the expected life of trade receivables, adjusted for forward-looking estimates. Management believes the unimpaired amounts that are past due by greater than 30 days are fully collectible based on historical default rates of customers and management's assessment of counterparty credit risk through established credit management techniques as discussed above.

Expected credit losses on lease receivables are determined using a probability-weighted estimate of credit losses, measured as the present value of all expected cash shortfalls, discounted at the interest rates implicit in the leases, using reasonable and supportable information about past events, current conditions and forecasts of future economic conditions. Pembina considers the risk of default relating to lease receivables low based on Pembina's assessment of individual counterparty credit risk through established credit management techniques as discussed above.

Advances to related parties at December 31, 2021 are held at amortized cost and consist of funds advanced by Pembina to a jointly controlled entity. Expected credit losses are measured using a probability-weighted estimate of credit losses, measured as the present value of all expected cash shortfalls, discounted at the effective interest rate of the financial asset, using reasonable and supportable information about past events, current conditions and forecasts of future economic conditions.

Pembina monitors and manages its concentration of counterparty credit risk on an ongoing basis. Pembina believes these measures minimize its counterparty credit risk but there is no certainty that they will protect it against all material losses. As part of its ongoing operations, Pembina must balance its market and counterparty credit risks when making business decisions.

Liquidity Risk

Liquidity risk is the risk Pembina will not be able to meet its financial obligations as they come due. The following are the contractual maturities of financial liabilities, including estimated interest payments.

As at December 31, 2021 (\$ millions)	Outstanding Balances Due by Period					
	Carrying Amount	Expected Cash Flows	Less Than 1 Year	1 - 3 Years	3 - 5 Years	More Than 5 Years
Trade payables and accrued liabilities	1,063	1,063	1,063	—	—	—
Loans and borrowings	10,645	16,535	1,478	1,944	2,088	11,025
Subordinated hybrid notes	594	874	41	58	58	717
Dividends payable	115	115	115	—	—	—
Derivative financial liabilities	59	59	59	—	—	—
Lease liabilities	723	978	113	181	152	532

Pembina manages its liquidity risk by forecasting cash flows over a 12 month rolling time period to identify financing requirements. These financing requirements are then addressed through a combination of credit facilities and through access to capital markets, if required.

Market Risk

Pembina's results are subject to movements in commodity prices, foreign exchange and interest rates. A formal Risk Management Program including policies and procedures has been designed to mitigate these risks.

a. Commodity Price Risk

Certain of the transportation contracts or tolling arrangements with respect to Pembina's pipeline assets do not include take-or-pay commitments from crude oil and gas producers and, as a result, Pembina is exposed to throughput risk with respect to those assets. A decrease in volumes transported can directly and adversely affect Pembina's revenues and earnings. The demand for, and utilization of, Pembina's pipeline assets may be impacted by factors such as changing market fundamentals, capacity bottlenecks, operational incidents, regulatory restrictions, system maintenance, weather and increased competition. Market fundamentals, such as commodity prices and price differentials, natural gas and gasoline consumption, alternative energy sources and global supply disruptions outside of Pembina's control can impact both the supply of and demand for the commodities transported on Pembina's pipelines.

Pembina's Marketing business includes activities related to product storage, terminalling, and hub services. These activities expose Pembina to certain risks relating to fluctuations in commodity prices and, as a result, Pembina may experience volatility in revenue and impairments related to the book value of stored product with respect to these activities. Primarily, Pembina enters into contracts to purchase and sell crude oil, condensate, NGL and natural gas at floating market prices; as a result, the prices of products that are marketed by Pembina are subject to volatility as a result of factors such 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 secure less volatile margins. Notwithstanding Pembina's management of price and quality risk, marketing margins for commodities can vary and have varied significantly from period to period in the past. This variability could have an adverse effect on the results of Pembina's Marketing business and its overall results of operations. To assist in reducing this inherent variability in its Marketing business, Pembina has invested, and will continue to invest, in assets that have a fee-based revenue component.

