



# Building something extraordinary

2021 | Sustainability Report



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# Introduction



## Message from the Board

On behalf of the Board of Directors of Pembina Pipeline Corporation, the Governance, Nominating and Corporate Social Responsibility Committee is proud to highlight what Pembina has accomplished in advancing its overall environmental, social and governance (“ESG”) performance in 2021 and what it is focusing on in 2022 and beyond. Integration of sustainability priorities across Pembina is making us an even stronger, more resilient company, which in turn benefits all of our stakeholders: employees, investors, communities and customers.

As part of our oversight responsibilities, the Board engages on Pembina’s sustainability strategy, commitments, actions and results.

2021 was an important year for Pembina as ESG became more fully integrated into long-term business planning, organizational structure and corporate policies and practices.

The appointment of Pembina’s first Chief Sustainability Officer, Janet Loduca, in 2021 was a significant step in advancing our ESG journey, underscoring our focus on sustainability and climate change. Among other things, Janet is responsible for Pembina’s long-term sustainability strategy, including the identification of issues, risks and opportunities, and enhancing measurement and disclosure of ESG performance.







Pembina has made important strides in identifying climate change-related impacts and has started incorporating climate risks and opportunities across Pembina's business practices, strategy and decision-making. One key step was establishing a 30% greenhouse gas ("GHG") emission intensity reduction target by 2030, relative to our 2019 baseline. The GHG reduction target will help guide business decisions and improve overall emissions intensity performance, contributing to the sustainability of Pembina's business and ensuring Canadian energy is developed and delivered responsibly. Focusing on operational opportunities, continuing to invest in renewables and other lower emission energy sources and developing carbon management solutions are all critical elements of how Pembina will achieve this target.

Pembina also established Equity, Diversity and Inclusion ("EDI") targets in 2020 for the Board and in 2021 for executive leadership and the workforce as a whole. These targets will help ensure the organization reflects a diverse range of perspectives, allowing for enhanced decision making and better representation from the communities in which we operate.

To support our focus on sustainable priorities, including climate and EDI, in 2021, we incorporated ESG objectives into Pembina's annual corporate incentive compensation program for all employees.

Pembina also significantly advanced its reporting practices in 2021, including submitting its first CDP report (formerly Carbon Disclosure Project). These efforts are being recognized externally as Pembina has successfully improved or maintained its ESG scores or rankings from third-party agencies such as Sustainalytics and MSCI.

Looking ahead, the Board is confident in Pembina's long term strategy. Pembina has initiated scenario analysis work to better understand future risks and opportunities and help guide our long-term strategy. Pembina is continuing to build important relationships with Indigenous communities, advancing its five-year Indigenous engagement strategy and making progress with our partners, the Haisla Nation and Western Indigenous Pipeline Group, on two significant Indigenous-led opportunities. In the EDI space, Pembina is continuing to expand Indigenous cultural awareness training, develop new inclusion networks and update policies to better reflect our recognition of best practice and support an inclusive culture. The combination of diverse information and perspectives will help us build a more resilient long-term business and support new, innovative energy solutions.

Overall, we are committed to ensuring sustainability remains a key tenet of Pembina's approach and to support the company's leadership in the energy industry's evolution towards a more sustainable future.

Sincerely,

**Robert G. Gwin**

*Chair, Governance, Nominating and  
Corporate Social Responsibility Committee*



## Message from our President and CEO

Over the past decade, I have had the opportunity to participate in Pembina's growth as it has become a more diversified and integrated business. Through our strategic planning, acquisitions, growth projects, recruitment of top talent and building strong long-term relationships with our stakeholders, Pembina has become a \$40 billion enterprise, operating safely and reliably, in jurisdictions across North America.

My appointment as President and CEO in 2021 was especially meaningful to me given the current inflection point we have reached as a company. Over our more than 65-year history, we have established a strong foundation and entrepreneurial spirit. Our financial guardrails have allowed us to grow and diversify while managing overall financial risk. Going forward, we will leverage that history and foundation to shape our approach for long-term ESG excellence in the transition to a lower carbon economy. We are strongly positioned to meaningfully address the impacts of climate change and continue bringing innovative solutions to our customers, investors, employees and communities.

As the world evolves, we are embracing the opportunity to adapt, respond and contribute to a more sustainable future. Pembina strives to be the leader in delivering energy solutions and connecting global markets so the world can thrive. We have committed ourselves to being in business for all stakeholders. Our communities expect us to minimize the impact of our operations and to share the economic benefits we bring. Our employees want a work environment that provides meaningful opportunities and celebrates and values their diversity. Our customers choose us for reliable service and sustainable performance. And our investors want to know that we are embracing the transition to a lower carbon economy, while still providing competitive returns.

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**Moving forward, I know we have an exciting future. Embedding ESG priorities across our organization is a critical part of how we will succeed and build a strong, thriving business for many years to come.**

Thank you to Pembina's Board of Directors for the trust they have placed in me as President and CEO. And thank you to all of Pembina's stakeholders for your continued support.

Sincerely,



**Scott Burrows**

*President and Chief Executive Officer*







## About Pembina

Pembina is a dynamic energy transportation and midstream provider, serving customers for more than 65 years.

Our Purpose at Pembina is to be the leader in delivering integrated infrastructure solutions connecting global markets:

### Customers

choose us first for reliable value-added services.

### Investors

receive sustainable industry-leading returns.

### Employees

say we are the 'employer of choice' and value our safe, respectful, collaborative and inclusive work culture.

### Communities

welcome us and recognize the net positive impact of our social and environmental commitment.

## Our Values

Pembina cares not only about results, but also how those results are achieved. In 2022, we established our Values, which represent the behaviours Pembina's people strive to exhibit every day.

