Welcome to your CDP Climate Change Questionnaire 2023

C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

Pembina Pipeline Corporation ("Pembina" or the "Company") 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 ("NGL") infrastructure and logistics services, and an export terminals business. Through our integrated value chain, we seek to provide safe and reliable energy solutions that connect producers and consumers across the world, support a more sustainable future and benefit our customers, investors, employees and communities. For more information, please visit pembina.com.

Our Operations
Pembina is structured into three divisions:
› Pipelines Division: We own and operate a strategically located pipeline network that serves various markets and basins across North America
› Facilities Division: We own and operate natural gas processing and NGL fractionation facilities, export terminals, and related infrastructure
› Marketing and New Ventures Division: To support our customers' overall business interests, we seek to create new markets and further enhance existing markets through the development of infrastructure

Our Purpose
In 2022, we revised our purpose to reflect the breadth and diversity of our operations and future aspirations: To deliver extraordinary energy solutions so the world can thrive.

Our Strategic Priorities
Our strategy recognizes that the future is dynamic, the energy industry is rapidly evolving, and scenarios exist that could materially impact our performance and resilience longer term. Our existing business, focused on energy transportation and midstream services, is sound and we will continue to invest in, and grow, our integrated value chain to meet our customers' needs for many years to come, including responding to opportunities to provide new services. In

continuing to meet global energy demand and our customers' needs, the company established four strategic priorities:

-To be resilient, we will sustain, decarbonize, and enhance our businesses
-To thrive, we will invest in the energy transition to improve the basins in which we operate
-To meet global demand, we will transform and export our products
-To set ourselves apart, we will create a differentiated experience for our stakeholders

Forward-Looking Statements

This document contains certain forward-looking statements and forward-looking information (collectively, “forward-looking statements”), including forward-looking statements within the meaning of the “safe harbor” provisions of applicable securities legislation, that are based on Pembina’s current expectations, estimates, projections and assumptions in light of its experiences and its perception of historical trends. In some cases, forward-looking statements can be identified by terminology such as “expect”, “will”, “could”, “assess”, “explore”, “potential”, “continue”, “would”, “may”, “explore”, “likely”, “plan”, “develop”, “to be”, “target” “believe” and similar expressions suggesting future events or future performance. In particular, this document contains forward-looking statements pertaining to, without limitation, the following: estimates relating to the financial or strategic impact of certain climate-related risks and opportunities on Pembina’s business; expected timing for Pembina to implement a transition plan that aligns with a 1.5°C world; plans, targets and strategies with respect to GHG emissions and offsets; intended outcomes as a result of Pembina's GHG emission intensity reduction target; completion and in-service dates; performance expectations for Cedar LNG & ACG; supplier ESG compliance; and expectations relating to PPAs, including anticipated environmental benefits.

Readers are cautioned that events or circumstances could cause results to differ materially from those predicted, forecasted or projected. The forward-looking statements contained in this document speak only as of the date of this document. For additional information on these forward-looking statements, the key assumptions on which such forward-looking statements are based and certain risks that may result in actual future results differing from such forward-looking statements, please refer to the Pembina’s public disclosure documents including, among other things, those detailed under the heading “Risk Factors” in Pembina’s management’s discussions and analysis and annual information form, each for the year ended December 31, 2022 and from time to time in Pembina's public disclosure documents available at www.sedar.com, www.sec.gov and through Pembina's website at www.pembina.com. Pembina does not undertake any obligation to publicly update or revise any forward-looking statements or information contained herein, except as required by applicable laws. The forward-looking statements contained in this document are expressly qualified by this cautionary statement.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data and indicate whether you will be providing emissions data for past reporting years.

Reporting year

Start date

January 1, 2022

End date

December 31, 2022

Indicate if you are providing emissions data for past reporting years

No

C0.3

(C0.3) Select the countries/areas in which you operate.

Canada
United States of America

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

CAD

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.

Operational control

C-OG0.7

(C-OG0.7) Which part of the oil and gas value chain and other areas does your organization operate in?

Row 1

Oil and gas value chain

Midstream

Other divisions

C0.8

(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, an ISIN code	CA7063271034
Yes, a Ticker symbol	TSX: PPL; NYSE: PBA

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual or committee	Responsibilities for climate-related issues
Board-level committee	While oversight of environmental, social and governance ("ESG") and climate-related issues is ultimately the responsibility of Pembina's Board of Directors ("Board" or "Board of Directors"), the Board has delegated responsibility for oversight of Pembina's ESG strategy to the Governance, Nominating and Corporate Social Responsibility Committee (Governance Committee). The Governance Committee makes recommendations to the Board on the integration of ESG considerations into long-term business planning, organizational structure and corporate policies and practices. The Governance Committee also facilitates and provides education to the Board, including on ESG matters. The Governance Committee receives at least quarterly updates from management on ESG-related risks and opportunities, including emissions reduction strategies. The Board also regularly engages on ESG issues, including at strategy sessions. In 2021, the Board approved Pembina's target for a reduction of emission intensity (30% reduction in GHG emissions intensity of scope 1 and 2 emissions by 2030, based on 2019 baseline emissions). The Governance Committee and Board continue to monitor and oversee Pembina's progress towards this emissions intensity target. In addition to the Governance Committee, the Safety, Environment and Operational Excellence Committee oversees specific environment and emission-related initiatives and the Human Resources, Health and Compensation

	Committee is responsible for overseeing ESG integration with employee compensation. The Audit Committee maintains oversight of the integrity of Pembina's financial statements, the reporting process and the internal audit function.
Chief Executive Officer (CEO)	The Chief Executive Officer ("CEO") is responsible for providing oversight and coordination of sustainability-related matters and for ensuring timely and effective reporting to the Board and our stakeholders. See the response to C1.2 for additional details.

C1.1b

(C1.1b) Provide further details on the board's oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – all meetings	Reviewing and guiding annual budgets Overseeing major capital expenditures Overseeing acquisitions, mergers, and divestitures Reviewing and guiding strategy Overseeing the setting of corporate targets Monitoring progress towards corporate targets Reviewing and guiding the risk management process	In addition to the Governance Committee's oversight of ESG strategy as described in response to C1.1a above, the Safety, Environment and Operational Excellence Committee has oversight responsibility in respect of development, implementation and monitoring of environmental risks and reviewing appropriate programs to manage and reduce risk. This committee also oversees the development and implementation of environmental management policies, programs, systems and practices, and reviews overall environmental performance and the impact of regulatory changes. The Safety, Environment and Operational Excellence Committee reports directly to the Board and at each Board meeting provides an update on safety and environment related risks, mitigation efforts in respect to such risks and Pembina's safety and environmental performance. The Audit Committee reports directly to the Board and at each Board meeting provides an update on financial performance including budget oversight and acquisition and divestiture activity. In addition, the Board of Directors considers climate related criteria when evaluating potential investment opportunities.

Scheduled – all meetings	Overseeing and guiding employee incentives	In 2021, the Board approved changes to Pembina's short term incentive plan which had been redesigned to include performance goals related to ESG performance including emissions reductions. In addition to the Governance Committee's oversight of ESG strategy as described in response to C1.1a above, the Human Resources, Health and Compensation Committee is responsible for overseeing our employee and executive incentive plan design, compensation decisions and equity, diversity and inclusion targets.

C1.1d

(C1.1d) Does your organization have at least one board member with competence on climate-related issues?

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues
Row 1	Yes	Criteria used to assess competence of board members include skills, experience or knowledge of the following: climate adaption science, climate adaption planning and implementation, risk assessment, economic analysis, future thinking, collaboration and change management.

C1.2

(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

Position or committee

Chief Executive Officer (CEO)

Climate-related responsibilities of this position

Integrating climate-related issues into the strategy
Setting climate-related corporate targets
Assessing climate-related risks and opportunities
Managing climate-related risks and opportunities

Coverage of responsibilities

Reporting line

Reports to the board directly

Frequency of reporting to the board on climate-related issues via this reporting line

Quarterly

Please explain

The CEO is responsible for providing oversight and coordination of climate-related matters and for ensuring timely and effective reporting to the Board and our stakeholders. Specific to climate-related issues, the CEO is responsible for the oversight of our business strategies, including how Pembina will contribute to the development of a lower carbon economy, mitigate the risks associated with climate-related issues and capitalize on potential opportunities. For example, in 2022, the CEO led a year-long review of the Company's strategy to ensure Pembina remains resilient into the future. This culminated in an approved strategy that allows Pembina to build on its strengths by continuing to invest in and grow its core businesses while also capitalizing on opportunities to leverage its assets and expertise into new offerings that proactively respond to the transition to a lower-carbon economy. Further, in 2022, we
-Completed our second renewable power purchase agreement for the offtake of 105 megawatts ("MW") from the Wild Rose 2 Wind Farm;
-Established a $1 billion sustainability-linked revolving credit facility with borrowing costs tied to Pembina’s performance relative to its GHG emissions intensity reduction target;
-Advanced development of the Alberta Carbon Grid (“ACG”) by entering into a carbon sequestration evaluation agreement with the Government of Alberta; and
-Progressed development of the Cedar LNG Project ("Cedar LNG") through Pembina's partnership with the Haisla First Nations.

Position or committee

Chief Financial Officer (CFO)

Climate-related responsibilities of this position

Managing annual budgets for climate mitigation activities
Managing major capital and/or operational expenditures related to low-carbon products or services (including R&D)
Assessing climate-related risks and opportunities
Managing climate-related risks and opportunities

Coverage of responsibilities

Reporting line

CEO reporting line

Frequency of reporting to the board on climate-related issues via this reporting line

Quarterly

Please explain

The CFO is responsible for overall financial stewardship, including assessing climate-related risks and opportunities, financial reporting as well as providing timely, accurate and transparent information to our stakeholders. Specific to climate-related issues, the CFO is responsible for oversight of our capital program, which in 2022 was approximately $605 million. As we continue to integrate ESG, including climate-related initiatives, into all aspects of our business, it is becoming an increasing focus in our investment decisions, including through investment criteria. In 2022, the CFO was actively involved in securing Pembina's $2.9 billion unsecured credit facilities which includes a $1 billion sustainability-linked revolving credit facility aligning the Company's financing strategy with Pembina's ESG priorities.

Position or committee

Chief Sustainability Officer (CSO)

Senior Vice President, External Affairs & Chief Legal and Sustainability Officer

Climate-related responsibilities of this position

Implementing a climate transition plan
Integrating climate-related issues into the strategy
Setting climate-related corporate targets
Monitoring progress against climate-related corporate targets
Assessing climate-related risks and opportunities
Managing climate-related risks and opportunities

Coverage of responsibilities

Reporting line

CEO reporting line

Frequency of reporting to the board on climate-related issues via this reporting line

Quarterly

Please explain

The Senior Vice President, External Affairs & Chief Legal and Sustainability Officer is responsible for overseeing Pembina’s ESG Strategy, including oversight and monitoring of climate-related issues and risks, trends and Pembina’s environmental performance as well as making recommendations to the executive team on climate and environmental matters. In particular, the Senior Vice President, External Affairs & Chief Legal and Sustainability Officer had accountability for establishing and regularly reporting on Pembina's emissions intensity reduction target and also provided regular updates to Pembina's Board of Directors, the Governance Committee, the Safety, Environment & Operational Excellence Committee, as well as Pembina’s Enterprise Risk Committee ("ERC") regarding Pembina’s ESG strategy and climate and environmental matters. The ERC, consisting of senior company officers, meets at least quarterly to review the performance, appropriateness and current business environment surrounding risk

management activities. The ERC provides updates to the Board of Directors, outlining risk identification, management and reporting and any deficiencies identified. In 2022, Senior Vice President, External Affairs & Chief Legal and Sustainability Officer helped advance the development of the ACG, a carbon transportation and sequestration platform that aims to enable Alberta-based industries to effectively manage their GHG emissions and contribute positively to Alberta's lower-carbon economy, through legal, safety, environmental, regulatory and Indigenous engagement.

Position or committee

Chief Operating Officer (COO)

Climate-related responsibilities of this position

Managing major capital and/or operational expenditures related to low-carbon products or services (including R&D)
Managing climate-related acquisitions, mergers, and divestitures
Integrating climate-related issues into the strategy
Assessing climate-related risks and opportunities
Managing climate-related risks and opportunities

Coverage of responsibilities

Reporting line

CEO reporting line

Frequency of reporting to the board on climate-related issues via this reporting line

Quarterly

Please explain

The COO is responsible for business development and commercial services, operationalizing our ESG objectives, including through engineering and construction, and supporting our various Operating Management System (“OMS”) strategies and programs. The COO has executive accountability for operational emissions reductions to ensure the assessment, monitoring and management of climate-related issues. In 2022, the Empress Cogeneration facility became operational which 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. We also identified and executed on a number of operational efficiency enhancements including pump replacements and optimizations, pipeline flow rate optimizations, engine conversion from rich burn to lean burn, fugitive leak repairs, and several other initiatives that reduced Pembina’s emissions footprint. These actions resulted in an absolute annual reduction of approximately 60,000 tonnes of GHG emissions.

Position or committee

Other C-Suite Officer, please specify

Senior Vice President and Corporate Services Officer

Climate-related responsibilities of this position

Providing climate-related employee incentives
Integrating climate-related issues into the strategy
Managing value chain engagement on climate-related issues
Assessing climate-related risks and opportunities

Coverage of responsibilities

Reporting line

CEO reporting line

Frequency of reporting to the board on climate-related issues via this reporting line

Quarterly

Please explain

Responsible for the advancement of our ESG objectives, by enhancing organizational culture and diversity of our employee base, strategic supply chain management and through support of our various OMS strategies and programs.