Pembina is also exposed to potential price declines and decreasing frac spreads between the time Pembina purchases NGL feedstock and sells NGL products. Frac spread is the difference between the sale prices of NGL products and the cost of NGL sourced from natural gas and acquired at prices related to natural gas 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 exchange rate. In addition to the frac spread ratio changes, there is also a differential between NGL product prices and crude oil prices which can change margins realized for midstream products. The amount of profit or loss made on the extraction portion of the business will generally increase or decrease with frac spreads. This exposure could result in variability of cash flow generated by the Marketing business, which could affect Pembina and the cash dividends that Pembina is able to distribute.

Pembina utilizes financial derivative instruments as part of its overall risk management strategy to assist in managing the exposure to commodity price, interest rate, cost of power and foreign exchange risk. As an example of commodity price mitigation, Pembina actively fixes a portion of its exposure to fractionation margins through the use of derivative financial instruments. Additionally, Pembina's Marketing business is also exposed to variability in quality, time and location differentials for various products, and financial instruments may be used to offset Pembina's exposures to these differentials. Pembina does not use financial instruments for speculative purposes. Commodity price fluctuations and volatility can also impact producer activity and throughput in Pembina's infrastructure.

The following table shows the impact on earnings⁽¹⁾ if the underlying commodity price risk of the derivative financial instruments (increased) or decreased by 15 percent, with other variables held constant.

As at December 31, 2021 (\$ millions)	15 Percent Price Increase	15 Percent Price Decrease
Crude oil	(40)	40
Natural gas	11	(11)
NGL ⁽²⁾	(39)	39

⁽¹⁾ Based on average market prices.

⁽²⁾ Includes propane, butane and condensate.

b. Foreign Exchange Risk

Certain of Pembina's cash flows, namely a portion of its commodity-related cash flows, certain cash flows from U.S.-based infrastructure assets and distributions from U.S.-based investments in equity accounted investees, are subject to currency risk, arising from the denomination of specific cash flows in U.S. dollars. Additionally, a portion of Pembina's capital expenditures and contributions or loans to Pembina's U.S.-based investments in equity accounted investees, may be denominated in U.S. dollars. Furthermore, the value of the investment in U.S. dollar denominated subsidiaries will fluctuate with changes in exchange rates when translated into Pembina's functional currency.

Pembina monitors, assesses and responds to these foreign currency risks using an active risk management program, which may include the issuance of U.S. dollar debt, and exchange of foreign currency for domestic currency at a fixed rate.

The following table shows the impact on earnings⁽¹⁾ if the underlying foreign exchange risk rate of the derivative financial instruments (increased) or decreased by \$0.10, with other variables held constant.

As at December 31, 2021 (\$ millions)	\$0.10 Rate Increase	\$0.10 Rate Decrease
U.S. to Canadian dollars	(27)	27

⁽¹⁾ Based on the U.S. to Canadian dollar exchange rate.

c. Interest Rate Risk

Interest bearing financial liabilities include Pembina's debt and lease liabilities. Pembina has a floating interest rate debt in the form of its credit facilities and certain long-term debt, which subjects Pembina to interest rate risk. Pembina monitors and assesses variable interest rate risk and responds to this risk by issuing long-term debt with fixed interest rates or by entering into interest rate swaps.

Pembina's U.S. drawings on its credit facilities, certain U.S. debt, and Pembina's interest rate swaps have variable rate components that reference the USD London Interbank Offered Rate ("LIBOR"). 1-Week and 2-Month USD LIBOR rates have been phased out on December 31, 2021 and other USD LIBOR rates will cease to be published at the end of June 2023. LIBOR will likely be replaced by a secured overnight financing rate. Pembina will continue to monitor developments and the potential impact on the business.

At the reporting date, the interest rate profile of Pembina's interest-bearing financial instruments was:

As at December 31 (\$ millions)	2021	2020
Carrying amounts of financial liability		
Fixed rate instruments ⁽¹⁾	11,055	10,120
Variable rate instruments ⁽²⁾	907	1,530
	11,962	11,650

⁽¹⁾ Includes lease liabilities and subordinated hybrid notes.

⁽²⁾ At December 31, 2021, Pembina held positions in financial derivative contracts designated as cash flow hedging instruments, fixing the interest rates on U.S. \$250 million of variable rate debt (December 31, 2020: U.S. \$250 million).