### Safe

We care for each other

### Trustworthy

We have each other's backs

### Respectful

We seek to be gracious and kind

### Collaborative

We are great together

### Entrepreneurial

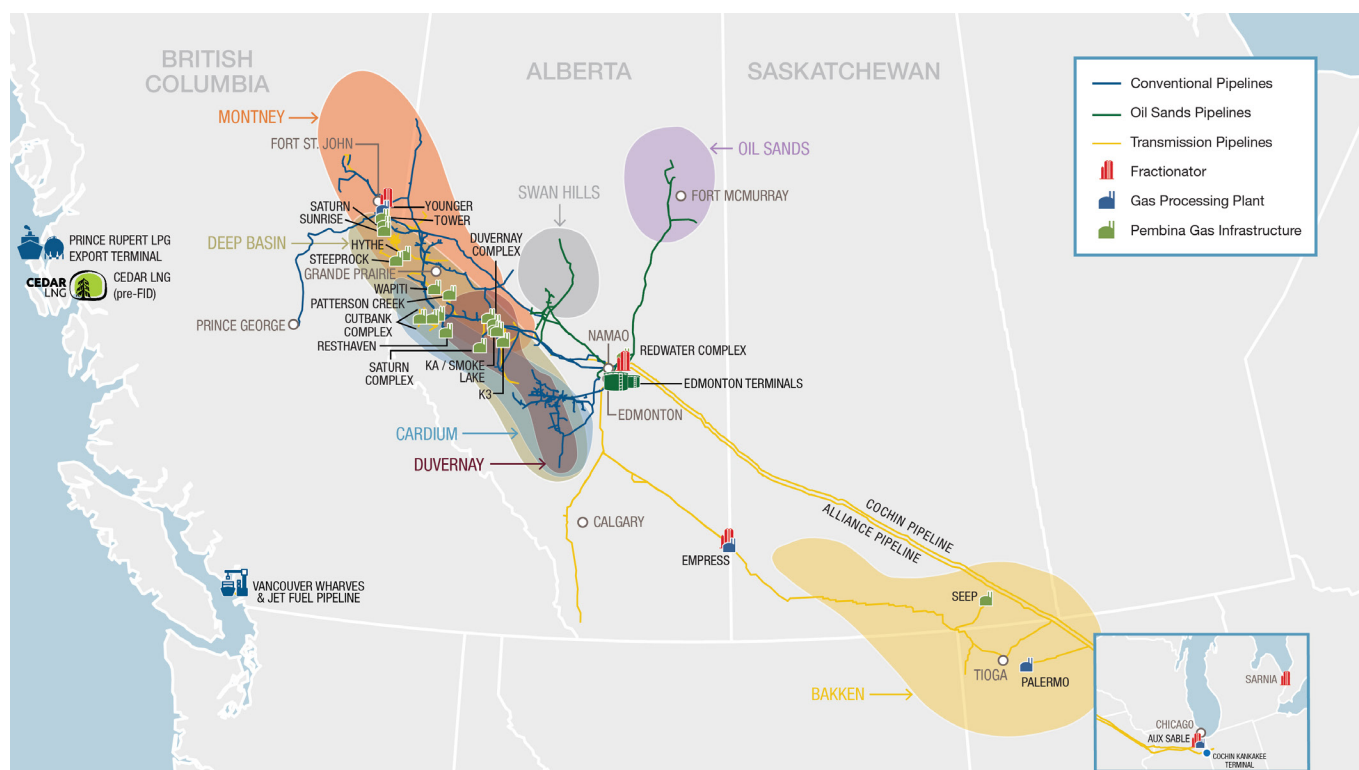
We create to succeed



## 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 natural gas liquids (“NGL”) fractionation facilities 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.



The above map reflects Pembina’s operational footprint inclusive of the assets that recently were acquired through the strategic joint venture transaction with KKR that created Pembina Gas Infrastructure (“PGI”).<sup>1</sup> This transaction closed in mid-2022. PGI’s ESG data will be incorporated into Pembina’s sustainability disclosures in the future. For additional information about PGI and its approach to sustainability please visit [Pembina Gas Infrastructure](#).

<sup>1</sup> Pembina owns 60% of PGI and is responsible for physical operations, while KKR owns the remaining 40%. For more information about KKR, please visit the [KKR website](#).





## Sustainability at Pembina

Culture of inclusion and EDI targets



Alberta Carbon Grid partnership with TC Energy

Employee annual compensation linked to ESG metrics including: safety, emissions reductions and EDI

Transformational Indigenous Partnerships



**30%**

GHG emissions intensity reduction target

Exploring new energy solutions



As we evolve our sustainability focus, we have made great strides. Some highlights of our 2021 progress include:

### Energy Transition and Climate

- Pembina developed an enhanced GHG strategy and committed to a 30% GHG emission intensity reduction target by 2030. To meet this target, we are focused on operational opportunities, greater use of renewable and lower emission energy sources and investments in a lower carbon economy.
- We announced our proposed Alberta Carbon Grid (“ACG”) project, in collaboration with TC Energy. This is a forward-looking carbon transportation and sequestration solution, which is being designed to serve multiple customers, industries and sectors.
- We are committed to continuing to explore new energy solutions including solar and LNG. In 2021, Pembina advanced development of the Empress Cogeneration facility. We also committed to a long-term 100 megawatt (“MW”) renewable energy power purchase agreement with TransAlta Corporation at the Garden Plains Wind Farm, which is currently in development, with expected start up in 2022. More recently, in 2022, we signed a second power purchase agreement with a wholly-owned subsidiary of Capstone Infrastructure Corporation for the offtake of 105 MW from the Wild Rose 2 wind farm. Together, these two renewable power purchase agreements are anticipated to produce an estimated total of 3.7 million tonnes of carbon dioxide equivalent (“CO<sub>2</sub>e”) emission offsets.



## Transformational Indigenous Partnerships

- Recognizing the important role we play in supporting Indigenous economic reconciliation, we are proud to be part of two transformational Indigenous-led partnerships:
  1. A partnership with the Haisla Nation to develop the proposed Cedar LNG Project, which would be the largest First Nation majority-owned infrastructure project in Canada with one of the cleanest environmental profiles in the world.
  2. Chinook Pathways, a partnership with the Western Indigenous Pipeline Group ("WIPG") to pursue ownership of the Trans Mountain Pipeline, following completion of the construction of the Trans Mountain Expansion project.
- These partnerships are exciting opportunities to redefine how Indigenous communities and the energy industry can work together.

## Safety

- We are deeply saddened to report the fatality of one of our subcontractors in 2021. While Pembina's overall safety performance was better than the industry average this year and we had no employee lost time injuries, the fatality is a stark reminder of the need to remain ever diligent. We continue to believe that all incidents are preventable and are committed to enhancing our contractor safety program to ensure that everyone returns home safely at the end of each day.
- Leading indicators are a key part of how we evaluate our performance. In 2021, we had approximately 10,000 hazard identifications completed and 9,500 positive safety recognitions, a significant increase over 2020.
- We are proud to have received the CN Safe Handling Award and to have started up our new Prince Rupert Terminal with no lost time injuries or significant safety incidents. Also in 2021, our Aux Sable and Palermo facilities achieved 7 years with no recordable injuries.

## Employee Well-Being and Culture

- Our people shape Pembina's future. Understanding that a diverse workforce makes us a better, more resilient company, Pembina has established EDI targets for our Board, senior executive team and all employees. These targets aim to increase the representation of women and other underrepresented groups at all levels of the organization.
- We are creating a culture where all employees feel valued and recognized through initiatives such as inclusion networks and employee led panel discussions with an emphasis on Indigenous culture and reconciliation, mental health, LGBTQ2S+ pride, disability awareness and unpacking impacts of harmful traditional gender norms.
- Pembina was recognized as one of Canada's Top Employers in 2021 for the fifth consecutive year.





## ESG Ratings

Our focus on sustainability and hard work has been recognized. Pembina has successfully improved or maintained its ESG scores or rankings from globally recognized agencies including Sustainalytics<sup>2</sup> and MSCI<sup>3</sup>.



### ESG RISK RATING

RANKING

#### Rank

(1<sup>st</sup> = lowest risk)

#### Percentile

(1<sup>st</sup> = lowest risk)

**Refiners & Pipelines**  
(Industry Group)

**2** out of 198

**2<sup>nd</sup>**

**Oil & Gas Storage  
and Transportation**  
(Subindustry)

**2** out of 198

**2<sup>nd</sup>**



ESG  
**INDUSTRY  
TOP RATED**



**MSCI**  
ESG RATINGS



In 2021, Pembina also participated in CDP (formerly Carbon Disclosure Project) for the first time and continued that participation in 2022<sup>4</sup>.

<sup>2</sup> As of January 13, 2022.

<sup>3</sup> Pembina was upgraded to an A on January 21, 2022.

<sup>4</sup> Pembina CDP submissions are available on our [website](#).



## Sustainability Focus Areas

Over the last two years, Pembina has taken a deliberate and robust approach to identifying our sustainability-related material focus areas<sup>5</sup>, using a third-party materiality assessment that included broad engagement with capital markets and other stakeholders. We have organized our report in a similar manner, into six sustainability focus areas:



### Governance

Strong governance is essential to support the achievement of our sustainability goals.

[Pages 14 - 21](#)



### Energy Transition and Climate

Climate change presents both opportunities and risks for our business. Through continued innovation, we can succeed as a leader in energy transition.

[Pages 22 - 29](#)



### Employee Well-Being & Culture

We are great together – we aspire to create a culture that provides meaningful opportunities and attracts and retains diverse talent.

[Pages 30 - 35](#)



### Health and Safety

Safety is a core Pembina value and we are committed to ensuring everyone returns home safely every day.

[Pages 36 - 39](#)



### Responsible Asset Management

We are committed to ensuring the reliability of our assets and protecting the environment.

[Pages 40 - 53](#)



### Indigenous and Community Engagement

We recognize the important relationship that Indigenous peoples have with the land and value our relationships with all the communities in which we operate.