Position or committee

Other C-Suite Officer, please specify

Senior Vice President and Corporate Development Officer

Climate-related responsibilities of this position

Managing major capital and/or operational expenditures related to low-carbon products or services (including R&D)
Managing climate-related acquisitions, mergers, and divestitures
Integrating climate-related issues into the strategy
Assessing climate-related risks and opportunities
Managing climate-related risks and opportunities

Coverage of responsibilities

Reporting line

CEO reporting line

Frequency of reporting to the board on climate-related issues via this reporting line

Quarterly

Please explain

Responsible for initiatives associated with extending our value chain and exploration of new opportunities centered around a lower carbon economy, including new energies. For example, in 2022, the Senior Vice President and Corporate Development Officer led the following:
-Development of the ACG project, in collaboration with TC Energy Corporation ("TC Energy"). The ACG project is a world-scale carbon transportation and sequestration system, which is being designed to serve multiple customers, industries and sectors. In 2022, Pembina and TC Energy entered into a carbon sequestration evaluation agreement with the Government of Alberta to further evaluate one of the largest Areas of Interest for safely storing carbon from industrial emissions in Alberta. This agreement will allow the ACG to move forward into the next phase of the province's carbon capture utilization and storage ("CCUS") process to provide confidence to customers, Indigenous communities, stakeholders and government in the project's carbon storage capabilities.
-Established a framework to decarbonize power consumption across Pembina, resulting in the formation of a dedicated energy management team, execution of a 105MW power purchase agreement from Capstone Infrastructure's Wild Rose 2 Wind Farm, and development of co-generation assets within the Facilities Division; and
-Progressed the Cedar LNG project, a partnership with the Haisla Nation, to develop a floating LNG facility in Kitimat, British Columbia within the traditional territory of the Haisla Nation to produce industry-leading low-carbon, cost-competitive Canadian LNG for new overseas markets and is expected to be one of the greenest LNG facilities in the world.

Position or committee

Other C-Suite Officer, please specify

Senior Vice President, Marketing & Strategy Officer

Climate-related responsibilities of this position

Integrating climate-related issues into the strategy
Conducting climate-related scenario analysis
Assessing climate-related risks and opportunities
Managing climate-related risks and opportunities

Coverage of responsibilities

Reporting line

CEO reporting line

Frequency of reporting to the board on climate-related issues via this reporting line

Quarterly

Please explain

Responsible for overseeing our strategy work, including the evaluation of enterprise risks and sustainability-related factors, energy management, carbon markets, as well as managing the enterprise transformation portfolio that contributes to our ESG performance. For example, in 2022, the Senior Vice President, Marketing & Strategy Officer co-led the scenario analysis work which served as an important input into our corporate strategy.

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	Pembina's short term incentive plan includes performance goals related to ESG metrics performance including emissions reduction targets. Included in those metrics is meeting our one-year target under our Board approved emission reduction plan. Achieving this metric will have an impact on annual compensation for all employees. In 2022, we made significant progress exceeding our targets for operational GHG improvements and the Wildrose power purchase agreement contribution to grid greening.

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Entitled to incentive

All employees

Type of incentive

Monetary reward

Incentive(s)

Bonus - % of salary

Performance indicator(s)

Progress towards a climate-related target

Incentive plan(s) this incentive is linked to

Short-Term Incentive Plan

Further details of incentive(s)

In addition to the details provided in C1.3 above, our GHG emissions reduction target is included within our short term incentive plan sustainability performance category. Performance in this category is weighted at 10% of our overall short term incentive plan criteria.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan

We believe that linking compensation to corporate performance on climate-related ESG factors, including our GHG emissions reduction target, aligns with long-term value creation and our stakeholders' interests.

C2. Risks and opportunities

C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?

Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	0	2	
Medium-term	2	5	
Long-term	5	10	

C2.1b

(C2.1b) How does your organization define substantive financial or strategic impact on your business?

Pembina is exposed to a variety of financial and strategic risks and opportunities, including the transition to a lower carbon economy. Some of these risks and opportunities are applicable to the oil and gas industry as a whole and others are unique to Pembina. We consider several factors, both qualitative and quantitative, when defining a substantial financial or strategic impact on our business. These may include impacts on our operations, reputation, financial condition, access to and cost of capital, results of operations, cash flow and dividends. It can also include external reports on macro considerations and associated risks we are seeing in the market, political and business environments. Assessments of identified risks and opportunities include the evaluation of potential impacts on our financial results, health, safety, environmental conditions, operating assets and reputation. The associated probabilities are also considered,

and those with higher potential financial or strategic impact are prioritized accordingly for investigation, management, mitigation or implementation.

Climate change, including the transition to a lower carbon economy, has been identified as both a key risk and opportunity which has the potential to intensify over time.

For additional discussion on potential risks and opportunities that Pembina has identified, please see our Management's Discussions and Analysis and Annual Information Form, each for the year ended December 31, 2022.

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

Value chain stage(s) covered

Direct operations
Upstream
Downstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

Short-term
Medium-term
Long-term

Description of process

The Board of Directors is responsible for ensuring that proper systems and practical procedures are in place to identify, monitor and mitigate risks. The Board has delegated oversight of specific risks to its committees, with a view to each committee's mandate and experience. Our Enterprise Risk Management ("ERM") program drives the identification, measurement, prioritization and management of risk across Pembina and is integrated with our OMS. Our ERM policy defines principles and specific expectations associated with Pembina's risk management activities and governance. All employees are required to sign-off on Pembina's enterprise risk management policy which outlines responsibilities for the identification, reporting and mitigation of risks. The ERM program consists of risk management practices and procedures applied across the Company to address principal risks that affect the achievement of business objectives.

The ERC, consisting of senior company officers, meets at least quarterly to identify and validate enterprise level risks and review the performance, appropriateness and current

business environment surrounding our risk management activities. Management reports to the Board of Directors about the risks that have been identified. Once the ERC has identified a risk, a risk owner is assigned based on associated oversight or portfolio responsibility. A mitigation workbook is also established which outlines mitigation plans and details, milestone dates and tracking and overall status of the mitigation plan. The risk owner is responsible for delegation of accountability for mitigation plans within their teams. Climate-related risks associated with Pembina's direct operations, as well as upstream and downstream in our value chain have been identified through the ERM process.

Furthermore, Pembina manages risks to its physical assets due to environmental threats potentially resulting from climate change. Pembina's Geohazard Management Program ("GMP") is designed to identify, monitor and mitigate geotechnical (slope-related), hydrotechnical (water-related), and seismic threats to its pipeline systems. All geohazard locations are ranked to determine their likelihood of failure, and this ranking is used to define the level and frequency of inspection and monitoring such that mitigations can be employed at the appropriate time to safely manage risk. Pembina utilizes numerous monitoring technologies for continual evaluation of geohazard risks such as in-line inspections, slope movement and river level monitoring. As well, Pembina leverages third party information such as early weather event warning systems, total annual precipitation accumulations, and snowpack levels to provide proactive operational responses to upcoming events. Lastly, specific design considerations to manage weather related risks such as stormwater and forest fires are also considered when designing facilities.

From a carbon transition perspective, Pembina monitors changing regulatory requirements, regularly assesses the impact of carbon pricing, changes in technology and demand for energy products, has included climate related investment criteria in our capital allocation decisions and focuses on taking actions in its operations to reduce its emissions.

C2.2a

(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Pembina's operations are subject to extensive federal, provincial, state and local environmental laws and regulations governing among other things, discharges to air, land and water, the handling and storage of petroleum products, waste disposal and the investigation and remediation of contamination. Pembina's facilities and pipelines must maintain a number of environmental permits from various governmental authorities in order to operate and failure to maintain compliance with these requirements could result in operational interruptions, fines or

		penalties or the need to install additional environmental mitigation technologies and/or management process controls. Various federal, provincial and state governments have announced intentions to regulate GHG emissions. Some of these regulations are in effect while others remain in various stages of review or implementation. These regulations could impact our existing and/or planned projects or increase capital investment or operating expenses, negatively impacting our financial results. Alberta's Technology Innovation and Emissions Reduction ("TIER") Regulation came into effect January 1, 2020. The TIER regulation continues to facilitate emissions reductions for large industrial facilities that emit 100,000 tonnes of GHGs or more per year or for facilities that chose to opt into the regulation. Amendments to TIER, which came into force January 1, 2023, mean the stringency of TIER will continue to increase annually. As at December 31, 2022, Pembina had ten processing facilities, along with three aggregate facilities (as a result of the opt-in option) subject to TIER. The potential costs and benefits to Pembina of those facilities under the TIER continue to be assessed. On June 29, 2021, the federal government enacted the Canadian Net-Zero Emissions Accountability Act ("Net-Zero Act"), which legislated a federal commitment to achieve net-zero GHG emissions by 2050 and a stringent 2030 target. The upstream oil and gas industry is expected to contribute a significant amount of the reduction needed to achieve these goals. Consistent with this target, the federal government mandated a pan-Canadian carbon price beginning at $20 per tonne in 2019, reaching $50 per tonne in 2022, and rising by $15 a year to $170 in 2030. Future amendments, including the potential increase in carbon prices may impose additional costs on the operations of Pembina and Pembina's customers and suppliers.
Emerging regulation	Relevant, always included	Changes in environmental regulations and enforcement policies, including those with respect to climate change, could result in significant new or higher operating or capital costs, including but not limited to: higher compliance costs; costs to adopt and deploy new practices, processes and technologies; and higher energy and non-energy input costs. If Pembina is not able to mitigate the impacts of these changes or is unable to recover the resulting capital or operational costs through existing contractual terms or through higher tolls, this could impact Pembina's financial results. Changes to environmental regulations and legislation, including those

		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 facilities. In the 2030 Emissions Reduction Plan under the Net Zero Act, and a discussion paper which followed, the federal government has proposed to cap and reduce oil and gas sector GHG emissions in order to achieve an overall reduction of GHG emissions from the sector of 32% below 2005 levels by 2030. The details of this cap and reduction strategy are still in development and Pembina continues to actively monitor such developments. On June 21, 2022, the federal Clean Fuel Regulations came into force, which will require all producers and importers of gasoline and diesel in Canada to reduce or offset the carbon intensity of the fuels they produce or import. The Clean Fuel Regulations are intended to facilitate a decrease in the carbon intensity of gasoline and diesel used in Canada by approximately 15% below 2016 levels by 2030, with reductions beginning in 2023. The potential costs and benefits of the Clean Fuel Regulations to Pembina and its customers are continuing to be assessed.
Technology	Relevant, always included	Achieving the Company's GHG emissions intensity reductions target and goals could require significant capital expenditures and resources. As the world transitions to a lower carbon economy, technology will be a key factor. As renewable energy technology becomes more cost effective in the long term, Pembina may face the risk of changes in customer demand which could in turn impact revenues and the Company's assets. Pembina also sees technology as an opportunity to diversify our business and contribute to a lower carbon economy. Pembina continues to explore technology associated with CCUS, hydrogen, ammonia and solar to effectively manage Pembina emissions and also contribute positively to a lower-carbon economy.
Legal	Relevant, always included	For companies in the energy sector, legal risk (including potential project delays) could increase due to the number and complexity of regulatory requirements, as well as the potential for climate-related litigation. Specifically, Pembina monitors the risks associated with the violation of or potential non-compliance with laws and regulations such as, for example, discharge to air, land and water or handling, storage, transportation and disposal of waste and other materials.

Market	Relevant, always included	Changing consumer preferences, new technologies, government regulation or other external factors may result in a transition from fossil-based sources of energy, including energy derived from 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 Pembina's producing customers and lead to less demand for Pembina's services, which could impact the revenue Pembina receives from and the value of, its pipeline, facilities, and other infrastructure assets, the useful life of those assets and accelerate the timing of decommissioning. Pembina sees multiple opportunities that support the transition to a lower carbon economy, which involve investments in businesses, operations or assets relating to renewable or other alternative forms of energy. Pembina has many of the core competencies to adjust to a changing energy mix and is exploring opportunities for new infrastructure service including carbon transportation and sequestration and new forms of energy including hydrogen and ammonia.
Reputation	Relevant, always included	Pembina's reputation could be negatively impacted by changing public attitudes towards climate change. Negative impacts from a compromised reputation could include revenue loss, reduction in customer base, delays in obtaining regulatory approvals with respect to growth projects, reduced access to capital, higher cost of capital, or decreased value of Pembina's securities and reduced insurance capacity and coverage. Concerns about the effects of the use of hydrocarbons on climate change and the impact of oil and gas operations on the environment have affected certain investors' sentiments towards investing in the oil and gas industry. As a result of these concerns, some 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 requires a commitment from Pembina's Board of Directors, management and employees. Failure to implement the policies and practices may result in investors reducing their investment in Pembina or not investing in Pembina at all. A reduction in the investor base may result in limits on Pembina's ability to access capital, increases to the cost of capital, an impact to Pembina's credit ratings or an impact to the price and liquidity of

		Pembina's securities even if Pembina's operating results, underlying asset values or prospects have not changed. Pembina has responded to this concern through the development of a robust strategy to address climate change, reduce emissions and participate in the energy transition. Our strategy recognizes that the future is dynamic, the energy industry is rapidly evolving, and scenarios exist that could materially impact our performance and resilience longer term. Furthermore, the company continues to strengthen the transparency of the information it publishes on climate-related issues including, governance, risk, opportunities and performance.
Acute physical	Relevant, always included	Changes and or extreme variability in weather patterns, as well as increases in the frequency of extreme weather events, such as floods, cyclones, hurricanes, drought and forest fires, increases the potential risk for Pembina's assets. These risks include operational disruptions, transportation difficulties, supply chain disruptions, employee safety incidents, and damage to assets, which may result in lower revenue, higher costs or project delays. An example of a specific risk would be floods and the potential impact to our pipeline assets in both a business continuity as well as public health and safety perspective. Pembina's GMP is designed to identify, monitor and mitigate geotechnical (slope-related), hydrotechnical (water and flood-related), and seismic threats to its pipeline systems. All geohazard locations are ranked to determine their likelihood of failure, and this ranking is used to define the level and frequency of inspection and monitoring such that mitigations can be employed at the appropriate time to safely manage risk. Pembina utilizes numerous monitoring technologies for continual evaluation of geohazard risks such as in-line inspections, slope movement and river level monitoring. As well, Pembina leverages third party information such as early weather event warning systems, total annual precipitation accumulations, and snowpack levels to provide proactive operational responses to upcoming events. Lastly, specific design considerations to manage weather related risks such as stormwater and forest fires are also considered when designing facilities.
Chronic physical	Relevant, always included	Weather conditions 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 used for heating which tends to result in increased throughput volume on the Company's pipelines and at the Company's gas processing facilities and higher prices in the processing and storage businesses. Pembina has capacity to handle typical increases in volume of throughput and storage at its facilities to meet changes in seasonal demand.