Cash Flow Sensitivity Analysis for Variable Rate Instruments

The following table shows the impact on earnings if interest rates at the reporting date would have (increased) decreased earnings by 100 basis points, with other variables held constant.

As at December 31, 2021 (\$ millions)	100 Basis Point Increase	100 Basis Point Decrease
Variable rate instruments	(11)	11

Fair Values

The fair values of financial assets and liabilities, together with the carrying amounts shown in the consolidated statements of financial position, are shown in the table below. Certain non-derivative financial instruments measured at amortized cost including, cash and cash equivalents, trade receivables and other, finance lease receivables, advances to related parties, trade payables and other, and other liabilities have been excluded because they have carrying amounts that approximate their fair value due to the nature of the item or the short time to maturity. These instruments would be classified in Level 2 of the fair value hierarchy.

As at December 31 (\$ millions)	2021				2020			
	Carrying Value	Fair Value ⁽¹⁾			Carrying Value	Fair Value ⁽¹⁾		
		Level 1	Level 2	Level 3		Level 1	Level 2	Level 3
Financial assets carried at fair value								
Derivative financial instruments ⁽³⁾	95	—	84	11	53	—	53	—
Financial liabilities carried at fair value								
Derivative financial instruments ⁽³⁾	59	—	59	—	69	—	69	—
Contingent consideration ⁽⁴⁾	70	—	35	35	—	—	—	—
Financial liabilities carried at amortized cost								
Loans and borrowings ⁽²⁾	11,239	—	11,814	—	10,876	—	11,902	—

⁽¹⁾ The basis for determining fair value is disclosed in Note 4.

⁽²⁾ Carrying value of current and non-current balances. Includes loans and borrowings and subordinated hybrid notes.

⁽³⁾ At December 31, 2021 all derivative financial instruments are carried at fair value through earnings, except for \$8 million in interest rate derivative financial assets that have been designated as cash flow hedges.

⁽⁴⁾ Included in trade payables and other and other liabilities. See Note 9 for further details.

Level 2

Pembina's Level 2 financial instruments carried at fair value are valued using inputs that include quoted forward prices for commodities, time value and volatility factors, which can be substantially observed or corroborated in the marketplace. Instruments in this category include non-exchange traded derivatives such as over-the-counter physical forwards and options, including those that have prices similar to quoted market prices. Pembina obtains quoted market prices for its inputs from information sources including banks, Bloomberg Terminals and Natural Gas Exchange.

Level 3

In April 2021, Pembina entered into a long-term power purchase agreement that resulted in the recognition of an embedded derivative which Pembina has classified in Level 3 of the fair value hierarchy. The embedded derivative is accounted for at fair value with realized and unrealized gains and losses recognized in earnings. The fair value is measured using a forward pricing model based on the fixed off take price and forward power price differentials each reporting date. The fair value is determined using the contracted Alberta Electric System Operator ("AESO") wind power price at the reporting date compared to the quoted forward AESO wind power prices at the reporting date adjusted for the wind discount, which is calculated as the decrease in realized power price for wind generators relative to the average power pool prices.

The significant unobservable inputs used in the fair value measurement of the Level 3 derivative instrument were as follows:

Significant Unobservable Inputs (percent)	2021
Wind discount	29.0
Wind escalation rate	4.5
Wind capacity	38.2

Wind discount inputs are adjusted for management's projections of wind discount escalation over time which cannot be substantially observed or corroborated in the marketplace.

The table below shows the impact to earnings associated with the change in fair value of the derivative if the following significant unobservable inputs at the reporting date would have (increased) decreased, with other variables held constant. Management concluded that changes in the wind capacity factor would not have a material impact to the fair value measurement.

As at December 31, 2021 <i>(\$ millions)</i>	Sensitivity Range	Increase	Decrease
Wind discount	+/- 20 percent	(38)	38
Wind escalation rate	+/- 10 percent	(8)	8

Changes in net fair value of derivative asset and liability classified as Level 3 in the fair value hierarchy were as follows:

For the year ended December 31 <i>(\$ millions)</i>	2021
Level 3 net derivative asset at beginning of period	—
Total gain (loss):	
Included in earnings	11
Level 3 net derivative asset at end of period	11

There were no transfers into or out of Level 3 during the year ended December 31, 2021.