[Pages 54 - 59](#)

<sup>5</sup> The terms "material", "materiality" and "materiality assessment" are used specifically in this report to identify the sustainability topics that we believe are important to our stakeholders. These definitions may not be the same as the meaning of "material" pursuant to applicable securities legislation.





### ***Reading This Report***

This report has been developed using guidance from leading sustainability reporting standards, including the Sustainability Accounting Standards Board (“SASB”), and the World Economic Forum (“WEF”). In certain places we have also reviewed specific guidance from the Global Reporting Initiative (“GRI”) to inform content. We have also mapped our goals and targets to the UN Sustainable Development Goals (“UN SDGs”), to ensure they are meaningful and support development that balances social, economic and environmental sustainability.

The terms “sustainability” and “ESG” are used interchangeably in this report. Generally speaking, “sustainability” refers to a focus on outcomes and “ESG” refers to a focus on the measurement of performance.



# Governance

## Our Approach

Strong and effective governance is an essential foundation to having a successful sustainable business. Our focus on governance supports our ability to mitigate risk and create value. Additional details and information on our governance can be found in our [2022 Management Information Circular](#).

### ***The Board's Role***

Overseeing Pembina's sustainability strategy is a core responsibility of the Board. The Board regularly engages on ESG issues through presentations by management and third-party experts at its annual strategy sessions and quarterly meetings.

On certain key sustainability topics, the Board has delegated regular oversight to specific Committees including:

- The Governance, Nominating and Corporate Social Responsibility Committee (the "Governance Committee") assists the Board in providing oversight of Pembina's ESG strategy and 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 Safety, Environment and Operational Excellence Committee oversees the development, implementation and monitoring of risks and policies related to safety, environment, operational excellence and responsible asset management programs, such as integrity management and cyber security.
- The Human Resources, Health and Compensation Committee (the "HR Committee") oversees Pembina's approach to employee health and wellness as well as EDI strategies and programs. The HR Committee is also responsible for approving Pembina's incentive compensation programs for all employees, including the incorporation of ESG metrics into those programs.
- The Audit Committee maintains oversight of the integrity of Pembina's financial statements, the reporting process and the internal audit function.





## Management's Role

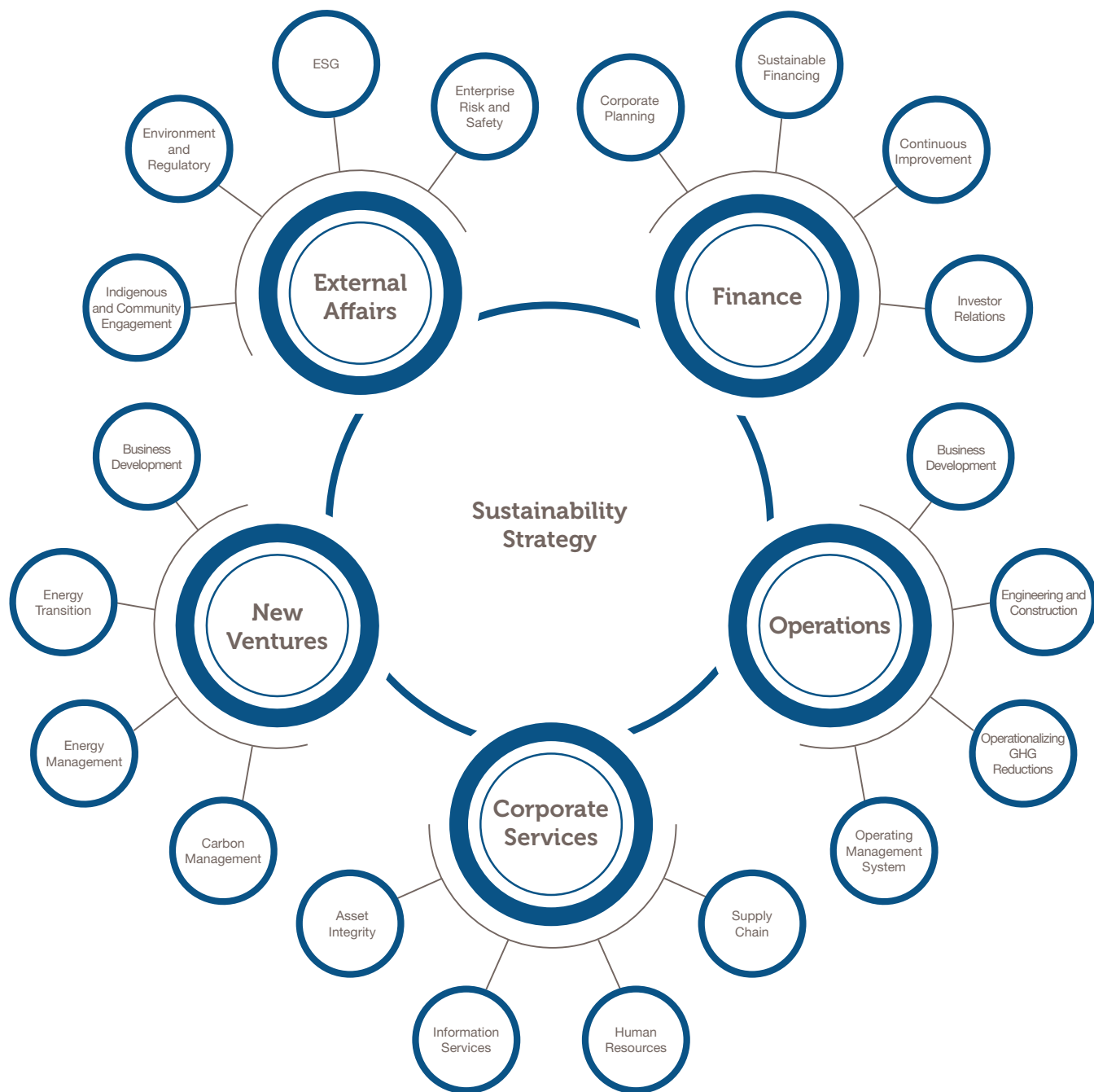
### Management plays a critical role in advancing Pembina's sustainability objectives.

Each member of our senior executive team is responsible for components of sustainability including employee and contractor safety, environment and process safety, assessing climate-related risks and opportunities, overseeing the development of strategic opportunities, enhancing organizational culture and diversity of our employee base and reporting to the Board on Pembina's ESG-related actions.

<p>➤ <b>Chief Executive Officer (CEO)</b></p>	Responsible for providing oversight and coordination of sustainability-related matters and for ensuring timely and effective reporting to the Board and our stakeholders.
<p>➤ <b>Chief Financial Officer (CFO)</b></p>	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.
<p>➤ <b>Chief Operating Officer (COO)<sup>6</sup></b></p>	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.
<p>➤ <b>Senior Vice President, Marketing and New Ventures &amp; Corporate Development Officer</b></p>	Responsible for initiatives associated with extending Pembina's value chain and exploration of new opportunities centred around a lower carbon economy, including new energies.
<p>➤ <b>Senior Vice President, External Affairs and Chief Legal and Sustainability Officer</b></p>	Responsible for overseeing Pembina's ESG strategy, including oversight and monitoring of sustainability issues, risks, trends, and Pembina's performance as well as making recommendations to the executive team and Board on sustainability matters.
<p>➤ <b>Senior Vice President, Corporate Services Officer</b></p>	Responsible for the advancement of Pembina's ESG objectives, including through supporting our various OMS strategies and programs, enhancing organizational culture and diversity of our employee base and strategic supply chain management.

Teams across all of Pembina's business and service units collaborate and support the advancement of our ESG priorities.

<sup>6</sup> In February 2022, executive accountability for operational emissions reductions was consolidated into a single role with the newly combined position of Senior Vice President & Chief Operating Officer.



In addition to the formal structure, there are a number of cross-functional committees and teams to help manage risk, share learnings and collaborate on new opportunities that support Pembina's business and priorities.