		Weather conditions may impact Pembina's ability to complete capital projects, maintenance and integrity projects or facility turnarounds. Unseasonable weather or work required outside of normal construction seasons can result in delays and increased costs. In areas where construction activities 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. Weather impacts include persistent and heavy rainfall events, early onset of winter conditions, excessive cold, warm winter conditions and early spring breakup. Pembina may adjust scheduling to accommodate weather conditions. In more severe cases project activities can be suspended until the weather conditions are more favourable or in more extreme cases until the next preferred construction season (i.e. winter to winter) and a potential delay of nearly a year. Weather may also affect access to Pembina's facilities and operations and require the use of helicopters to transport personnel. Where heavy equipment moves are required maintenance activities may require the installation of temporary matting to create access or delays to the next appropriate season for activity.

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Current regulation

Carbon pricing mechanisms

Primary potential financial impact

Increased direct costs

Company-specific description

Federal, provincial, and state governments are supporting the transition to a lower carbon economy by introducing increasingly stringent climate-related laws, regulations and policies. Without appropriate climate-related risk mitigation strategies, Pembina could face increased carbon-related compliance costs, which may impact Pembina's long-term business resilience. For example, in Alberta the TIER regulations came into effect January 1, 2020. The TIER regulation directly applies to several Pembina facilities.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

12,000,000

Potential financial impact figure – maximum (currency)

15,000,000

Explanation of financial impact figure

As an estimate for all of our assets, we utilized the facility-specific benchmark methodology which specifies a reduction requirement of 10% below historical levels. Essentially, this dictates that we are required to pay a carbon price on 10% of our Scope 1 emissions. For simplicity, this estimate applies Alberta's TIER Regulations to all of our assets in all jurisdictions and does not account for other facility-specific regulations. We multiplied the 10% reduction requirement by the carbon price in 2022 of $50/tonne CO2e and our 2022 scope 1 emissions. A potential financial impact range has been provided to account for jurisdictional and facility-specific regulations, which provides a reasonable basis to obtain an estimate for 2022.

Cost of response to risk

1,200,000

Description of response and explanation of cost calculation

In 2022, Pembina stood up a dedicated GHG and air emissions team that worked with various groups across the organization to optimize our operations. These optimization activities could result in lower emissions across the business. The cost disclosed above

equates to the cost of this dedicated team (an estimate of time/total compensation). This figure does not reflect capital costs.

Comment

The potential financial impacts and costs set out above are estimates only and are based on assumptions and expectations that management believes are reasonable as of the date hereof and are “forward-looking” in nature. Pembina makes no representation that actual results achieved will be the same in whole or in part as those set out in such forward-looking information. See “Forward-Looking Statements” on the first page of this document.

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Current regulation

Enhanced emissions-reporting obligations

Primary potential financial impact

Increased direct costs

Company-specific description

Pembina has operating assets in jurisdictions that have robust reporting obligations and, in most cases, have assets that are regulated at both the federal and provincial levels. For instance, Pembina's Alberta-based facilities fall under TIER Regulations that apply to facilities that emit over 100,000 tonnes of CO2e. In British Columbia, all Pembina assets have a reporting obligation under the Greenhouse Gas Industrial Reporting and Control Act. In addition to these provincial requirements, Pembina also has facilities that are regulated at the federal level in Canada, under the GHG Reporting program requiring any facility emitting over 10,000 tonnes of CO2e per year to report GHG emissions. Emission reporting obligations are subject to change, as a result of change in government and or regulatory advancements. These changes can result in increased costs due to enhanced data collection requirements, increased time and efforts by employees to understand changing requirements to ensure compliance and potential increases in compliance cost associated with changes in reporting requirements.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

2,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

The financial impact is an estimate of the time/total compensation of those involved in regulatory GHG emissions reporting to government bodies at Pembina in 2022.

Cost of response to risk

1,240,000

Description of response and explanation of cost calculation

In an effort to manage the increasing cost associated with emission reporting, Pembina is building a centralized data management model. We are current working on implementation of data management and are budgeting annual costs of approximately $1,240,000. This figure does not include implementation capital costs.

Comment

The potential financial impacts and costs set out above are estimates only and are based on assumptions and expectations that management believes are reasonable as of the date hereof and are “forward-looking” in nature. Pembina makes no representation that actual results achieved will be the same in whole or in part as those set out in such forward-looking information. See “Forward-Looking Statements” on the first page of this document.

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Emerging regulation

Carbon pricing mechanisms

Primary potential financial impact

Increased direct costs

Company-specific description

GHG regulations related to carbon pricing could become increasingly stringent and may expose Pembina to increased costs. As legislated, the federal government's pan-Canadian minimum carbon price will rise by $15 per tonne annually starting in 2023 through to 2030, which may have a significant impact on the Canadian energy industry, including potentially Pembina. Consistent with this increase, the TIER will increase in stringency annually pursuant to amendments that came into force January 1, 2023.

Time horizon

Long-term

Likelihood

Very likely

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

70,000,000

Potential financial impact figure – maximum (currency)

80,000,000

Explanation of financial impact figure

As an estimate for all of our assets, we utilized the facility-specific benchmark methodology which specifies a reduction requirement of 10% below historical levels and added the amended TIER Regulation of a 2% tightening per year starting in 2023. Essentially, this dictates that we are required to pay a carbon price on 10% of our Scope 1 emissions plus an additional 2% per year starting in 2023. This estimate applies Alberta TIER regulations to all of our assets in all jurisdictions and does not account for other facility-specific regulations or other potential changes to regulation. Each year, we multiplied the applicable percentage by the applicable carbon price ($50/tonne CO2e in 2022 and $170/tonne CO2e in 2030) and our scope 1 emissions. We assumed a reduction in scope 1 emissions of 2% per year, no additional initiatives to reduce or mitigate our emissions has been included. This impact figure is range of our potential carbon tax in 2030 and does not include customer contributions. Our actual carbon liability will differ from this number when jurisdictional and facility-specific regulations are factored in, as well as the uncertainty in emerging carbon regulation, but we used this methodology to obtain an estimate for 2030.

Cost of response to risk

1,200,000

Description of response and explanation of cost calculation

Pembina has a team of employees who are monitoring the risk of emerging regulation, including people from our Government Relations, Legal, Sustainability, Environmental Regulatory and Financial Reporting teams. Each of these positions would have a portion of their time spent addressing this risk. The cost disclosed above is an estimate of the time/total compensation of those monitoring this risk.

Comment

The potential financial impacts and costs set out above are estimates only and are based on assumptions and expectations that management believes are reasonable as of the date hereof and are “forward-looking” in nature. Pembina makes no representation that actual results achieved will be the same in whole or in part as those set out in such forward-looking information. See “Forward-Looking Statements” on the first page of this document.

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Opp1

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Energy source

Primary climate-related opportunity driver

Use of lower-emission sources of energy

Primary potential financial impact

Reduced direct costs

Company-specific description

Pembina has constructed a second co-generation plant at the Empress NGL Extraction facility which was brought in service in late 2022. The facility requires significant power and heat for its processes and the addition of cogeneration supplies both of these in a more energy efficient way that reduces our overall operating costs and emissions. The facility uses 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 is consumed on site, thereby supplying up to 90 percent of the site's electrical requirements. Further, this project contributes to annual GHG reductions at the Empress NGL Extraction Facility through the utilization of the cogeneration waste heat and the low-emission power generated.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

15,000,000

Potential financial impact figure – maximum (currency)

35,000,000

Explanation of financial impact figure

The potential financial impact disclosed above equates to our estimated annual cost savings associated with removing variable tariff and energy charges which will no longer be applicable as a result of the co- generation. The rate of return is extremely variable depending on fuel gas price and power pool price.

Cost to realize opportunity

100,000,000

Strategy to realize opportunity and explanation of cost calculation

The cost to realize the opportunity is the announced capital cost for the project. No operating costs are included in this estimate.

Comment

The potential financial impacts and costs set out above are estimates only and are based on assumptions and expectations that management believes are reasonable as of the date hereof and are “forward-looking” in nature. Pembina makes no representation that actual results achieved will be the same in whole or in part as those set out in such forward-looking information. See “Forward-Looking Statements” on the first page of this document.

Identifier

Opp2

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Energy source

Primary climate-related opportunity driver

Participation in carbon market

Primary potential financial impact

Reduced direct costs

Company-specific description

Pembina views power purchase agreements as an effective tool to support development of renewable energy infrastructure and support the transition to a lower carbon energy system. In 2021, Pembina signed a long-term, 100 megawatt (MW) power purchase agreement with a subsidiary of TransAlta Corporation supporting the development of the 130 MW Garden Plain Wind Project in Alberta, with an expected start-up in 2023. The power purchase agreement provides significant benefits to Pembina including generating cost-competitive renewable energy and fixing the price for a portion of the power Pembina consumes. The 100 MW of capacity from the power purchase agreement should provide an estimated 335,000 MWh annually of renewable energy to Alberta's power grid, or enough to power over 45,000 homes for a year. The power purchase agreement is expected to generate on average approximately 135,000 tonnes of carbon dioxide equivalent emission ("CO2e") offsets annually. Pembina may use these offsets to reduce its own emissions with the option to sell or bank future offsets for other uses.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

0

Potential financial impact figure – maximum (currency)

13,824,000

Explanation of financial impact figure

Pembina may use the offsets to reduce its own emissions and or has the option to sell or bank future offsets for other uses. The maximum financial impact equates to an average 135,000 tonnes of CO2e emission offsets annually multiplied by an average price of $102.40 per offset. This average is based on current and potential ranges of offset prices which can range from $65 to $170.

Cost to realize opportunity

3,350,000

Strategy to realize opportunity and explanation of cost calculation

This cost estimate equates to the highest potential cost Pembina could realize and is calculated based on Pembina's average share of power generation at Garden Plain multiplied by the cost of energy. This cost of energy does have a range which starts at $0, however to be conservative we have calculated using the maximum cost.

Comment

The potential financial impacts and costs set out above are estimates only and are based on assumptions and expectations that management believes are reasonable as of the date hereof and are “forward-looking” in nature. Pembina makes no representation that actual results achieved will be the same in whole or in part as those set out in such forward-looking information. See “Forward-Looking Statements” on the first page of this document.

Identifier

Opp3

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Energy source

Primary climate-related opportunity driver

Participation in carbon market

Primary potential financial impact

Reduced direct costs

Company-specific description

Pembina views power purchase agreements ("PPA") as an effective tool to support development of renewable energy infrastructure and support the transition to a lower carbon energy system. In May 2022, Pembina entered into a PPA with Capstone Infrastructure to offtake 105 MW of renewable energy and associated renewable attributes over a 15 year period from their 192 MW Wild Rose 2 Wind Farm, which is currently under development. The PPA signals another step forward towards a low-carbon electricity sector in Alberta. The power purchase agreement provides significant

benefits to Pembina including generating cost-competitive renewable energy and fixing the price for a portion of the power Pembina consumes. The 105 MW of capacity from the power purchase agreement should provide an estimated 351,750 MWh annually of renewable energy to Alberta's power grid, or enough to power over 42,000 homes for a year. The power purchase agreement is expected to generate on average approximately 141,750 tonnes of CO2e emission offsets annually. Pembina may use these offsets to reduce its own emissions with the option to sell or bank future offsets for other uses.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

0

Potential financial impact figure – maximum (currency)

15,649,200

Explanation of financial impact figure

Pembina may use the offsets to reduce its own emissions and or has the option to sell or bank future offsets for other uses. The maximum financial impact equates to an average 141,750 tonnes of CO2e emission offsets annually multiplied by an average price of $110.40 per offset. This average is based on current and potential ranges of offset prices which can range from $80 to $170.

Cost to realize opportunity

3,517,500

Strategy to realize opportunity and explanation of cost calculation

This cost estimate equates to the highest potential cost Pembina could realize and is calculated based on Pembina's average share of power generation at Wild Rose 2 Wind Farm multiplied by the cost of energy. This cost of energy does have a range which starts at $0, however to be conservative we have calculated using the maximum cost.

Comment

The potential financial impacts and costs set out above are estimates only and are based on assumptions and expectations that management believes are reasonable as of the date hereof and are “forward-looking” in nature. Pembina makes no

representation that actual results achieved will be the same in whole or in part as those set out in such forward-looking information. See “Forward-Looking Statements” on the first page of this document.

C3. Business Strategy

C3.1

(C3.1) Does your organization’s strategy include a climate transition plan that aligns with a 1.5°C world?