Interest Rates Used for Determining Fair Value

The interest rates used to discount estimated cash flows, when applicable, are based on the government yield curve at the reporting date plus an adequate credit spread, and were as follows:

As at December 31 <i>(percent)</i>	2021	2020
Derivatives	0.4 - 1.8	0.5 - 0.7
Loans and borrowings	1.1 - 5.0	0.5 - 3.9

Fair value of power derivatives are based on market rates reflecting forward curves.

Derivative instruments

Pembina enters into derivative instruments to hedge future cash flows associated with interest rate, commodity, and foreign exchange exposures. Derivatives are considered effective hedges to the extent that they offset the changes in value of the hedged item or transaction resulting from a specified risk factor. In some cases, even though the derivatives are considered to be effective economic hedges, they do not meet the specific criteria for hedge accounting treatment and are classified as held at fair value through profit or loss ("FVTPL").

The following table is a summary of the net derivative financial instruments:

As at December 31 (\$ millions)	2021					2020			
	Current Asset ⁽¹⁾	Non-Current Asset	Current Liability ⁽¹⁾	Non-Current Liability	Total	Current Asset ⁽¹⁾	Non-Current Asset	Current Liability ⁽¹⁾	Total
Commodity, power, storage and rail financial instruments	13	73	(48)	(6)	32	11	27	(68)	(30)
Interest rate	1	8	—	—	9	—	1	(1)	—
Foreign exchange	—	—	(5)	—	(5)	14	—	—	14
Net derivative financial instruments	14	81	(53)	(6)	36	25	28	(69)	(16)

⁽¹⁾ At December 31, 2021 the derivative financial instruments were offset by \$11 million (2020: \$6 million) when determining the net amounts presented on the consolidated statement of financial position.

Notional and Maturity Summary

The maturity and notional amount or quantity outstanding related to Pembina's derivative instruments are as follows:

(\$ millions)	Liquids (bpd)	Natural Gas (GJ/d)	Power (GWh)	Foreign Exchange	Interest Rate
As at December 31, 2021					
Purchases ⁽¹⁾	—	62,615	6,166	—	—
Sales ⁽¹⁾	16,550	—	—	—	—
Millions of U.S. dollars	—	—	—	272	250
Maturity dates	2022	2022	2040	2022	2025
As at December 31, 2020					
Purchases ⁽¹⁾⁽²⁾	1,756	73,557	—	—	—
Sales ⁽¹⁾	25,284	—	—	—	—
Millions of U.S. dollars	—	—	—	260	250
Maturity dates	2021	2021	2021	2021	2025

⁽¹⁾ Barrels per day ("bpd"), gigajoules per day ("GJ/d") and gigawatt hours ("GWh").

⁽²⁾ As at December 31, 2020 Pembina had outstanding power purchase derivatives representing approximately 6 megawatt hours.

Gains and Losses on Derivative Instruments

Realized and unrealized losses (gains) on derivative instruments are as follows:

For the years ended December 31 (\$ millions)	2021	2020
Derivative instruments held at FVTPL⁽¹⁾		
Realized loss (gain)		
Commodity-related	200	(54)
Foreign exchange	(12)	2
Unrealized (gain) loss		
Commodity-related	(73)	84
Foreign exchange	19	5
Derivative instruments in hedging relationships⁽²⁾		
Unrealized (gain) loss		
Interest rate	(8)	—

⁽¹⁾ Realized and unrealized losses (gains) on commodity derivative instruments held at FVTPL are included in loss (gain) on commodity-related derivative financial instruments in the Consolidated Financial Statements. Realized and unrealized losses (gains) on foreign exchange derivative instruments held at FVTPL are included in net finance costs in the Consolidated Financial Statements.

⁽²⁾ Unrealized losses (gains) on derivatives in designated cash flow hedging relationships are recognized in the cash flow hedge reserve in accumulated other comprehensive income, with realized (gains) losses being reclassified to net finance costs. Refer to Note 24 for amounts reclassified. No (gains) losses have been recognized in net income relating to discontinued cash flow hedges.