### Enterprise Risk Management

Pembina's Enterprise Risk Management ("ERM") program drives the identification, measurement, prioritization and management of risk across Pembina, including climate-related risk and opportunities. 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 our ERM policy, outlining individual responsibilities for the identification, reporting and mitigation of risks. Pembina considers several factors when defining a substantial financial or strategic impact on our business, both qualitative and quantitative. This may include impacts on Pembina's business, reputation, financial condition, access to and cost of capital, results of operations, cash flow and dividends. Assessments of all identified risks and opportunities

include the evaluation of potential impacts on financial results, health, safety, or environmental conditions, operating system 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.

Once the Enterprise Risk Management Committee ("ERC") has identified a risk, a risk owner is assigned based on associated oversight or portfolio responsibility. The ERC meets at least quarterly to review the performance, appropriateness and current business environment surrounding our risk management activities, with an additional, more comprehensive review completed annually. Management reports to the Board about the risks that have been identified. Energy transition is one of the risks and opportunities that has been identified in the ERM program.



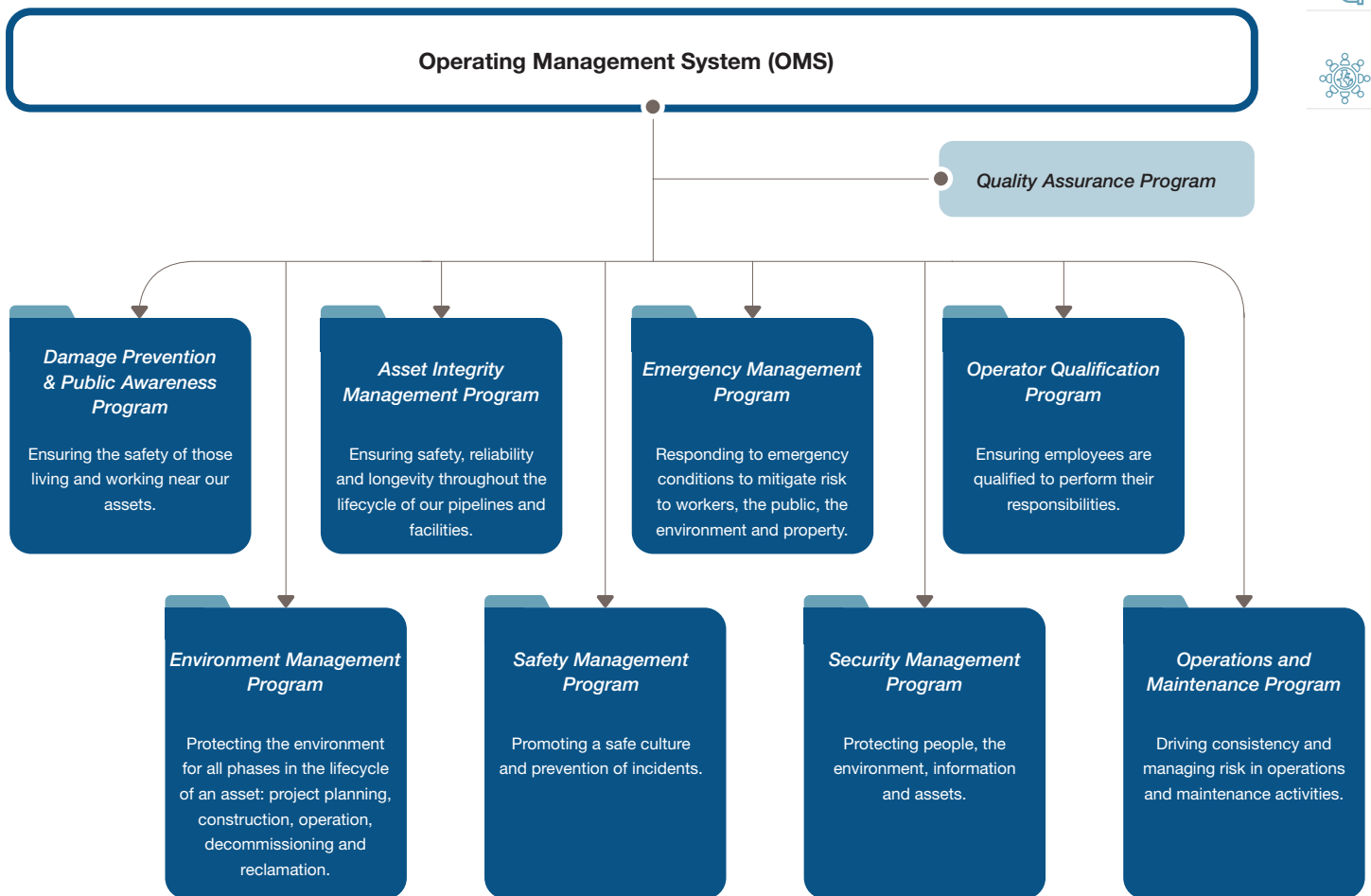




## Operating Management System

The ERM program is aligned to the Pembina OMS.

Pembina's OMS governs our activities relevant to our ESG material topics including safety, security, emergency management, integrity and environment. The OMS is a framework of policies, processes and procedures to guide planning, implementation, checking and corrective action.



More information on the OMS programs can be found in the Health and Safety and Responsible Asset Management sections.

## Supply Chain Management

Pembina prides itself on working with suppliers who place safety as a top priority, uphold the highest standards of ethics and integrity, and are economically, environmentally, and socially responsible. We are on a journey to enhance our supply chain process to incorporate diverse-owned businesses providing quality goods and services. We have made considerable progress in this area, governed by our newly released Supplier Code of Conduct. Please reference the Indigenous and Stakeholder Engagement section for more information.



## 2021 Performance

Pembina's strength in governance has been recognized by ISS Corporate Solutions who ranked Pembina as low risk with a "3 out of 10" on Governance (1 being the highest possible score) and Sustainalytics<sup>7</sup> has also ranked Pembina as low risk at a 2 (1 being the lowest risk) in our industry group and sector.

Key 2021 governance highlights are as follows:

- › **Board independence:** All our directors, other than our CEO, are independent.
- › **Board attendance:** Our Board meeting attendance was 100% in 2021.
- › **Board gender diversity:** Our Board has established a gender diversity target for independent Board representation of at least 30%. In 2021, 40% of our independent directors were women, consistent with the prior year. More recently, women make up 45% of our independent directors.
- › **Overall Board diversity:** Our Board has also established an overall diversity target for independent Board representation of at least 40%. Overall diversity includes women, persons with disabilities, Indigenous peoples or members of other racial, ethnic and/or visible minorities. In 2021, 40% of our independent directors were diverse, consistent with the prior year. More recently, 45% of our independent directors are diverse.
- › **Executive and employee gender and diversity:** The Board approved Pembina's new executive and employee EDI targets. Pembina's 2021 Canadian workforce EDI performance represents meaningful progress towards achievement of these targets. Please see the Employee Well-Being and Culture section beginning on page 30 for additional details
- › **New and updated policies:** The Board approved amendments to the Code of Ethics to include human rights, adopted a new Anti-Bribery Policy and Community Relations Policy and enhanced the Indigenous and Tribal Relations Policy to codify our commitment to ethical and inclusive practices. To learn more about how we are governed and our policies, please visit the [Governance](#) page on our website.
- › **GHG emissions reduction target:** The Board approved Pembina's commitment to a 30% GHG emission intensity reduction by 2030, relative to a 2019 baseline.
- › **Indigenous-led partnerships:** The Board oversaw the creation of two transformational Indigenous-led partnerships.
- › **ESG tied to compensation:** The Board approved incorporating ESG performance into Pembina's annual corporate incentive compensation for all employees, including targets related to safety and environment, emission intensity, EDI and supplier diversity.

<sup>7</sup> As of January 13, 2022.