Row 1

Climate transition plan

No, our strategy has been influenced by climate-related risks and opportunities, but we do not plan to develop a climate transition plan within two years

Explain why your organization does not have a climate transition plan that aligns with a 1.5°C world and any plans to develop one in the future

Pembina is committed to environmental leadership through our emission intensity reduction target and proposed projects like the ACG and the Low Carbon Complex. We are currently evaluating what would be necessary to achieve net zero emissions at some of our higher emitting facilities and will use this information to help inform our longer term approach.

As part of this assessment we will continue to carefully evaluate several factors and uncertainties including:
-the development of new technologies and solutions, and their applicability to Pembina's specific operations;
-evolving climate change and carbon pricing regulations and legislation; and
-the impact of pursuing net zero emissions on shareholder returns.

Importantly, net zero targets can only be credible with robust short and medium-term targets, which is where we are focused today.

C3.2

(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?

	Use of climate-related scenario analysis to inform strategy
Row 1	Yes, qualitative and quantitative

C3.2a

(C3.2a) Provide details of your organization’s use of climate-related scenario analysis.

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Transition scenarios IEA STEPS (previously IEA NPS)	Company-wide		See IEA STEPS
Transition scenarios IEA SDS	Company-wide		See IEA SDS

C3.2b

(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.

Row 1

Focal questions

1. How do we build a strategy that thrives to 2030 and is resilient beyond?
2. How will the pace of decarbonization impact our business?
3. How important is global market integration to the resiliency and growth of our business?

Results of the climate-related scenario analysis with respect to the focal questions

Pembina developed climate-related scenarios to address two distinct horizons for its strategy to ensure that it thrives through 2030 and is resilient beyond. To understand this, we utilized IEA Scenarios (STEPS & SDS) to evaluate the impacts to our resiliency and growth across both the pace of decarbonization as well as the importance of global integration to end markets. We evaluated the impacts of demand destruction on the North American market and looked to understand what risks and opportunities were inherent in our business based on the pace of decarbonization. The result of the scenario analysis gives us confidence that our strategy will allow Pembina to thrive through 2030 and be resilient beyond.

C3.3

(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	Pembina has an established New Ventures Business Unit which is actively exploring new opportunities centered

		around a lower carbon economy. Responsibilities of our Senior Vice President and Corporate Development Officer now include exploration of new opportunities centered around a lower carbon economy. Included in our evaluation process is: customer interest, alignment with our value chain, technology developments, safety requirements, financial investment required, and potential government incentives and payback. We have formed the Cedar LNG partnership with the Haisla Nation to develop the proposed Cedar LNG Project. The Cedar LNG Project is the world's first Indigenous majority-owned LNG project. Powered by renewable energy from BC Hydro, the project will be one of the lowest carbon LNG facilities in the world, providing significant opportunities for both the Haisla Nation and the region. The project is strategically positioned to leverage Canada's abundant natural gas supply and British Columbia's growing LNG infrastructure to produce industry-leading, low-carbon, cost-competitive Canadian LNG for overseas markets. Cedar LNG aims to contribute to the displacement of coal as an energy source in Asia, achieving higher prices for Canadian producers, contributing to lower overall emissions, and enhancing global energy security. As a replacement for coal power, LNG from Cedar could result in GHG reductions of six to 14 million tonnes of CO2e per year, on a lifecycle basis. In 2022, Cedar LNG continued to progress regulatory, commercial and engineering workstreams as it moves towards a final investment decision in 2023. Pembina and TC Energy are jointly developing the ACG, a world-scale carbon transportation and sequestration system, which will enable Alberta-based industries to effectively manage their GHG emissions, contribute positively to Alberta's lower-carbon economy and create sustainable long-term value for Pembina and TC Energy stakeholders. Our long-term vision is to annually transport and store up to 20 million tonnes of CO2 through several hubs across Alberta. These hubs are part of our ongoing commitment to energy diversification and will support federal emissions targets to reduce CO2 and other GHG emissions by at least 40% compared to 2005 levels by 2030.

Supply chain and/or value chain	Yes	Pembina has implemented a supplier code of conduct as part of our supplier on-boarding and compliance program. Included in this code are details of Pembina's environmental stewardship commitments. Suppliers are now also asked to provide ESG information, documenting their position on various ESG topics important to Pembina, including climate-related issues.
Investment in R&D	Yes	Pembina sees value in advancing new technologies which could have a positive impact on climate-related issues. As discussed above, the New Ventures Business Unit is actively exploring new technologies centered around a lower carbon economy. Pembina has many of the core competencies to adjust to a changing energy mix and is positioned to provide infrastructure services for new forms of energy, including energy produced from hydrogen and carbon sequestration. Pembina has partnered with TC Energy to jointly develop a world-scale carbon transportation and sequestration system, the ACG. This system, when fully constructed, will be capable of sequestering up to 20 million tonnes of carbon dioxide annually. In 2022, Pembina and TC Energy entered into a carbon sequestration evaluation agreement with the Government of Alberta to further evaluate one of the largest AOI for the ACG Industrial Heartland project. This agreement will allow the ACG to move forward into the next phase of the province's CCUS process to provide confidence to customers, Indigenous communities, stakeholders and government in the project's carbon storage capabilities.
Operations	Yes	In October 2021, Pembina announced its commitment to reduce the Company's GHG emissions intensity by 30% by 2030, relative to 2019 baseline emissions. This GHG reduction target will help guide business decisions and improve overall emissions intensity performance while increasing Pembina's long-term value and ensuring Canadian energy is developed and delivered responsibly. To meet this target, Pembina has identified multiple pathways including operational opportunities, renewable energy projects and lower carbon economy investments. Through a lens of continuous improvement, Pembina is taking further steps to reduce our environmental footprint while utilizing assets more efficiently. Operational contributions identified include: optimizing asset capacity; constructing cogeneration facilities (for example our

		Empress co-generation facility); modernizing and optimizing facilities to reduce the amount of energy consumed; reducing flaring and venting; and enhancing leak detection and repair programs at our facilities. In 2022 the following contributed to our emissions reductions: -Startup of the Empress Cogeneration facility in October 2022; -Asset modernization including the optimization of compressors, pumps, and pipeline flow rates and timing; and -Reducing our fugitive emissions through more rigorous and integrated maintenance and repair practices that enabled us to expedite the identification and repair of leaks.

C3.4

(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues Direct costs Capital expenditures Capital allocation Acquisitions and divestments Access to capital	Revenues – It is possible that lower demand, leading to lower prices for oil, natural gas and NGL's may be driven by changing consumer preferences, new technologies or a rapid transition to other forms of energy. This could impact Pembina's customers and lead to less demand for Pembina's current services, potentially negatively impacting our revenue. In 2021 we announced a partnership agreement with the Haisla Nation in the development of the proposed Cedar LNG Project. The Cedar LNG Project will be the largest First Nation-owned infrastructure project in Canada and will have one of the cleanest LNG environmental profiles in the world. The Cedar LNG Project's floating design is expected to offer significantly less environmental impact on the Douglas Channel coastline and the facility will be interconnected to the existing BC Hydro transmission system, utilizing renewable electricity. This project is expected to provide a connection for Western Canadian sedimentary basin natural gas to international markets and will contribute to the displacement of coal as an energy source in Asia. In 2022, Cedar LNG continued to progress regulatory, commercial and engineering workstreams as it moves towards a final investment decision in 2023. In 2021, Pembina also announced the start-up of our Prince Rupert Terminal ("PRT"), a propane export terminal located on Watson Island, British Columbia. This a major step in providing new market solutions

		and helping add incremental value to western Canadian hydrocarbons. PRT is a small-scale rail terminal, moving propane from rail cars, to pressurized storage spheres, and ultimately to 'handysize' vessels destined for international markets. Propane shipped from PRT is expected to help to improve air quality and reduce GHGs by displacing more carbon-intense energy sources. As discussed above, the New Ventures Business Unit is actively exploring new opportunities centered around a lower carbon economy. For example, Pembina has partnered with TC Energy to jointly develop a world-scale carbon transportation and sequestration system, the ACG. This system, when fully constructed, is expected to be capable of transporting more than 20 million tonnes of CO2 annually. By leveraging existing pipelines and newly developed sequestration hub, the ACG represents the infrastructure needed for Alberta-based industries to effectively manage their emissions and contribute positively to Alberta's lower-carbon economy and create sustainable long-term value for Pembina and TC Energy stakeholders. Pembina has many of the core competencies to adjust to a changing energy mix and is positioned to provide infrastructure services for new forms of energy, including energy produced from hydrogen and carbon sequestration, while continuing to deliver low cost energy solutions to existing customers and markets. Some examples include ACG, Cedar LNG, and PRT. Direct Costs - The costs associated with measurement, monitoring, reporting, compliance and technology are included as direct costs to Pembina. These costs are included in the budgeting and financial planning process. Power required to operate Pembina's assets are included in the calculation of operating costs. Pembina considers power as an opportunity to reduce its emissions as it considers generating its own electricity and using the waste heat through co-generation facilities and or through the purchase of renewable electricity. For example, following our first PPA for the offtake of 100 MW of renewable energy power from the Garden Plains Wind Farm in 2021, we signed a second agreement with a wholly owned subsidiary of Capstone Infrastructure Corporation for the offtake of 105 MW from the Wild Rose 2 Wind Farm in 2022. This power purchase agreement generates cost-competitive renewable energy and is an effective tool to support development of renewable energy infrastructure, lower emissions, and support the transition to a lower carbon energy system. Capital allocation – ESG and the transition to a lower carbon economy

		have become an increased area of focus in Pembina's investment decisions as we continue to progress towards our 2030 emission intensity reduction target. It is an additional lens through which all capital projects are evaluated by Pembina's Investment Committee and our Board of Directors. For example, in 2022 Pembina brought into service its co-generation facility at our Empress NGL Extraction Facility. The Facility uses natural gas to generate up to 45 MW of electrical power, contributing to lower annual GHG emissions through the utilization of waste heat and the low emission power generated at the co-generation facility. All the power is consumed on site, thereby supplying up to 90 percent of the site's electrical requirements. Acquisition and Divestments - ESG and the transition to a lower carbon economy have become an increased focus on our investment decisions as we continue to progress towards our 2030 emission reduction target and is an additional lens through which all acquisitions and divestments are evaluated by Pembina's Investment Committee and our Board of Directors. On August 15, 2022, Pembina completed a joint venture transaction with KKR & Co. to combine their respective Western Canadian natural gas processing assets into a single, new joint venture entity, Pembina Gas Infrastructure Inc. (PGI). The creation of PGI is a natural next step that will allow for efficiencies, cost reduction, unlock growth and provide increased service offerings to customers throughout the Montney and Duverney formations, from central Alberta to northeast British Columbia. Access to Capital – Pembina's investors are increasingly focused on ESG and the transition to a lower carbon economy. Pembina has responded to this focus in part with the commitment to reduce the Company's GHG emissions intensity by 30% by 2030, relative to baseline 2019 emissions. This GHG intensity reduction target will help guide business decisions and improve overall emissions intensity performance while increasing Pembina's long-term value for our shareholders. We also took a step to align our financing strategy with our ESG priorities by establishing a sustainability-linked loan. The $1 billion sustainability-linked revolving credit facility contains pricing adjustments that reduce or increase borrowing costs based on our performance relative to our GHG emissions intensity reduction target. The specific terms of the new loan facility include annual targets that align with our decarbonization pathway towards our 2030 GHG emissions intensity reduction goal. The time horizon for Pembina's financial planning related to revenue, costs, capital allocation and acquisition and divestments covers 10 years.

C3.5

(C3.5) In your organization's financial accounting, do you identify spending/revenue that is aligned with your organization's climate transition?

	Identification of spending/revenue that is aligned with your organization's climate transition
Row 1	No, and we do not plan to in the next two years

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?

Intensity target

C4.1b

(C4.1b) Provide details of your emissions intensity target(s) and progress made against those target(s).

Target reference number

Int 1

Is this a science-based target?