Non-Derivative Instruments Designated as Net Investment Hedges

Pembina has designated certain U.S. dollar denominated debt as a hedge of the Company's net investment in U.S. dollar denominated subsidiaries and investments in equity accounted investees. The designated debt has been assessed as having no ineffectiveness as the U.S. dollar debt has an equal and opposite exposure to U.S. dollar fluctuations. As a result, all foreign exchange gains or losses on the debt are reported directly in other comprehensive income.

The following balances of U.S. dollar debt had been designated as hedges:

For the years ended December 31 (\$ millions)	2021	2020
Notional amount of U.S. debt designated (<i>in U.S. dollars</i>)	250	250
Carrying value of U.S. debt designated	316	317
Maturity date	2025	2025

26. CAPITAL MANAGEMENT

Pembina's objective when managing capital is to ensure a stable stream of dividends to shareholders that is sustainable over the long-term. Pembina manages its capital structure based on requirements arising from significant capital development activities, the risk characteristics of its underlying asset base and changes in economic conditions. Pembina manages its capital structure and short-term financing requirements using non-GAAP measures, including the ratios of debt to adjusted EBITDA, debt to total enterprise value, adjusted cash flow to debt and debt to equity. The metrics are used to measure Pembina's financial leverage and measure the strength of Pembina's balance sheet. Pembina remains satisfied that the leverage currently employed in its capital structure is sufficient and appropriate given the characteristics and operations of the underlying asset base. Pembina, upon approval from its Board of Directors, will balance its overall capital structure through new equity or debt issuances, as required.

Pembina maintains a conservative capital structure that allows it to finance its day-to-day cash requirements through its operations, without requiring external sources of capital. Pembina funds its operating commitments, short-term capital spending as well as its dividends to shareholders through this cash flow, while new borrowing and equity issuances are primarily reserved for the support of specific significant development activities. The capital structure of Pembina consists of shareholder's equity, comprised of common and preferred equity, plus long-term debt. Long-term debt is comprised of bank credit facilities and unsecured notes.

Pembina is subject to certain financial covenants under its note indentures and credit agreements and is in compliance with all financial covenants as of December 31, 2021.

Note 16 of these financial statements shows the change in share capital for the year ended December 31, 2021.

27. GROUP ENTITIES

Significant Subsidiaries

As at December 31 <i>(percentages)</i>	Jurisdiction	Ownership Interest
Pembina Cochin LLC	Delaware U.S.	100
Pembina Empress NGL Partnership	Alberta	100
Pembina Gas Services Limited Partnership	Alberta	100
Pembina Holding Canada L.P.	Alberta	100
Pembina Infrastructure and Logistics L.P.	Alberta	100
Pembina Midstream Limited Partnership	Alberta	100
Pembina Oil Sands Pipeline L.P.	Alberta	100
Pembina Pipeline	Alberta	100

28. RELATED PARTIES

Pembina enters into transactions with related parties in the normal course of business and on terms equivalent to those that prevail in arm's length transactions, unless otherwise noted. Pembina contracts capacity from its equity accounted investees, advances funds to support operations, provides letters of credit, including financial guarantees, and provides services, on a cost recovery basis, to investments in equity accounted investees. A summary of the significant related party transactions are as follows:

Equity Accounted Investees

(\$ millions)	2021	2020
For the years ended December 31:		
Services provided	162	136
Services received	31	14
Interest income	15	14
As at December 31:		
Advances to related parties ⁽¹⁾	8	13
Trade receivables and other	7	7
Trade payables and accrued liabilities	27	18

⁽¹⁾ During the year ended December 31, 2021, Fort Corp. repaid advances of \$5 million (2020: \$5 million). During the year ended December 31, 2021, Pembina advanced U.S. \$10 million (2020: U.S. \$24 million) to Ruby and recognized an impairment of U.S. \$10 million (2020: U.S. \$110 million) on its advances to Ruby (Note 10).

Key Management Personnel and Director Compensation

Key management consists of Pembina's directors and certain key officers.

Compensation

In addition to short-term employee benefits, including salaries, director fees and short-term incentives, Pembina also provides key management personnel with share-based compensation, contributes to post employment pension plans and provides car allowances, parking and business club memberships.