- > **ESG disclosure:** The Board supported enhanced ESG disclosure (including through inaugural CDP submission) and assurance activity with respect to GHG emissions and waste and water.
- > **ESG accountability:** The Board appointed our first Corporate Sustainability Officer and supported the establishment of a dedicated internal ESG team.
- > **Supply chain:** The Board oversaw the implementation of the Supplier Code of Conduct to help ensure Pembina works with suppliers who share our commitment to sustainability.







## Looking Forward: 2022 and Beyond

We firmly believe that strong governance is core to having a sustainable and resilient business. Pembina remains committed to maintaining robust governance practices and will continue to leverage best practices and other learnings to progress this area.

To date in 2022, we have seen continued success, including increasing both our Board diversity metrics and executive team's EDI metrics.

In 2022, we commenced our first climate-related scenario analysis to inform our strategic planning. Our scenario analysis will provide us with new strategic insights we can use to ensure we continue to build a resilient business. In 2022 and 2023, we will further advance this scenario work at the executive and Board level. This will allow us to continue to progress our TCFD alignment.

We are committed to further enhancing our data collection and reporting. In particular, we are investigating the implementation of data management platforms to enhance collection processes and controls both for compilation of individual data sets and overall ESG metric aggregation.

Going forward, we will be focused on further incorporating ESG metrics into our supply chain processes that will create clear expectations and guide decisions about the vendors and suppliers with which we work.

### Analyst Corner

[Website - Governance](#)

[2022 Management Information Circular – Governance \(page 28-52\)](#)

[2021 Annual Information Form – Corporate Governance \(page 54 – 57\)](#)

[2022 CDP Climate Change Response \(C1\)](#)

### Reporting Frameworks

WEF (Adapted from GRI-201-1)

WEF (As Referenced in International Accounting Standard ("IAS") 7 and  
US GAAP Accounting Standards Codification ("ASC") 230)



# Energy

## Transition and Climate Change

This section covers two related topics: Pembina's broader approach to energy transition and an update on our GHG emissions.

### Energy Transition and Climate Change

#### Our Approach

Climate change is a key societal issue and a material focus area for Pembina and our industry. Reliably meeting the world's energy needs is critical to ensuring we continue to fuel our economies and support access to schools, education, hospitals, community and commercial centres, and more. Western Canada is fortunate to have abundant hydrocarbons, and we have a unique opportunity to be a global leader in delivering environmentally responsible energy.

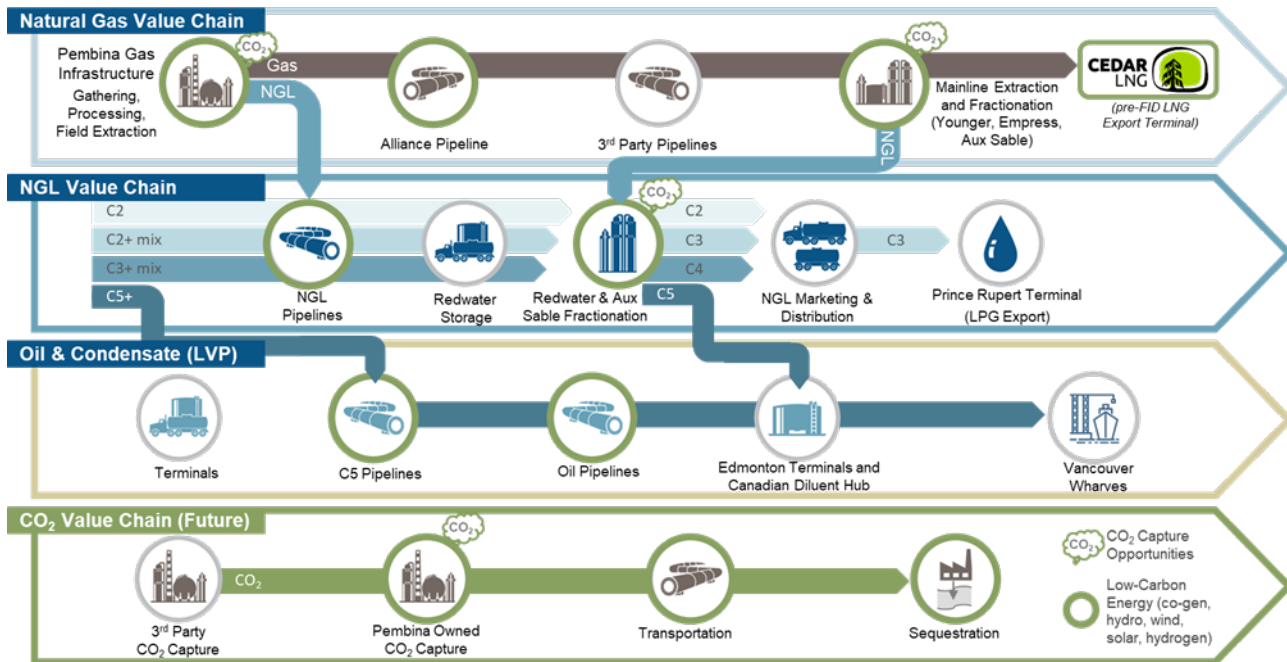
While hydrocarbons will remain important to energy supply and security for many decades, we acknowledge the critical nature of climate change, and are incorporating the transition to a lower carbon economy into our strategic planning. Over our more than 65-year history, Pembina has a proven track record of successfully evolving our business to be more resilient, and we are committed to the energy industry's evolution towards a more sustainable future.

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**Our focus areas include reducing GHG emissions across our operations, managing our energy usage and investing in a lower carbon economy through renewable energy, carbon sequestration and other low carbon opportunities.**







As shown above in the figure, we believe we are well-positioned to expand our value chain proposition to reliably address new lower carbon opportunities like LNG and carbon capture and sequestration.

To ensure these considerations are successfully embedded in our decision making, we have prioritized decarbonization and lower carbon initiatives through:

- Establishing an emission intensity reduction target;
- Adapting our strategic investment criteria to include regard for climate change;
- Incorporating GHG emissions reduction objectives into employee incentive compensation;
- Establishing teams aligned with these priorities including: a New Ventures team, an Energy Management team and a cross-functional team focused on operationalizing emissions reductions;

- Pursuing transformative projects such as ACG and Cedar LNG;
- Building Indigenous-led partnerships rooted in shared governance and collaborative decision making, which leverage diverse perspectives and experience; and
- Initiating the use of climate scenario analysis to inform us on major global and regional energy and climate trends that could impact our business in the short-, medium- and long-term.

## 2021 Performance

We know that collaboration across industry, governments, Indigenous communities and the public will be critical to making meaningful progress towards society's climate goals. As a result, we announced a number of exciting partnerships in 2021 that demonstrate our increased focus on energy transition and reducing GHG emissions. These projects all reflect different elements of our commitment to energy transition and how we can play a leadership role.





### Alberta Carbon Grid (ACG)



In partnership with TC Energy, [ACG](#) is envisioned to be a **world-leading carbon transportation and sequestration solution** to serve multiple customers, industries and sectors. The project leverages our collective skills, experience and extensive network of pipeline infrastructure. We are exploring options to potentially create several hubs throughout Alberta that would be designed to independently collect and store carbon dioxide (“CO<sub>2</sub>”) safely and cost-effectively. Our long-term vision is to transport and store up to 20 million tonnes of CO<sub>2</sub> annually through several hubs across Alberta. The ACG Industrial Heartland proposed project would be our first hub and current focus.

See the following video link for more information: [ACG video](#)

### Cedar LNG



A partnership with the Haisla Nation for the proposed development of the [Cedar LNG](#) (liquefied natural gas) project in Kitimat, BC that will connect Western Canadian Sedimentary Basin (“WCSB”) natural gas to international markets. This project will be the **largest Indigenous-owned infrastructure project in Canada** and by utilizing primarily renewable power, will have one of the cleanest environmental profiles of any LNG facility in the world. Natural gas has significant potential to displace coal as an energy source in Asia given its lower emission profile, reliability and the cost-competitiveness of coal-to-gas conversions.