No, and we do not anticipate setting one in the next two years

Target ambition

Year target was set

2021

Target coverage

Company-wide

Scope(s)

Scope 1

Scope 2

Scope 2 accounting method

Location-based

Scope 3 category(ies)

Intensity metric

Metric tons CO2e per barrel of oil equivalent (BOE)

Base year

2019

Intensity figure in base year for Scope 1 (metric tons CO2e per unit of activity)

0.00247

Intensity figure in base year for Scope 2 (metric tons CO2e per unit of activity)

0.00137

Intensity figure in base year for Scope 3, Category 1: Purchased goods and services (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 2: Capital goods (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 5: Waste generated in operations (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 6: Business travel (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 7: Employee commuting (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 8: Upstream leased assets (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 10: Processing of sold products (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 11: Use of sold products (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 13: Downstream leased assets (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 14: Franchises (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 15: Investments (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Other (upstream) (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Other (downstream) (metric tons CO2e per unit of activity)

Intensity figure in base year for total Scope 3 (metric tons CO2e per unit of activity)

Intensity figure in base year for all selected Scopes (metric tons CO2e per unit of activity)

0.00384

% of total base year emissions in Scope 1 covered by this Scope 1 intensity figure

100

% of total base year emissions in Scope 2 covered by this Scope 2 intensity figure

100

% of total base year emissions in Scope 3, Category 1: Purchased goods and services covered by this Scope 3, Category 1: Purchased goods and services intensity figure

% of total base year emissions in Scope 3, Category 2: Capital goods covered by this Scope 3, Category 2: Capital goods intensity figure

% of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) covered by this Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) intensity figure

% of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution covered by this Scope 3, Category 4: Upstream transportation and distribution intensity figure

% of total base year emissions in Scope 3, Category 5: Waste generated in operations covered by this Scope 3, Category 5: Waste generated in operations intensity figure

% of total base year emissions in Scope 3, Category 6: Business travel covered by this Scope 3, Category 6: Business travel intensity figure

% of total base year emissions in Scope 3, Category 7: Employee commuting covered by this Scope 3, Category 7: Employee commuting intensity figure

% of total base year emissions in Scope 3, Category 8: Upstream leased assets covered by this Scope 3, Category 8: Upstream leased assets intensity figure

% of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution covered by this Scope 3, Category 9: Downstream transportation and distribution intensity figure

% of total base year emissions in Scope 3, Category 10: Processing of sold products covered by this Scope 3, Category 10: Processing of sold products intensity figure

% of total base year emissions in Scope 3, Category 11: Use of sold products covered by this Scope 3, Category 11: Use of sold products intensity figure

% of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products covered by this Scope 3, Category 12: End-of-life treatment of sold products intensity figure

% of total base year emissions in Scope 3, Category 13: Downstream leased assets covered by this Scope 3, Category 13: Downstream leased assets intensity figure

% of total base year emissions in Scope 3, Category 14: Franchises covered by this Scope 3, Category 14: Franchises intensity figure

% of total base year emissions in Scope 3, Category 15: Investments covered by this Scope 3, Category 15: Investments intensity figure

% of total base year emissions in Scope 3, Other (upstream) covered by this Scope 3, Other (upstream) intensity figure

% of total base year emissions in Scope 3, Other (downstream) covered by this Scope 3, Other (downstream) intensity figure

% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this total Scope 3 intensity figure

% of total base year emissions in all selected Scopes covered by this intensity figure

100

Target year

2030

Targeted reduction from base year (%)

30

Intensity figure in target year for all selected Scopes (metric tons CO2e per unit of activity) [auto-calculated]

0.002688

% change anticipated in absolute Scope 1+2 emissions

3

% change anticipated in absolute Scope 3 emissions

Intensity figure in reporting year for Scope 1 (metric tons CO2e per unit of activity)

0.00259

Intensity figure in reporting year for Scope 2 (metric tons CO2e per unit of activity)

0.0012

Intensity figure in reporting year for Scope 3, Category 1: Purchased goods and services (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 2: Capital goods (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 5: Waste generated in operations (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 6: Business travel (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 7: Employee commuting (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 8: Upstream leased assets (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 10: Processing of sold products (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 11: Use of sold products (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 13: Downstream leased assets (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 14: Franchises (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 15: Investments (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Other (upstream) (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 3, Other (downstream) (metric tons CO2e per unit of activity)

Intensity figure in reporting year for total Scope 3 (metric tons CO2e per unit of activity)

Intensity figure in reporting year for all selected Scopes (metric tons CO2e per unit of activity)

0.00379

Does this target cover any land-related emissions?

Yes, it covers land-related CO2 emissions/removals associated with bioenergy and non-land related emissions (e.g. non-FLAG SBT with bioenergy)

% of target achieved relative to base year [auto-calculated]

4.3402777778

Target status in reporting year

Underway

Please explain target coverage and identify any exclusions

Our GHG emissions intensity reduction target encompasses all Scope 1 and 2 emissions, aggregated to the corporate level on an Operational Control basis.

Plan for achieving target, and progress made to the end of the reporting year

In the fourth quarter of 2021, Pembina announced a target to achieve a 30% reduction in emission intensity relative to 2019 baseline emissions. We have identified multiple pathways to achieve our GHG intensity reduction target that support the transition to a lower-carbon future, including;

-Operational opportunities: Reducing GHG emissions through energy efficiency and asset optimization, as well as investing in abatement projects across our assets including equipment modernization, electrification, and small-scale renewable energy projects. In 2022 from an operations perspective, we implemented a number of improvements to reduce our absolute emissions including completion of the Empress Cogeneration facility, as well as many efficiency enhancements, including pump replacements and optimizations, pipeline flow rate optimizations, engine conversions from rich-burn to lean-burn, fugitive leak repairs, and several other initiatives. These actions resulted in an absolute annual reduction of approximately 60,000 tonnes of GHG emissions.

-Renewable energy: Increasing the use of renewable energy through PPAs with TransAlta on the 100MW Garden Plain Wind Power Project and with Capstone on the 105MW Wild Rose 2 Wind Farm and currently developing a 5MW solar farm tied to our Empress facilities.

-Investments in a lower carbon economy: Developing the ACG to effectively manage emissions and contribute positively to a lower-carbon economy as well as the recently announced agreement with Marubeni Corporation for development of a Low Carbon Complex adjacent to our existing Redwater assets and underpinned by blue ammonia production.

List the emissions reduction initiatives which contributed most to achieving this target

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?

No other climate-related targets

C-OG4.2d

(C-OG4.2d) Indicate which targets reported in C4.1a/b incorporate methane emissions, or if you do not have a methane-specific emissions reduction target for your oil and gas activities, please explain why not and forecast how your methane emissions will change over the next five years.

Pembina's target (Int1) to reduce our emissions intensity by 30% by 2030 is inclusive of methane emissions.

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.

Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	14	
To be implemented*	1	3,402
Implementation commenced*	2	2,389
Implemented*	1	57,915
Not to be implemented	0	

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Initiative category & Initiative type

Energy efficiency in production processes

Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)

57,915

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

2,895,750

Investment required (unit currency – as specified in C0.4)

Payback period

4-10 years

Estimated lifetime of the initiative

11-15 years

Comment

This initiative in 2022 consisted of all energy efficiency and process optimization projects including repair leaks, compressor engine configuration, and pump optimization. Project economics considered multiple factors, and the annual monetary savings indicated excludes confidential factors.

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Compliance with regulatory requirements/standards	All of Pembina's Canadian assets are covered by carbon emission intensity regulations or carbon tax frameworks. Pembina strives to mitigate carbon compliance costs by seeking operational improvements and energy efficiency projects that improve production output and/or carbon emission reductions.
Internal incentives/recognition programs	Pembina's short term incentive plan includes performance goals related to ESG metrics and emissions intensity tagets. Included in those metrics is meeting our one-year target under our Board approved emission intensity reduction plan. Achieving this metric will have an impact on annual compensation for all employees. In 2022, we made significant progress exceeding our targets for operational GHG improvements and the Wildrose power purchase agreement contribution to grid greening. We believe that linking compensation to corporate performance on climate-related ESG factors, including our GHG emissions intensity targets, aligns with long-term value creation and our stakeholders' interests.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?

No

C-OG4.6

(C-OG4.6) Describe your organization's efforts to reduce methane emissions from your activities.

Starting in 2020, the British Columbia, Alberta and Federal governments implemented methane reduction regulations to reduce methane emissions from the oil and gas sector by 40% to 45% by 2025. The federal government published a discussion paper in March, 2022 and confirmed that the stringency of the Federal Methane Regulations will increase in order to achieve a reduction of oil and gas methane emissions by at least 75 percent below 2012 levels by 2030. Draft regulations to implement this commitment are expected to be released in 2023 and finalized in 2024, with effect from 2025 onward.

Pembina has a program to comply with the applicable regulations for the survey and measurement of vented and fugitive methane emissions from our Canadian natural gas processing, transportation and handling operations. Emission surveys are conducted up to three times per year. Based on the survey findings, Pembina makes every effort to repair identified fugitive leaks or corrective actions to mitigate vented emissions through equipment upgrades, retrofits or focused maintenance programs to ensure equipment is operating as efficient as possible.

In the US, Pembina's Aux Sable facilities have an obligation to monitor and report under the federal (US EPA) Greenhouse Gas Reporting Program. We are required to report annually but there are no emissions limits or requirement to reduce methane emissions at this time. Pembina will continue monitor the upcoming changes to methane regulations in US.

Regulations applicable to Pembina's operations include: federal *Regulations Respecting Reduction in the Release of Methane and Certain Volatile Organic Compounds (Upstream Oil and Gas Sector)*; Alberta *Methane Emission Reduction Regulation*, made under the Alberta *Environmental Protection and Enhancement Act* and incorporating several sections of the Alberta Energy Regulator *Directive 017* and *Directive 060*; Saskatchewan *Directive PNG036: Venting and Flaring Requirements* made under the Saskatchewan Oil and Gas Conservation Act and *the British Columbia Drilling and Production Regulation* made under the British Columbia *Oil and Gas Activities Act*.

C-OG4.7

(C-OG4.7) Does your organization conduct leak detection and repair (LDAR) or use other methods to find and fix fugitive methane emissions from oil and gas production activities?

Yes

C-OG4.7a

(C-OG4.7a) Describe the protocol through which methane leak detection and repair or other leak detection methods, are conducted for oil and gas production activities,

including predominant frequency of inspections, estimates of assets covered, and methodologies employed.

In 2020, Pembina implemented a fugitive emissions leak detection and repair program at 100% of our natural gas processing, natural gas pipeline transportation and handling operations. The leak detection program was also implemented on select liquid hydrocarbon pipeline and storage assets where required by applicable regulation.

Where required, fugitive emission leaks are identified by following the US EPA Method 21 and/or the utilization of a qualified optical gas-imaging instrumentation. These comprehensive fugitive emission surveys are conducted up to three times per year and are completed by trained third-party consultants. Identified fugitive emission leaks are measured, quantified and tagged for subsequent repairs by Pembina's instrumentation and maintenance teams. Fugitive emission leaks are tracked until repairs are made and confirmed as completed. The results are recorded and reported as required by the applicable regulatory authority.

C-OG4.8

(C-OG4.8) If flaring is relevant to your oil and gas production activities, describe your organization's efforts to reduce flaring, including any flaring reduction targets.

Flaring activities predominately occur at our natural gas processing and natural gas liquid fractionation facilities, where waste gas or processing upsets result in the actuation of flaring or incineration systems. Flaring and incineration activities are regulated under operational limits (i.e., daily volume limits) and/or annual flaring limits. Pembina is committed to maintaining regulatory compliance at all our facilities.

Pembina's target (Int1) to reduce our GHG emissions intensity by 30% by 2030 is inclusive of reductions from emissions from flaring.

C5. Emissions methodology

C5.1

(C5.1) Is this your first year of reporting emissions data to CDP?

No

C5.1a

(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?

Row 1

Has there been a structural change?

Yes, an acquisition

Name of organization(s) acquired, divested from, or merged with

In 2022, Pembina completed a joint venture transaction with KKR & Co. ("KKR") to combine their respective Western Canadian natural gas processing assets into a single, new joint venture entity, Pembina Gas Infrastructure Inc. ("PGI") (the "PGI Transaction").

Details of structural change(s), including completion dates

On August 15, 2022, Pembina completed a joint venture transaction with KKR & Co. ("KKR") to combine their respective Western Canadian natural gas processing assets into a single, new joint venture entity, Pembina Gas Infrastructure Inc. ("PGI") (the "PGI Transaction"). Pembina owns 60% of PGI while KKR's global infrastructure funds own the remaining 40%. Pembina serves as the operator and manager of PGI. Pembina contributed to PGI its wholly-owned field-based gas processing assets as well as its 45% interest in Veresen Midstream Limited Partnership. KKR contributed to PGI its 55% interest in Veresen Midstream Limited Partnership, as well as its 49 percent interest in PGI Processing ULC (formerly named Energy Transfer Canada ULC) (“ETC”). Concurrent with the closing of the transaction, PGI also acquired the remaining 51% common share equity interest in ETC. As a result of the structural change, our threshold for rebaselining GHG emissions as discussed in C5.1c was met.

C5.1b

(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

	Change(s) in methodology, boundary, and/or reporting year definition?	Details of methodology, boundary, and/or reporting year definition change(s)
Row 1	Yes, a change in methodology	Our Scope 2 methodology was updated to use a jurisdictional consumption-based emission factor rather than a generation-based emission factor to account for annually updated electric power, supply and disposition for unallocated energy mix and SF6 emissions. Because these factors from Environment and Climate Change Canada’s National Inventory Report (NIR) and the U.S. Environmental Protection Agency’s Emissions & Generation Resource Integrated Database (eGRID) also include line losses and metering differences, the emissions from these losses are no longer captured in Scope 3 to avoid double-counting.

C5.1c

(C5.1c) Have your organization’s base year emissions and past years’ emissions been recalculated as a result of any changes or errors reported in C5.1a and/or C5.1b?

	Base year recalculation	Scope(s) recalculated	Base year emissions recalculation policy, including significance threshold	Past years' recalculation
Row 1	Yes	Scope 1 Scope 2, location-based	Per the guidance provided in the GHG Protocol, if a company's operations experience growth or decline as part of normal business development or cycle, or implement new technologies, processes or products that reflect real changes in emissions or emission intensity, a re-calculation of the base year is not triggered. As specified in the GHG Protocol, the base year will be re-calculated when a company meets the qualitative criteria and accompanying quantitative thresholds outlined below. These re-calculations will ensure the consistency and relevance of the reported GHG emissions when tracked to the base year. If there are structural changes that result in minor GHG emissions changes, then a full restate of the baseline may not be required, rather the change could be noted in relevant disclosures. Pembina's GHG Inventory Methodology mandates that if structural changes impacting the organizational boundary including mergers, acquisitions, and divestments has a cumulative impact more than 15% of base year Scope 1 and 2 emissions, recalculation of base year emissions is required. As a result of the PGI Transaction discussed in C5.1a, Pembina's threshold for base year emissions recalculations was met.	Yes

C5.2

(C5.2) Provide your base year and base year emissions.

Scope 1

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

2,588,569

Comment

Scope 2 (location-based)

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

1,430,608

Comment

Scope 2 (market-based)

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

Comment

No market-based emissions intensities were relevant or available prior to 2022 reporting year.

Scope 3 category 1: Purchased goods and services

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

We are progressing our Scope 3 delineation but do not have sufficient data yet to select a base year.

Scope 3 category 2: Capital goods

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

We are progressing our Scope 3 delineation but do not have sufficient data yet to select a base year.