Key management personnel compensation comprised:

For the years ended December 31	2021	2020
(\$ millions)		
Short-term employee benefits	9	8
Share-based compensation and other ⁽¹⁾	53	3
Total compensation of key management	62	11

⁽¹⁾ Includes termination benefits.

Transactions

Key management personnel and directors of Pembina control less than one percent of the voting common shares of Pembina (consistent with the prior year). Certain directors and key management personnel also hold Pembina preferred shares. Dividend payments received for the common and preferred shares held are commensurate with other non-related holders of those instruments.

Certain officers are subject to employment agreements in the event of termination without just cause or change of control.

Post-Employment Benefit Plans

Pembina has significant influence over the pension plans for the benefit of their respective employees. No balance payable is outstanding at December 31, 2021 (December 31, 2020: nil).

(\$ millions)	Transaction	Transaction Value Years Ended December 31	
Post-employment benefit plan		2021	2020
Defined benefit plan	Funding	23	23

29. COMMITMENTS AND CONTINGENCIES

Commitments

Pembina had the following contractual obligations outstanding at December 31, 2021:

Contractual Obligations ⁽¹⁾ (\$ millions)	Payments Due by Period				
	Total	Less than 1 Year	1 – 3 Years	3 – 5 Years	After 5 Years
Leases ⁽²⁾	978	113	181	152	532
Long-term debt ⁽³⁾	17,409	1,519	2,002	2,146	11,742
Construction commitments ⁽⁴⁾	1,042	435	32	24	551
Other	531	92	120	74	245
Total contractual obligations	19,960	2,159	2,335	2,396	13,070

⁽¹⁾ 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 9 years and involve the purchase of NGL products from producers. Assuming product is available, Pembina has secured between 18 and 190 mbpd of NGL each year up to and including 2030. Power purchase agreements range from one to 23 years and involve the purchase of power from electrical service providers. Pembina has secured up to 79 megawatts per day each year up to and including 2045.

⁽²⁾ Includes terminals, rail, office space, land and vehicle leases.

⁽³⁾ Includes loans and borrowings, subordinated hybrid notes and interest payments on Pembina's senior unsecured medium-term notes and subordinated hybrid notes. Excludes deferred financing costs.

⁽⁴⁾ Excluding significant projects that are awaiting regulatory approval, projects which Pembina is not committed to construct, and projects that are executed by equity accounted investees.

Commitments to Equity Accounted Investees

Pembina has commitments to provide contributions to certain equity accounted investees based on annual budgets approved by the joint venture partners and contractual agreements.

Contingencies

Pembina, including its subsidiaries and its investments in equity accounted investees, are subject to various legal and regulatory and tax proceedings, actions and audits arising in the normal course of business. We represent our interests vigorously in all proceedings in which we are involved. Legal and administrative proceedings involving possible losses are inherently complex, and we apply significant judgment in estimating probable outcomes. Of most significance is a claim filed against Aux Sable by a counterparty to an NGL supply agreement. Aux Sable has filed Statements of Defense responding to the claim. While the final outcome of such actions and proceedings cannot be predicted with certainty, at this time management believes that the resolutions of such actions and proceedings will not have a material impact on Pembina's financial position or results of operations.

Letters of Credit

Pembina has provided letters of credit to various third parties in the normal course of conducting business. The letters of credit include financial guarantees to counterparties for product purchases and sales, transportation services, utilities, engineering and construction services. The letters of credit have not had and are not expected to have a material impact on Pembina's financial position, earnings, liquidity or capital resources. As at December 31, 2021, Pembina had \$135 million (December 31, 2020: \$91 million) in letters of credit issued.

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STOCK EXCHANGE

Pembina Pipeline Corporation

Toronto Stock Exchange listing symbols for:

COMMON SHARES PPL
PREFERRED SHARES PPL.PR.A, PPL.PR.C, PPL.PR.E, PPL.PR.G,
PPL.PR.I, PPL.PR.O, PPL.PR.Q, PPL.PR.S, PPL.PFA, PPL.PFC
and PPL.PFE

New York Stock Exchange listing symbol for:

COMMON SHARES PBA

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