See the following video link for more information: [Cedar LNG](#)

### Garden Plains Wind Farm

A long-term 100 MW power purchase agreement that supports the **development of the 130 MW Garden Plains Wind Farm in Alberta** with an expected start up in 2022. This agreement generates cost competitive renewable energy and will offset approximately 1.8 million tonnes CO<sub>2</sub>e over its lifetime.





## Looking Forward: 2022 and Beyond

We continue to work on increasing Pembina's long-term value and helping ensure Canadian energy is developed and delivered responsibly. Going forward, our focus will be on:

- Advancing ACG after being selected by the Government of Alberta to further evaluate the proposed location for safely storing carbon.
- Progressing Cedar LNG to a final investment decision.
- Continuing to evaluate renewable power opportunities. To date, underpinning third-party owned renewable wind projects has proven to be the optimal solution which balances the decarbonization of Pembina's power supply and capital allocation priorities. In early 2022, Pembina signed its second renewable energy power purchase agreement with a subsidiary of Capstone Infrastructure Corporation for the offtake of 105 MW from the Wild Rose 2 wind farm, which is expected to be operational in 2024.
- Continuing to explore other renewable and LNG opportunities.

In 2022, we commenced our first climate-related scenario analysis to inform our strategic planning. By evaluating climate risks and opportunities against the resiliency of our business, we can identify proactive operational responses, evaluate cost implications, adapt to changing policies/regulations and set longer term priorities. As part of this analysis, we are using global International Energy Agency ("IEA") scenarios including the Stated Policies Scenario (STEPS) and the Sustainable Development Scenario (SDS). We are also evaluating local dynamics, for example, the impact of Canadian (and North American) climate policy and WCSB supply and demand dynamics. Our process involves taking a quantitative approach to the impacts on the commodities we handle under each scenario.

Our scenario analysis will provide us with new strategic insights we can use to ensure we continue to build a resilient business and allow us to continue to progress our TCFD alignment. In 2022 and 2023, we will further advance this work at the executive and Board level. As part of our go-forward plan, we intend to update our scenario analysis based on any material changes to our business or the IEA assumptions, to assess the opportunities and risks, inform our strategic planning and provide climate-related information to our stakeholders.

### Analyst Corner

[2021 Annual Information Form – Risks Related to Climate Change \(pages 98-99\)](#)

[2021 Annual Report – Risks Related to Climate Change \(page 60-62\)](#)

[2022 CDP Climate Change Response \(C2.2a\)](#)

### Reporting Frameworks

United Nations Sustainable Development Goal 13: Climate Action



## GHG Emissions

### Our Approach

At Pembina, we are committed to minimizing our environmental footprint through the reduction of our GHG emissions intensity.

**In 2021, Pembina established a target of reducing Scope 1 and Scope 2 GHG emission intensity 30% by 2030, relative to the 2019 baseline ("30 by 30").**

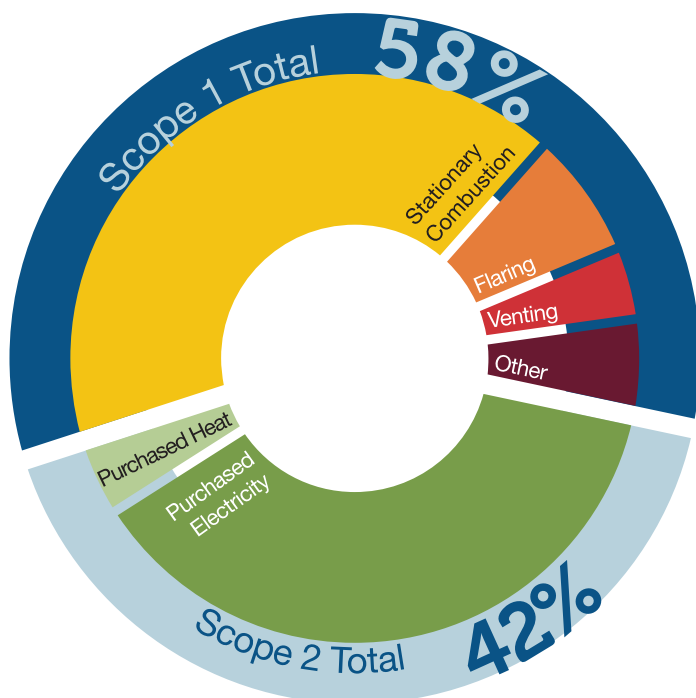
Pembina has identified multiple pathways that support achievement of this target, including operational opportunities, building renewable energy capacity and

investing in projects that reduce or manage emissions. Pembina is committed to executing on projects that show immediate results while also exploring longer-term significant reduction initiatives.

Pembina's GHG emissions footprint is generated from our facility and pipeline operations. Scope 1 GHG emissions result primarily from the combustion of fuels, flaring and venting at our facilities. Scope 2 GHG emissions are primarily from the use of electricity, which is used to run our equipment and serve our offices. A breakdown of the composition of our 2021 Scope 1 and 2 emissions is shown below.

To ensure continued confidence in our disclosures, Pembina has obtained limited assurance opinions for Scope 1 and Scope 2 GHG emissions data from 2019 to 2021 inclusive, which are available [here](#).

2021 Scope 1 and 2 Emissions Composition







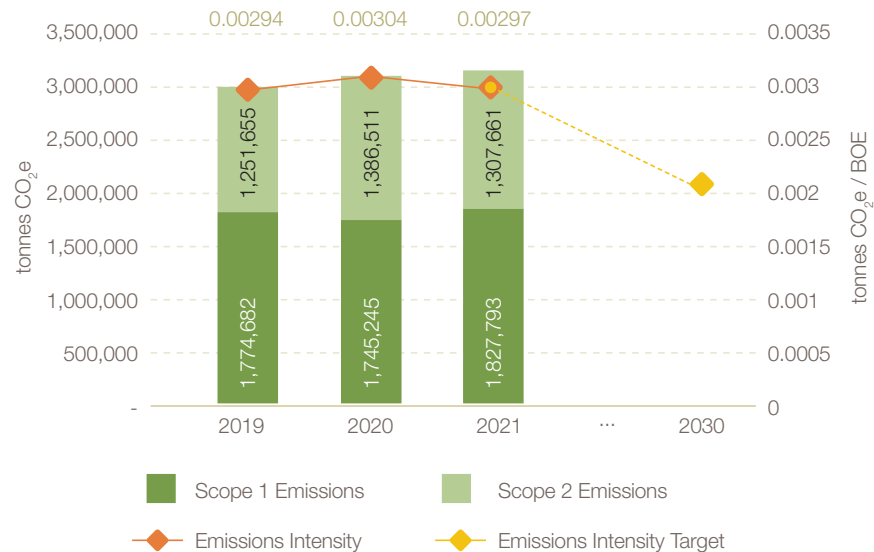
## 2021 Performance

As noted, in 2021 we set our 30 by 30 target for reducing our GHG emissions intensity. In support of that objective, we established a number of new teams to identify opportunities to reduce our emissions, including an Energy Management team and an ESG team. Working together with others across Pembina, including operations, supply chain, environmental and New Ventures, these new groups will help operationalize the targets by incorporating them into our projects and processes.

While our Scope 1 and 2 absolute emissions have been relatively flat from 2019 to 2021, our emissions intensity decreased by approximately 2% in 2021. Our path to achieving our emission intensity target will not be linear, but we are confident in our ability to achieve our target by 2030 as our mitigation plans, including operational efficiencies and new technologies, come into effect.