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

We are progressing our Scope 3 delineation but do not have sufficient data yet to select a base year.

Scope 3 category 4: Upstream transportation and distribution

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

We are progressing our Scope 3 delineation but do not have sufficient data yet to select a base year.

Scope 3 category 5: Waste generated in operations

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

We are progressing our Scope 3 delineation but do not have sufficient data yet to select a base year.

Scope 3 category 6: Business travel

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

We are progressing our Scope 3 delineation but do not have sufficient data yet to select a base year.

Scope 3 category 7: Employee commuting

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

We are progressing our Scope 3 delineation but do not have sufficient data yet to select a base year.

Scope 3 category 8: Upstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

We are progressing our Scope 3 delineation but do not have sufficient data yet to select a base year.

Scope 3 category 9: Downstream transportation and distribution

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

We are progressing our Scope 3 delineation but do not have sufficient data yet to select a base year.

Scope 3 category 10: Processing of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

We are progressing our Scope 3 delineation but do not have sufficient data yet to select a base year.

Scope 3 category 11: Use of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

We are progressing our Scope 3 delineation but do not have sufficient data yet to select a base year.

Scope 3 category 12: End of life treatment of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

We are progressing our Scope 3 delineation but do not have sufficient data yet to select a base year.

Scope 3 category 13: Downstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

We are progressing our Scope 3 delineation but do not have sufficient data yet to select a base year.

Scope 3 category 14: Franchises

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Not relevant, Pembina does not have any franchises.

Scope 3 category 15: Investments

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

We are progressing our Scope 3 delineation but do not have sufficient data yet to select a base year.

Scope 3: Other (upstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3: Other (downstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

C5.3

(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

American Petroleum Institute Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Natural Gas Industry, 2009
Canadian Association of Petroleum Producers, Calculating Greenhouse Gas Emissions, 2003
IPIECA's Petroleum Industry Guidelines for reporting GHG emissions, 2nd edition, 2011
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
The Greenhouse Gas Protocol: Scope 2 Guidance
The Greenhouse Gas Protocol: Corporate Value Chain (Scope 3) Standard
US EPA Mandatory Greenhouse Gas Reporting Rule
US EPA Emissions & Generation Resource Integrated Database (eGRID)
Other, please specify
Alberta Environment and Parks. Alberta Greenhouse Gas Quantification Methodologies Technology Innovation and Emissions Reduction Regulation, Version 2.2. December 2021.

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)

2,834,288

Comment

C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

We have operations where we are able to access electricity supplier emission factors or residual emissions factors, but are unable to report a Scope 2, market-based figure

Comment

Scope 2 emissions are calculated using current location-based and consumption-based emission factors from Environment and Climate Change Canada's NIR for Canadian facilities, U.S. Environmental Protection Agency's eGRID for US facilities.

Pembina has entered into contractual arrangements to acquire electricity and heat from a third-party cogeneration facility at one of our sites. We are gathering the appropriate data in order to report Scope 2 emissions applying the market-based methodology in the future. Based off our initial internal analysis, we do not expect this to result in a difference greater than 10% in our overall Scope 2 emissions.

C6.3

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?

Reporting year

Scope 2, location-based

1,305,415

Comment

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1, Scope 2 or Scope 3 emissions that are within your selected reporting boundary which are not included in your disclosure?

Yes

C6.4a

(C6.4a) Provide details of the sources of Scope 1, Scope 2, or Scope 3 emissions that are within your selected reporting boundary which are not included in your disclosure.

Source of excluded emissions

Construction activities and emissions directly resulting from spill

Scope(s) or Scope 3 category(ies)

Scope 1
Scope 2 (location-based)
Scope 2 (market-based)

Relevance of Scope 1 emissions from this source

Emissions are not evaluated

Relevance of location-based Scope 2 emissions from this source

Emissions are not evaluated

Relevance of market-based Scope 2 emissions from this source

Emissions are not relevant

Relevance of Scope 3 emissions from this source

Date of completion of acquisition or merger

Estimated percentage of total Scope 1+2 emissions this excluded source represents

Estimated percentage of total Scope 3 emissions this excluded source represents

Explain why this source is excluded

Aligned with our historical reporting, emissions from construction activities and spills are excluded to ensure Pembina's corporate annual reported GHG emissions focus' on consistent operational data.

Explain how you estimated the percentage of emissions this excluded source represents

C6.5

(C6.5) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status

Relevant, not yet calculated

Please explain

Emissions from purchased goods and services may be relevant but have not yet been calculated.

Capital goods

Evaluation status

Relevant, not yet calculated

Please explain

Emissions from capital goods may be relevant but have not yet been calculated.

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

291,341

Emissions calculation methodology

Fuel-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

Scope 3 emissions have been estimated based on the best available data to Pembina at this time.

Upstream transportation and distribution

Evaluation status

Relevant, not yet calculated

Please explain

Further assessment of emissions from upstream transportation and distribution of products purchased by Pembina is required.

Waste generated in operations

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

50,362

Emissions calculation methodology

Fuel-based method
Distance-based method
Waste-type-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

This is calculated based on the waste data reported in 2022 and includes both transportation related emissions from the waste, as well as the processing emissions of each waste types. The inclusion of the processing emissions component is a new addition to Pembina's 2022 Scope 3 emissions.

Business travel

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

460

Emissions calculation methodology

Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

60

Please explain

Pembina tracks business travel (transportation of employees for business-related activities in vehicles not owned or operated by Pembina). Scope 3 emissions were

estimated based on supplier data, which was estimated to cover approximately 60% of Pembina's business travel.

Employee commuting

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

9,642

Emissions calculation methodology

Average data method
Fuel-based method
Other, please specify
Local government statistics on Transportation

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

In 2022, there was a methodology update to improve our estimates and account for GHG and transportation data from municipalities, which are used to calculate the employee commuting emissions. Field employee commuting emissions are also included as part of this calculation.

Upstream leased assets

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

3,471

Emissions calculation methodology

Fuel-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

Emissions in this category are limited during this reporting year to those associated with our corporate headquarters in Calgary. The other field offices are considered under operational control and are included as part of Scope 1 and 2 emissions.

Downstream transportation and distribution

Evaluation status

Relevant, not yet calculated

Please explain

Further assessment of transportation and distribution of any products sold by Pembina to the end customer is required.

Processing of sold products

Evaluation status

Relevant, not yet calculated

Please explain

Further assessment of processing of sold products by Pembina is required.

Use of sold products

Evaluation status

Relevant, not yet calculated

Please explain

Further assessment of end use of goods and services sold by Pembina is required.

End of life treatment of sold products

Evaluation status

Relevant, not yet calculated

Please explain

Pembina is engaged primarily in the provision of transportation and midstream services and not the sale of products. Further assessment is required.

Downstream leased assets

Evaluation status

Relevant, not yet calculated

Please explain

Further assessment of downstream leased assets by Pembina is required.

Franchises

Evaluation status

Not relevant, explanation provided

Please explain

Pembina does not have any franchises.

Investments

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

1,378,189.29

Emissions calculation methodology

Investment-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

Scope 1 and 2 emissions were reported to Pembina by our partners for two significant investments and these have been prorated to Pembina's ownership interest.

Other (upstream)

Evaluation status

Please explain

Other (downstream)

Evaluation status

Please explain

C6.7

(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?

No

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure

0.00379

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

4,139,703

Metric denominator

barrel of oil equivalent (BOE)

Metric denominator: Unit total

1,091,715,865

Scope 2 figure used

Location-based

% change from previous year

1.6

Direction of change

Decreased

Reason(s) for change

Other emissions reduction activities
Acquisitions
Change in output
Change in methodology
Unidentified

Please explain

The assets acquired as part of the PGI Transaction have been included in the emissions intensity for both 2022 and 2021 to calculate the % change from the previous year of 1.6%.

Intensity figure

0.000357

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

4,139,703

Metric denominator

unit total revenue

Metric denominator: Unit total

11,611,000,000

Scope 2 figure used

Location-based

% change from previous year

2

Direction of change

Decreased

Reason(s) for change

Acquisitions
Change in revenue
Change in methodology

Please explain

The % change was calculated based on the difference between emissions intensity of 2021 CDP reported numbers (without assets acquired as part of the PGI Transaction) and 2022 reported numbers (including assets acquired as part of the PGI Transaction).

C-OG6.12

(C-OG6.12) Provide the intensity figures for Scope 1 emissions (metric tons CO2e) per unit of hydrocarbon category.

Unit of hydrocarbon category (denominator)

Other, please specify
Barrels of oil equivalent

Metric tons CO2e from hydrocarbon category per unit specified

0

% change from previous year

50

Direction of change

Increased

Reason for change

This is primarily due to inclusion of assets acquired as part of the PGI Transaction in 2022.

Comment

C-OG6.13

(C-OG6.13) Report your methane emissions as percentages of natural gas and hydrocarbon production or throughput.

Oil and gas business division

Midstream

Estimated total methane emitted expressed as % of natural gas production or throughput at given division

0.004

Estimated total methane emitted expressed as % of total hydrocarbon production or throughput at given division

0

Details of methodology

Reported as methane emissions (tCH4) over natural gas (BOE) 0.0048%
Reported as methane emissions (tCH4) over total (BOE) 0.0006%

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?

Yes

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	2,603,726	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	160,574	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	50,314	IPCC Fourth Assessment Report (AR4 - 100 year)
HFCs	19,674	IPCC Fourth Assessment Report (AR4 - 100 year)

C-OG7.1b

(C-OG7.1b) Break down your total gross global Scope 1 emissions from oil and gas value chain production activities by greenhouse gas type.

Emissions category

Combustion (excluding flaring)

Value chain

Midstream

Product

Unable to disaggregate

Gross Scope 1 CO2 emissions (metric tons CO2)

2,136,257

Gross Scope 1 methane emissions (metric tons CH4)

3,977

Total gross Scope 1 emissions (metric tons CO2e)

2,286,955

Comment

Emissions category

Flaring

Value chain

Midstream

Product

Unable to disaggregate

Gross Scope 1 CO2 emissions (metric tons CO2)

371,802

Gross Scope 1 methane emissions (metric tons CH4)

608

Total gross Scope 1 emissions (metric tons CO2e)

389,232

Comment

Emissions category

Venting

Value chain

Midstream

Product

Unable to disaggregate

Gross Scope 1 CO2 emissions (metric tons CO2)

68,341

Gross Scope 1 methane emissions (metric tons CH4)

937

Total gross Scope 1 emissions (metric tons CO2e)

92,101

Comment

Emissions category

Fugitives

Value chain

Midstream

Product

Unable to disaggregate

Gross Scope 1 CO2 emissions (metric tons CO2)

24

Gross Scope 1 methane emissions (metric tons CH4)

869

Total gross Scope 1 emissions (metric tons CO2e)

21,981

Comment

Emissions category

Other (please specify)

Other including mobile

Value chain

Midstream

Product

Unable to disaggregate

Gross Scope 1 CO2 emissions (metric tons CO2)

27,302

Gross Scope 1 methane emissions (metric tons CH4)

32

Total gross Scope 1 emissions (metric tons CO2e)

44,019

Comment

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/area/region.

Country/area/region	Scope 1 emissions (metric tons CO2e)
Canada	2,522,112
United States of America	312,177

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By business division

C7.3a

(C7.3a) Break down your total gross global Scope 1 emissions by business division.

Business division	Scope 1 emissions (metric ton CO2e)
Corporate	16,845
Facilities	2,801,443
Pipelines	16,000

C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4

(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization's total gross global Scope 1 emissions by sector production activity in metric tons CO2e.

	Gross Scope 1 emissions, metric tons CO2e	Comment
Oil and gas production activities (upstream)		
Oil and gas production activities (midstream)	2,834,288	Pembina is a midstream operator.

Oil and gas production activities (downstream)		

C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/area/region.

Country/area/region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Canada	1,166,183	
United States of America	139,232	

C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

By business division

C7.6a

(C7.6a) Break down your total gross global Scope 2 emissions by business division.

Business division	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Corporate	1,319	
Facilities	782,928	
Pipelines	521,168	

C7.7

(C7.7) Is your organization able to break down your emissions data for any of the subsidiaries included in your CDP response?

Yes

C7.7a

(C7.7a) Break down your gross Scope 1 and Scope 2 emissions by subsidiary.

Subsidiary name

Pembina Gas Infrastructure

Primary activity

Oil & gas extraction

Select the unique identifier(s) you are able to provide for this subsidiary

No unique identifier

ISIN code – bond

ISIN code – equity

CUSIP number

Ticker symbol

SEDOL code

LEI number

Other unique identifier

Scope 1 emissions (metric tons CO2e)

1,914,559

Scope 2, location-based emissions (metric tons CO2e)

362,623

Scope 2, market-based emissions (metric tons CO2e)

Comment

All of these assets are apart of PGI, which is a joint venture that Pembina has 60% ownership. The numbers reported here are from PGI assets that Pembina had 100% operational control in 2022.

C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7

(C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7) Break down your organization's total gross global Scope 2 emissions by sector production activity in metric tons CO2e.

	Scope 2, location-based, metric tons CO2e	Scope 2, market-based (if applicable), metric tons CO2e	Comment

Oil and gas production activities (upstream)			
Oil and gas production activities (midstream)	1,305,415		Pembina is a midstream operator.
Oil and gas production activities (downstream)			

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Increased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change in emissions	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption				There was no change in renewable energy consumption that resulted in a change in Scope 1 & 2 emissions in 2022.
Other emissions reduction activities	57,916	Decreased	1.8	Please refer to response C4.3b.
Divestment				There was one divestment that happened in 2022 but did not result in a change in Scope 1 & 2 emissions in 2022.
Acquisitions	900,149	Increased	28	The PGI Transaction resulted in an increase in Scope 1 & 2 emissions in 2022.
Mergers				There were no mergers that resulted in a change in Scope 1 & 2 emissions in 2022.

Change in output				Estimated based on a xx% increase in physical volumes processed.
Change in methodology	110,337	Increased	3.5	There was an update to the methodology to include unallocated energy source, SF6 and line loss in the Scope 2 emissions. Because of this change, the line loss emissions are not included in the Scope 3 calculations.
Change in boundary				There were no changes in boundary that resulted in a change in Scope 1 & 2 emissions in 2022.
Change in physical operating conditions				There were no changes in physical operating conditions that resulted in a change in Scope 1 & 2 emissions in 2022.
Unidentified				Not applicable.
Other	51,679	Increased	1.6	This increase is due to increase in energy consumption in 2022.

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Location-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

More than 35% but less than or equal to 40%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertook this energy-related activity in the reporting year

Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	Yes
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	No

C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	Unable to confirm heating value		9,531,433	9,531,433
Consumption of purchased or acquired electricity		4,131	2,699,905	2,704,036
Consumption of purchased or acquired heat			495,053	495,053
Total energy consumption		4,131	12,726,392	12,730,523

C8.2b

(C8.2b) Select the applications of your organization's consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of heat	Yes

Consumption of fuel for the generation of steam	No
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	Yes

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Sustainable biomass

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

MWh fuel consumed for self-generation of electricity

MWh fuel consumed for self-generation of heat

MWh fuel consumed for self- cogeneration or self-trigeneration

Comment

Not a relevant fuel type for Pembina in 2022.

Other biomass

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

MWh fuel consumed for self-generation of electricity

MWh fuel consumed for self-generation of heat

MWh fuel consumed for self- cogeneration or self-trigeneration

Comment

Not a relevant fuel type for Pembina in 2022.

Other renewable fuels (e.g. renewable hydrogen)

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

MWh fuel consumed for self-generation of electricity

MWh fuel consumed for self-generation of heat

MWh fuel consumed for self- cogeneration or self-trigeneration

Comment

Not a relevant fuel type for Pembina in 2022.

Coal

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

MWh fuel consumed for self-generation of electricity

MWh fuel consumed for self-generation of heat

MWh fuel consumed for self- cogeneration or self-trigeneration

Comment

Not a relevant fuel type for Pembina in 2022.

Oil

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

MWh fuel consumed for self-generation of electricity

MWh fuel consumed for self-generation of heat

MWh fuel consumed for self- cogeneration or self-trigeneration

Comment

Not a relevant fuel type for Pembina in 2022.

Gas

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

9,531,433.37

MWh fuel consumed for self-generation of electricity

931,394.94

MWh fuel consumed for self-generation of heat

76,324.49

MWh fuel consumed for self- cogeneration or self-trigeneration

1,018,191.03

Comment

Estimated fuel consumptions have been provided based on the best available data at this time. Unable to provide a single heating value due to mix of fuel types.

Other non-renewable fuels (e.g. non-renewable hydrogen)

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

42,958.29

MWh fuel consumed for self-generation of electricity

MWh fuel consumed for self-generation of heat

MWh fuel consumed for self- cogeneration or self-trigeneration

Comment

Estimated fuel consumptions have been provided based on the best available data at this time. Inclusive of diesel, gasoline and jet fuel. Unable to provide a single heating value due to mix of fuel types.

Total fuel

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

9,574,391.67

MWh fuel consumed for self-generation of electricity

931,394.94

MWh fuel consumed for self-generation of heat

76,324.49

MWh fuel consumed for self- cogeneration or self-trigeneration

1,018,191.03

Comment

Estimated fuel consumptions have been provided based on the best available data at this time. Unable to provide a single heating value due to mix of fuel types.

C8.2g

(C8.2g) Provide a breakdown by country/area of your non-fuel energy consumption in the reporting year.

Country/area

Canada

Consumption of purchased electricity (MWh)

3,198,250,161

Consumption of self-generated electricity (MWh)

931,394.94

Consumption of purchased heat, steam, and cooling (MWh)

495,053.09

Consumption of self-generated heat, steam, and cooling (MWh)

76,324.49

Total non-fuel energy consumption (MWh) [Auto-calculated]

3,199,752,933.52

Country/area

United States of America

Consumption of purchased electricity (MWh)

344,259.53

Consumption of self-generated electricity (MWh)

0

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

344,259.53

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

C-OG9.5a/C-CO9.5a

(C-OG9.5a/C-CO9.5a) Break down, by fossil fuel expansion activity, your organization's CAPEX in the reporting year and CAPEX planned over the next 5 years.

	CAPEX in the reporting year for this expansion activity (unit currency as selected in C0.4)	CAPEX in the reporting year for this expansion activity as % of total CAPEX in the reporting year	CAPEX planned over the next 5 years for this expansion activity as % of total CAPEX planned over the next 5 years	Explain your CAPEX calculations, including any assumptions
Exploration of new oil fields	0	0	0	Exploration is the domain of upstream oil and gas companies, Pembina's business is predominantly focused on midstream and thus we don't see how this is relevant. All four of these are upstream concepts.
Exploration of new	0	0	0	Exploration is the domain of upstream oil and gas

natural gas fields				companies, Pembina's business is predominantly focused on midstream and thus we don't see how this is relevant. All four of these are upstream concepts.
Expansion of existing oil fields	0	0	0	Exploration is the domain of upstream oil and gas companies, Pembina's business is predominantly focused on midstream and thus we don't see how this is relevant. All four of these are upstream concepts.
Expansion of existing natural gas fields	0	0	0	Exploration is the domain of upstream oil and gas companies, Pembina's business is predominantly focused on midstream and thus we don't see how this is relevant. All four of these are upstream concepts.

C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6

(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

	Investment in low-carbon R&D	Comment
Row 1	Yes	Pembina sees tremendous value in advancing new technologies which could have a positive impact on climate-related issues. Pembina is actively exploring new technologies centered around a lower carbon economy.

C-CO9.6a/C-EU9.6a/C-OG9.6a

(C-CO9.6a/C-EU9.6a/C-OG9.6a) Provide details of your organization's investments in low-carbon R&D for your sector activities over the last three years.

Technology area	Stage of development in the reporting year	Average % of total R&D investment	R&D investment figure in the reporting year	Average % of total R&D investment planned over	Explain how your R&D investment in this technology area is aligned with

		over the last 3 years	(unit currency as selected in C0.4) (optional)	the next 5 years	your climate commitments and/or climate transition plan
1					

1 Information is considered confidential at this time however we will evaluate public disclosure of this information for future reporting periods.

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	No third-party verification or assurance

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

Pembina Limited Assurance Statement and Select Environmental Indicators Report Final_June 19 2023.pdf

Page/ section reference

Subject Matter Information & Applicable Criteria page 1
Selected Environmental Indicators Report page 4
Appendix 1 GHG Reporting Evaluation Criteria page 5

Relevant standard

Other, please specify

Alberta TIER; World Resource Institute Greenhouse Gas Protocol A Corporate Accounting and Reporting Standard; United Nations Intergovernmental Panel on Climate Change (IPCC) in Fourth Assessment Report (AR4)

Proportion of reported emissions verified (%)

100

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

Scope 2 approach

Scope 2 location-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

Pembina Limited Assurance Statement and Select Environmental Indicators Report Final_June 19 2023.pdf

Page/ section reference

Subject Matter Information & Applicable Criteria page 1
Selected Environmental Indicators Report page 4
Appendix 1 GHG Reporting Evaluation Criteria page 5

Relevant standard

Other, please specify

Alberta TIER; World Resource Institute Greenhouse Gas Protocol A Corporate Accounting and Reporting Standard; United Nations Intergovernmental Panel on Climate Change (IPCC) in Fourth Assessment Report (AR4)

Proportion of reported emissions verified (%)

100

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?

Yes

C10.2a

(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C6. Emissions data	Other, please specify Physical throughput and total scope 1 and 2 GHG emissions intensity	GHG Protocol & Internally developed criteria	KPMG performed a limited assurance engagement over Pembina's reported 2019 and 2022 GHG emissions intensity. Pembina calculates its GHG emissions in accordance with the requirements of the GHG Protocol. Pembina measures and reports physical throughput volumes for each of its assets in accordance with internally developed criteria. The assured GHG emissions and physical throughput are used to calculate Pembina's GHG emissions intensity. 1

[1]Pembina Limited Assurance Statement and Select Environmental Indicators Report Final_June 19 2023.pdf

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

Yes

C11.1a

(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.

Alberta TIER - ETS

BC carbon tax

Canada federal fuel charge
Saskatchewan OBPS - ETS

C11.1b

(C11.1b) Complete the following table for each of the emissions trading schemes you are regulated by.

Alberta TIER - ETS

% of Scope 1 emissions covered by the ETS
86

% of Scope 2 emissions covered by the ETS
0

Period start date
January 1, 2022

Period end date
December 31, 2022

Allowances allocated
2,290,048

Allowances purchased
158,974

Verified Scope 1 emissions in metric tons CO2e
2,449,022

Verified Scope 2 emissions in metric tons CO2e
0

Details of ownership
Facilities we own and operate

Comment

Saskatchewan OBPS - ETS

% of Scope 1 emissions covered by the ETS
0.42

% of Scope 2 emissions covered by the ETS
0

Period start date
January 1, 2022

Period end date
December 31, 2022

Allowances allocated
8,755

Allowances purchased
3,251

Verified Scope 1 emissions in metric tons CO2e
12,005

Verified Scope 2 emissions in metric tons CO2e
0

Details of ownership
Facilities we own and operate

Comment
Our reporting period for assets under this ETS is for 2022 calendar year. The compliance verification for 2022 reporting year has been completed. The ETS activity for 2022 reporting year is still in progress and expected to be completed in weeks. Preliminary 2022 emissions data is included above. Scope 2 emissions are not directly verified under both Alberta TIER and Saskatchewan OBPS.

C11.1c

(C11.1c) Complete the following table for each of the tax systems you are regulated by.

BC carbon tax

Period start date
January 1, 2022

Period end date
December 31, 2022

% of total Scope 1 emissions covered by tax
11.9

Total cost of tax paid
16,798,826.02

Comment
Includes carbon taxes paid on stationary combustion, flaring and products placed into market from the assets located in BC in 2022.

Canada federal fuel charge

Period start date

January 1, 2022

Period end date

December 31, 2022

% of total Scope 1 emissions covered by tax

1.7

Total cost of tax paid

2,429,051.93

Comment

C11.1d

(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

Pembina operated facilities that are regulated under an emission trading system strive to meet the regulatory performance benchmarks and/or operate as efficiently as possible to mitigate exposure to carbon compliance obligations. When a facility cannot meet carbon performance benchmarks, the facility will utilize project-based or market carbon credits to offset compliance obligations to the extent permitted by regulation or purchase carbon credits through the appropriate government fund.

Our approach to improving emissions intensity performance includes:
-Operational opportunities: Reducing GHG emissions through energy efficiency and asset optimization, as well as investing in abatement projects across our assets including equipment modernization, electrification, and small-scale renewable energy projects. In 2022, our operational improvements resulted in more than 60,000 tonnes of CO2e reductions.
-Renewable energy: Increasing the use of renewable energy through PPAs with TransAlta on the 100MW Garden Plain Wind Power Project and with Capstone on the 105MW Wild Rose 2 Wind Farm as well as exploring other potential renewable power opportunities.
-Investments in a lower carbon economy: Developing the ACG to effectively manage emissions and contribute positively to a lower-carbon economy

C11.2

(C11.2) Has your organization canceled any project-based carbon credits within the reporting year?

No

C11.3

(C11.3) Does your organization use an internal price on carbon?

No, but we anticipate doing so in the next two years

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?

Yes, our suppliers

Yes, other partners in the value chain

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement

Information collection (understanding supplier behavior)

Details of engagement

Collect GHG emissions data at least annually from suppliers

Collect targets information at least annually from suppliers

Collect climate-related risk and opportunity information at least annually from suppliers

Other, please specify

Annual collection of supplier self-reported ESG information

% of suppliers by number

100

% total procurement spend (direct and indirect)

100

% of supplier-related Scope 3 emissions as reported in C6.5

Rationale for the coverage of your engagement

Pembina recognizes the need to engage with its suppliers on climate-related issues. As part of the pre-qualification and renewal process as well as our standard supplier contract, suppliers are asked to maintain a statement of compliance with Pembina's Health, Safety & Environment ("HSE") policy. More recently we have implemented a supplier code of conduct as part of Pembina's supplier on-boarding and compliance program. Included in this code of conduct are details of Pembina's environmental stewardship commitments. Furthermore, beginning in 2022 all of Pembina's suppliers are asked to comply with the supplier code of conduct and complete the standard ISN ESG questionnaire, which includes topics important to Pembina, including climate-related issues.

Impact of engagement, including measures of success

Pembina is committed to protecting the health and safety of workers, the public and safeguarding the environment affected by Pembina's activities. Suppliers are an

important extension of Pembina's business and Pembina wants to ensure that suppliers understand what Pembina expects from them with regards to our HSE policy and supplier code of conduct, including climate issues. We initially plan to measure our success in this area through the number of suppliers who complete the ESG questionnaire by the end of 2022. Furthermore, we expect to see increased awareness and engagement with our suppliers in addition to an expanded understanding of our total scope 3 emissions as a result of these efforts.

Comment

C12.1d

(C12.1d) Give details of your climate-related engagement strategy with other partners in the value chain.

Pembina shares information on the performance as well as compliance around emissions with Pembina's owner partners at certain large facilities. In addition, Pembina participates in discussions around any major investment decisions related to climate or emissions technology. Finally, Pembina also engages with its owner partners in the decision-making process around the use of carbon credits.