GHG Emissions Performance





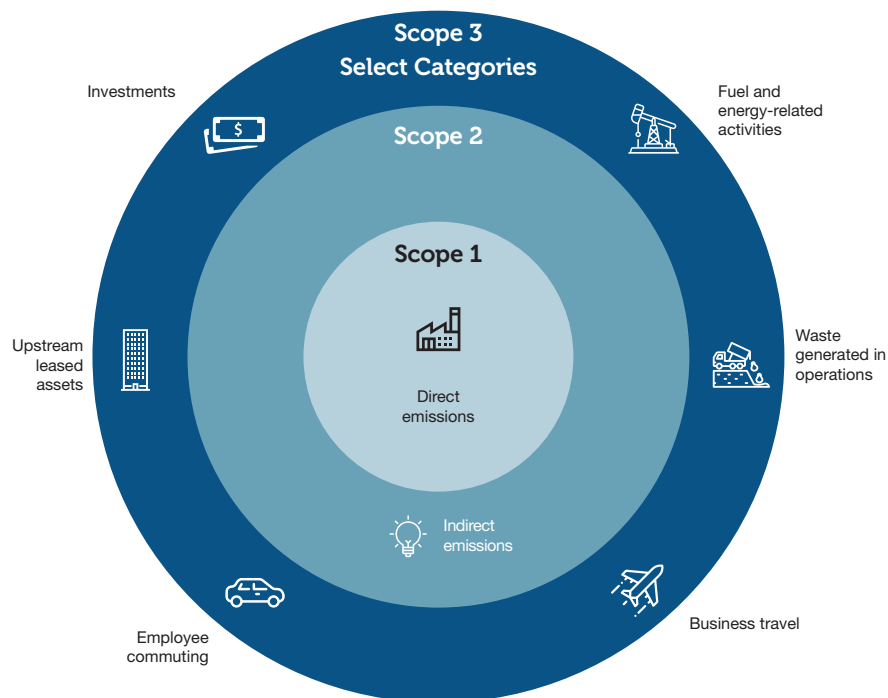
## METHANE

Pembina's 30 by 30 emissions intensity reduction target is inclusive of methane emissions, which is predominantly generated from stationary combustion, followed by flaring, venting, fugitive and mobile emissions. In 2021, methane emissions were reduced to a level consistent with 2019 performance, following an increase in vented emissions at the Duvernay Complex for 2020 that was addressed with an operational improvement in 2021. Methane emissions also declined in part based on a fugitive emissions leak detection and repair program implemented in 2020 across 100% of our Canadian 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. Based on the survey findings, Pembina identified opportunities to repair fugitive leaks or take corrective actions to mitigate vented emissions through equipment upgrades, retrofits or focused maintenance programs to ensure equipment is operating as efficiently as possible.

In 2021, we expanded our Scope 3 reporting and now report and provide estimates on six Scope 3 categories as follows:

- > fuel and energy-related activities (not included in Scope 1 or 2);
- > waste generated in operations;
- > business travel;
- > employee commuting;
- > upstream leased assets; and
- > investments.

The calculation of Scope 3 emissions relies on best available data and is determined using various assumptions. Our Scope 3 emissions are estimates only and do not cover the full range of Scope 3 categories. We continue to evaluate how to expand our Scope 3 reporting to include additional categories in future reporting.



Pembina also carefully manages other emissions that may impact air quality, including nitrogen oxides, sulphur oxides, volatile organic compounds and particulate matter. Please refer to the data tables for our 2021 performance.



## Looking Forward: 2022 and Beyond

Key focus areas for our work on GHG emissions reductions in 2022 and beyond include:

- Continuing to embed GHG targets into Pembina's annual corporate incentive compensation at all levels.
- Incorporating sustainable financing into our broader capital structure aligning Pembina's financing strategy with its ESG priorities. As a first step, in 2022 we established a [sustainability-linked loan](#).
- Continuing to leverage our cross-functional teams to optimize our operations and invest in technologies that add value to operations while reducing our emissions footprint, including:
  - In late 2022, the first Cogeneration Facility at the Empress NGL Extraction Facility will be in service, supplying up to 90% of the site's

electrical requirements. It will use natural gas to generate up to 45 megawatts of low-emission electrical power, thereby reducing overall operating costs and reducing GHG emissions through the utilization of cogeneration heat. In 2023, we anticipate emissions reductions to total approximately 30,000 tonnes CO<sub>2</sub>e, with reductions decreasing over time relative to grid emission factors.

- Pembina is pursuing opportunities to optimize the operation of our existing assets, including through compressor control system optimization and equipment replacement.
- Exploring opportunities to better understand our equipment and pneumatic devices inventory and potential methane emissions reduction opportunities.
- Advancing our Scope 3 evaluation and strategy to more comprehensively account for all applicable categories.



### Analyst Corner

[2022 Management Information Circular – Sustainability and ESG \(page 33 -34\)](#)

[2022 CDP Climate Change Response \(C6\)](#)

[Pembina Pipeline Corporation Announces GHG Reduction Target](#)

### Reporting Frameworks

United Nations Sustainable Development Goal 13: Climate Action

SASB EM-MD-110a.1

WEF (Adapted from GRI-305:1-3, Task Force on Climate-related Financial Disclosures ("TCFD"), GHG Protocol)



# Employee

## Well-Being and Culture

### Our Approach

A successful, resilient business requires an engaged, diverse and innovative workforce.

**Pembina is committed to being the employer of choice that is recognized for its commitment to diversity, equal opportunity and an inclusive environment.**

We aim to be the place where people are proud to be a part of the team, are committed to the future vision, have professional growth opportunities and see themselves represented at all levels in the organization.

### Engaging with Employees

Creating feedback opportunities from our employees is important to creating an inclusive and engaging work environment that allows people to thrive. In addition to regular employee town halls with Pembina's officers and senior leadership, Pembina routinely conducts engagement surveys to hear feedback from employees on what is going well, identify opportunities for improvement and inform how we can develop strategic action plans to address what is important to our employees.

### Targets

Establishing targets demonstrates our commitment to measuring and driving the results we value. In 2021, we established the following EDI targets<sup>8</sup> as described below.

We are confident we will achieve these targets by focusing on exploring new ways to build out our talent pipelines, particularly for operations-related positions, and fostering an inclusive and diverse culture.

35%

Women in the overall workforce

45%

Overall diversity in the workforce

30%

Gender diversity of Board Members

40%

Overall diversity of Board Members

30%

Women in executive leadership

40%

Overall diversity in executive leadership

<sup>8</sup> Our EDI targets include our Canadian workforce only. Employee targets are for 2025.



We use multiple methods to support our employees' understanding of how we can all contribute to a culture of inclusion, including:

- Inclusion Networks: employee-led groups designed to build a sense of workplace community and belonging for diverse employees and their allies to explore important EDI topics and initiatives.
- EDI Foundations Education: interactive training designed to increase understanding of the core concepts of EDI, explore the dynamics of inclusion and exclusion and create a culture of allyship.
- Conversations for Change: company-wide conversations with our employees to explore EDI topics and their impact on the personal and professional lives of our colleagues.

## 2021 Performance

**For the fifth year in row, Pembina was proud to be recognized by The Globe and Mail as one of Canada's Top 100 Employers and Alberta's Top Employers.**

This award acknowledges organizations that demonstrate excellence in work environment, employee communications, career development, community involvement and other core cultural elements and employment terms. In 2021, Pembina was also honoured with the Disability Employment Awareness Month (DEAM) Award, which recognizes innovative organizations who are leading the charge in employing and accommodating Albertans with disabilities.