Pembina consults with local Indigenous communities, landowners and other local stakeholders to minimize Pembina's environmental footprint. By working closely with Indigenous communities and local stakeholders to identify potential risks and or areas of concerns, Pembina is able to incorporate their input into project design and future operating plans. In addition, Pembina participates in discussions with landowners around the environmental impacts, including climate change, of Pembina's projects. This helps to reduce potential for future harm to the environment.

As an example, Pembina and the Haisla Nation announced a partnership agreement in the development of the proposed Cedar LNG Project. The Cedar LNG Project is strategically positioned to leverage Canada's abundant natural gas supply and British Columbia's growing liquified natural gas ("LNG") infrastructure to produce industry-leading low carbon, cost-competitive Canadian LNG for overseas markets. The Cedar LNG Project is expected to be the largest First Nation-owned infrastructure project in Canada and to have one of the cleanest environmental profiles in the world. This partnership is the result of meaningful collaboration, with a focus on environmental stewardship, Indigenous prosperity and inclusion and mutual economic benefit. The project's floating design offers significantly less environmental impact on the Douglas Channel coastline and it is expected that the facility will be interconnected to the existing BC Hydro transmission system, utilizing renewable electricity to make the Cedar LNG Project one of the lowest emission intensity LNG facilities globally. In 2022, Cedar LNG continued to progress regulatory, commercial and engineering workstreams as it moves towards a final investment decision in 2023.

C12.2

(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?

No, but we plan to introduce climate-related requirements within the next two years

C12.3

(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?

Row 1

External engagement activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

Yes, we engage directly with policy makers

Yes, our membership of/engagement with trade associations could influence policy, law, or regulation that may impact the climate

Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?

No, and we do not plan to have one in the next two years

Describe the process(es) your organization has in place to ensure that your external engagement activities are consistent with your climate commitments and/or climate transition plan

Pembina's External Affairs unit is responsible for ensuring that all engagement with government and public sector stakeholders on matters of legislative, regulatory, or policy development related to climate change is conducted in a manner that is aligned to our business's overarching climate change strategy. We develop robust engagement plans on an annual basis with all priority stakeholder groups and identify issues upon which we can engage to advance of our climate change strategy.

C12.3a

(C12.3a) On what policy, law, or regulation that may impact the climate has your organization been engaging directly with policy makers in the reporting year?

Specify the policy, law, or regulation on which your organization is engaging with policy makers

Alberta's Technology Innovation and Emissions Reduction Regulation

Category of policy, law, or regulation that may impact the climate

Carbon pricing, taxes, and subsidies

Focus area of policy, law, or regulation that may impact the climate

Carbon offsets

Policy, law, or regulation geographic coverage

Sub-national

Country/area/region the policy, law, or regulation applies to

Other, please specify

Alberta

Your organization's position on the policy, law, or regulation

Support with minor exceptions

Description of engagement with policy makers

As part of open government consultation on revisions to Alberta's TIER, Pembina offered written comments to help create a more effective regulation. Pembina was generally supportive of the government's proposed amendments except for the proposal to remove the pre-existing extension period which could be applied for to lengthen the lifetime of generated carbon credits.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

Pembina advocated for lifetime of carbon credits to remain as was prescribed by the existing iteration of the TIER regulation.

Have you evaluated whether your organization's engagement on this policy, law, or regulation is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Specify the policy, law, or regulation on which your organization is engaging with policy makers

Government of Canada's proposed regulatory framework for reducing oil and gas methane emissions to achieve 2030 target.

Category of policy, law, or regulation that may impact the climate

Climate change mitigation

Focus area of policy, law, or regulation that may impact the climate

Emissions – methane

Policy, law, or regulation geographic coverage

National

Country/area/region the policy, law, or regulation applies to

Canada

Your organization's position on the policy, law, or regulation

Support with minor exceptions

Description of engagement with policy makers

In the past several years, Pembina has been in regular written and verbal contact with federal and provincial policymakers and regulators and provided input on the evolving regulations of methane emissions in Canada.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

Pembina has advocated for a performance-based policy approach that ensures reduction of methane emissions from the midstream sector is cost effective, promotes innovation, does not undermine competitiveness, and imparts sufficient compliance flexibility for the various obligated parties.

Have you evaluated whether your organization's engagement on this policy, law, or regulation is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Specify the policy, law, or regulation on which your organization is engaging with policy makers

Government of Canada draft guidance for best-in-class GHG emissions performance by oil and gas projects

Category of policy, law, or regulation that may impact the climate

Climate change mitigation

Focus area of policy, law, or regulation that may impact the climate

Emissions – CO2

Policy, law, or regulation geographic coverage

National

Country/area/region the policy, law, or regulation applies to

Canada

Your organization's position on the policy, law, or regulation

Neutral

Description of engagement with policy makers

Pembina believes in a balanced approach to transitioning towards a lower carbon economy - one that addresses society's needs for affordable and reliable energy, while mitigating the risks associated with climate change. Pembina has advocated for regulatory frameworks that support effective and outcome-based regulations for the management and reduction of lifecycle carbon emissions.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

Have you evaluated whether your organization's engagement on this policy, law, or regulation is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Specify the policy, law, or regulation on which your organization is engaging with policy makers

Government of Canada's options to cap and cut oil and gas sector GHG emissions to achieve 2030 goals and net-zero by 2050.

Category of policy, law, or regulation that may impact the climate

Climate change mitigation

Focus area of policy, law, or regulation that may impact the climate

Climate-related targets

Policy, law, or regulation geographic coverage

National

Country/area/region the policy, law, or regulation applies to

Canada

Your organization's position on the policy, law, or regulation

Neutral

Description of engagement with policy makers

Pembina believes in a balanced approach to transitioning towards a lower carbon economy - one that addresses society's needs for affordable and reliable energy, while mitigating the risks associated with climate change. Pembina has advocated for regulatory frameworks that support effective and outcome-based regulations for the management and reduction of lifecycle carbon emissions.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

Have you evaluated whether your organization's engagement on this policy, law, or regulation is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

C12.3b

(C12.3b) Provide details of the trade associations your organization is a member of, or engages with, which are likely to take a position on any policy, law or regulation that may impact the climate.

Trade association

Other, please specify

Canadian Propane Association ("CPA")

Is your organization's position on climate change policy consistent with theirs?

Mixed

Has your organization attempted to influence their position in the reporting year?

No, we did not attempt to influence their position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

CPA is the national association for Canada's propane industry, dedicated to promoting propane as an essential, clean and reliable energy solution. CPA works with governments and regulators on policy issues that have ramifications for the propane industry in Canada. Pembina participates in and supports CPA's advocacy work on issues of relevance to Pembina. The company is represented on CPA's board of directors and on CPA committees.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Trade association

Other, please specify

Alberta Industrial Heartland Association (AHIA)

Is your organization's position on climate change policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

Yes, we publicly promoted their current position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

AIHA is a municipal economic development partnership that encourages sustainable industrial development in the northeast Edmonton capital region. AIHA seeks to position itself as a globally recognized, diversified, eco-industrial cluster, with a world-leading hydrocarbon processing industry, that sets the global standard for industrial ESG leadership. The organization promotes low-carbon industrial growth opportunities based on access to two large carbon capture and storage, and two hydrogen infrastructure systems positioned within the industrial region. AIHA acknowledges the important role heavy industry must play in helping Canada achieve its net-zero aspirations and is consistently seeking opportunities to partner with industry and government to reduce the region's overall climate impact. Based on expertise from industrial operators active within the region, AIHA regularly works with all three levels of government to ensure a healthy policy, program, regulatory, and legislative environment for a competitive framework for industry to grow, innovate, and pursue carbon reduction opportunities.

Pembina regularly partners with AIHA to host government delegations seeking to learn more about Pembina's operations in Alberta's Industrial Heartland, including carbon reduction opportunities and challenges.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Trade association

Other, please specify

Northeast Capital Industrial Association ("NCIA")

Is your organization's position on climate change policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

No, we did not attempt to influence their position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

The NCIA is an Alberta-based association that seeks to promote sustainable industrial growth through environmental, socio-economic, and public safety programs. The NCIA represents the interests of industry in Alberta's Industrial Heartland area and works with government organizations and community groups at the provincial, regional, and local levels to address environmental, health, safety, infrastructure, and community issues.

Pembina participates in and supports the NCIA's advocacy work on issues of relevance to the company, including issues related to climate policies. A representative of Pembina is currently a Director on the board of directors of the NICA.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Trade association

Other, please specify

Strathcona Industrial Association (SIA)

Is your organization's position on climate change policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

No, we did not attempt to influence their position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

SIA is an industry association representing east Edmonton and Strathcona County heavy industrial operators in Alberta, that provides a common voice for industry. SIA members share a commitment to safe and environmentally responsible operations. By consistently monitoring and measuring performance, the SIA assesses the effects of industry and gathers scientifically valid data about current local air quality and long-term trends. This information is shared through ongoing reporting to Alberta Environment and Parks.

Pembina has representatives on the Board of Directors and the Environment Committee of the SIA. Pembina supports SIA's work on advancement in the areas of environmental monitoring, including current local air quality and long-term trends, performance, safety promotion, public engagement and community well-being.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Trade association

Other, please specify

Business Council of Alberta ("BCA")

Is your organization's position on climate change policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

No, we did not attempt to influence their position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

The BCA is supportive of government's climate ambitions but stresses that actions in support of emissions reductions best utilize Alberta's industrial strengths. The BCA is also supportive of action that increases the workforce necessary in Alberta to meet the needs of the energy transition.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Trade association

Other, please specify

Alberta Chamber of Resources

Is your organization's position on climate change policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

No, we did not attempt to influence their position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

The Alberta Chamber of Resources (ACR) provides cross-sectoral perspectives and leadership on resource opportunities and challenges in Alberta's resource sector. ACR members are resource companies, transportation, logistics companies, engineers, and others who work in the resource-extraction industry in Alberta. Their core focus areas are enabling policy and regulatory support, resource industry of the future, Indigenous engagement and partnerships, ESG standards and expectations, and workforce.

Pembina participates on the Indigenous engagement and responsible development committee.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Trade association

Other, please specify

North Dakota Petroleum Council

Is your organization's position on climate change policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

No, we did not attempt to influence their position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

The NDPC recognizes the challenge of climate change and the energy transitions and advocates to ensure that energy remains affordable and secure through the transition.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Trade association

Other, please specify

Resource Diversification Council

Is your organization's position on climate change policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

No, we did not attempt to influence their position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

The RDC recognizes the immense potential for Alberta's workforce and natural resources to be used to grow the petrochemical industry and support the global energy transition.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Trade association

Other, please specify

Western Canadian Shipper's Coalition

Is your organization's position on climate change policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

No, we did not attempt to influence their position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

Western Canadian Shippers' Coalition (WCSC) represents western shippers who provide tens of thousands of direct and indirect jobs for Canadians in communities across the west and ship billions of dollars' worth of mainly resource products annually to domestic and international customers.

Pembina participates in and supports WCSC's advocacy work on issues of relevance to Pembina and participates in WCSC committees.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Trade association

Other, please specify

BC Marine Terminal Operators Association

Is your organization's position on climate change policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

No, we did not attempt to influence their position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

The BC Marine Terminal Operators Association is the voice of marine terminals in British Columbia. The association is dedicated to the safe, environmentally responsible, cost-effective, efficient and reliable movement of goods through B.C. ports. The association invests in the community and to protect the industrial shoreline. They also Advocate for responsible growth, balanced investment, and forward-thinking policy.

Pembina participates in and supports the BC Marine Terminal Operators Association's advocacy work on issues of relevance to Pembina and participates in committees. A representative of Pembina is currently a Director on the board of directors.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

C12.4

(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Publication

In mainstream reports

Status

Complete

Attach the document

2023 Information Circular.pdf

Page/Section reference

Pages: 1-2, 32-36, 59

Content elements

Governance
Strategy
Risks & opportunities
Emission targets

Comment

Publication

In voluntary communications

Status

Complete

Attach the document

Annual Summary 2022.pdf

Page/Section reference

Pages: 3-4, 8

Content elements

Strategy
Risks & opportunities
Emission targets

Comment

Publication

In voluntary sustainability report

Status

Complete

Attach the document

Pembina Sustainability Report - FINALV2 - WEB-Optimized_compressed.pdf

Page/Section reference

Sustainability at Pembina pg. 7
About Pembina pg. 9-10
Governance pg. 13-18
Energy Transition & Climate Change pg. 19-26

Data Tables & Appendices pg. 63-64

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets

Comment

C12.5

(C12.5) Indicate the collaborative frameworks, initiatives and/or commitments related to environmental issues for which you are a signatory/member.

	Environmental collaborative framework, initiative and/or commitment
Row 1	We are not a signatory/member of any collaborative framework, initiative and/or commitment related to environmental issues

C15. Biodiversity

C15.1

(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues
Row 1	

C15.2

(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity
Row 1	

C15.3

(C15.3) Does your organization assess the impacts and dependencies of its value chain on biodiversity?

Impacts on biodiversity

Indicate whether your organization undertakes this type of assessment

Dependencies on biodiversity

Indicate whether your organization undertakes this type of assessment

C15.4

(C15.4) Does your organization have activities located in or near to biodiversity-sensitive areas in the reporting year?

C15.5

(C15.5) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?
Row 1	

C15.6

(C15.6) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1		

C15.7

(C15.7) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located

C16. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

C16.1

(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Senior Vice President, External Affairs & Chief Legal and Sustainability Officer	Chief Sustainability Officer (CSO)

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

Please confirm below

I have read and accept the applicable Terms