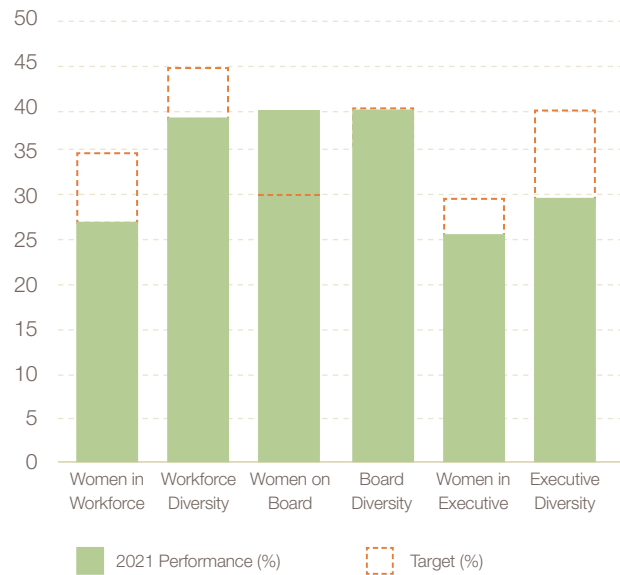
Pembina employee Lionel Migrino, recent graduate of the Dhillon School of Business at the University of Lethbridge, was the winner of the National Co-operative Education and work Integrated Learning (CEWIL) Student of the Year Award for extraordinary achievement in work-integrated learning. Lionel created a series of Disability Awareness Training workshops that have been shared with Pembina employees.





Pembina also made meaningful progress towards achieving our established EDI targets, as can be seen in the graph below which outlines our results against targets in 2021. We acknowledge the under representation of women in certain roles, particularly in operations, and are committed to increasing Pembina's diverse representation.

#### 2021 EDI Performance in Canadian Workforce<sup>9,10</sup>



<sup>9</sup> This represents our permanent Canadian workforce only. As of December 31, 2021, Pembina had 2,099 total permanent Canadian employees.

<sup>10</sup> Board Diversity includes independent directors only. Employee targets are for 2025.





Our inclusion programs began to truly mature in 2021 and we made significant progress on each of the identified elements:

- Initiated development of three new Inclusion Networks: Pembina Pride (LGBTQ2S+), Women's Inclusion Network and the Multicultural Resource Network (launched in 2022).
- The Conversations for Change series was established and seven employee led panel-style conversations were held on topics including:
  - Women and Gender
  - Pride and the LGBTQ2S+ Community
  - National Indigenous Peoples Day
  - Mental Health
  - People with Disabilities
  - Understanding the Impact of Male Norms

In total, these panels were viewed approximately 2,800 times in 2021 by Pembina employees, as we all learned more about the lived experiences of our under-represented colleagues. These conversations significantly progressed an inclusive culture with behaviours of empathy, compassion and allyship.

I feel empowered. There is momentum through tangible events and allyship across the company... I'm now leading a multicultural resource group, along with others who share the same vision and passion, and we're making plans to help employees from all backgrounds feel included and be successful."

**Panel Participant**

I continue to be shocked by the empathy I feel towards my colleagues who choose to share their experiences so that we may all learn. The bravery and courage exhibited in these conversations inspires me to take action in my life to ensure I am doing everything I can to support and create an inclusive workplace and community."

**Pembina Employee**

- Developed and piloted a comprehensive 9-hour interactive EDI Foundations program. Through evaluation of the program, the EDI Foundations was refined for roll out to all people leaders in 2022, with technical leaders scheduled to be included in 2023.
- Developed a comprehensive EDI Hub to share resources and support employee learning and awareness. The Hub contains webinars, event recordings, articles, books and links for further exploration.



## Looking Forward: 2022 and Beyond

In 2022, Pembina's Employee Engagement Survey had its highest ever engagement survey response rate, with an impressive 93% of employees taking the time to share their thoughts and feedback. The results underscored the pride that Pembina employees have in the work they do, and an understanding of how it contributes to our collective success. The results also revealed opportunities to focus on enhanced internal collaboration, communication and acceptance of new ways of working based on learnings through the pandemic. Voluntary focus groups were conducted post-survey to further understand the feedback received. Over 300 employees from across Pembina raised their hands to provide feedback, allowing us to gain a robust understanding on improvements we can make to enable increased employee engagement. Action planning was conducted in each unit area, to identify specific opportunities within teams and we have further engagement surveys planned to solicit continued feedback. Pembina is looking forward to another Employee Engagement Pulse Survey later in 2022 to understand where we've improved, and where we continue to see opportunity. We will continue conducting Employee Engagement Surveys and using the results and feedback to improve the experience of our employees.

In 2022, we are introducing our inaugural Pembina RISE (Recognize Individuals who Show Excellence) Awards, a comprehensive employee awards celebration that recognizes excellence in leadership, safety, environment, community engagement and customer service, among other categories, in alignment with Pembina's values.

We are currently working to assess our pay equity, including base pay, short- and long-term incentives, and further incorporate pay equity into our EDI Strategy. In 2022, in response to employee feedback and to better align Canadian and U.S. policies, Pembina introduced U.S. parental leave for up to 12-weeks at 100 per cent pay. Supporting new parents is a demonstration of Pembina's investment in our people as our greatest asset. The benefits of paid parental leave support gender equality by enabling each parent to engage in childcare, which has a positive impact on increasing women's participation in the workforce and reducing gender pay gaps. In support of our goal of creating more diversity in the operations, we are proud to be continuing our renewed partnership with Women Building Futures (see further description in Community Engagement section at [page 58](#)). We've also continued to make progress on our EDI targets; a more recent update is available on our [webpage](#).





## In 2022, the EDI training program will be completed by all people leaders, over 400 people, and will be rolled out across the organization to all remaining employees in 2023.

In addition to the EDI Foundations Series, an Indigenous Inclusion module will be added to the series and piloted in 2022. With the completion of the pilot, the Indigenous Inclusion education module will be rolled out to all leaders in 2023. In addition, mandatory Indigenous Cultural Awareness Training will begin to be implemented in 2022 for all employees.

In 2022, we held two Acknowledgment Months: Black History Month and International Pride Month. These months were supported by employee-led planning groups and anchored by our employee-based Conversations for Change panels. They included guest speakers and Pride-based celebrations in June, including barbeques across many of Pembina's sites. Pembina partnered with community organizations in its Whitecourt location for its first ever Pride celebration and we were excited to participate in the Calgary Pride Parade for the first time in September.

National Indigenous Peoples Day was marked with a Conversations for Change event which included a celebration of Indigenous song and dance at our Calgary office. Pembina also observed National Day for Truth and Reconciliation with an office closure and a special live musical performance by a Pembina employee.

As we continue to advance in our ESG journey, EDI will be further integrated within our supply chain management, including increasing and improving data collection to enhance our metric measurement.



### Analyst Corner

[Website - Employee Well-Being and Culture](#)

[2022 Management Information Circular – Diversity \(page 36\)](#)

### Reporting Frameworks

United Nations Sustainable Development Goal 5: Gender Equality

United Nations Sustainable Development Goal 10: Reduced Inequalities

WEF (Adapted, to include other indicators of diversity, from GRI 401- 1a&b)

WEF (GRI 405-1b)

WEF (Adapted, to include other indicators of diversity, from GRI 401- 1a&b)



# Health & Safety

## Our Approach

**Working safely is a way of life at Pembina and one of Pembina's core values. Our success depends on protecting the safety of our employees, contractors and the communities in which we operate.**

Pembina's Safety Program is aligned with our Health, Safety and Environment ("HSE") Policy and other programs that form Pembina's OMS. It employs a systematic approach comprised of principles, standards, procedures, guidelines and other supporting documents. To support the Safety Program, Pembina has established Life Saving Rules and Safety Culture Expectations applicable to all personnel and Pembina activities to ensure critical safety risks are managed effectively. Our corporate safety culture of "Zero by Choice" seeks to minimize incidents, and we believe our employees can achieve this by recognizing that "Safety Starts with Me".

The Safety Program is designed to drive continuous improvement and enhance safety performance through measurement and risk management. Pembina uses leading and lagging metrics, incident reporting,

audits and other assurance tools as inputs from the Safety Program to identify continuous improvement opportunities. Pembina has built a strong reporting culture so we can investigate and learn from incidents and near misses.

In addition, we have a comprehensive approach to process safety and a management of change ("MOC") system is in place to confirm that changes to existing and future facilities are properly recognized, evaluated and managed to confirm that health, safety, security, operational and environmental risks arising from these changes remain at acceptable levels. Pembina uses process hazard analysis, which is a formal risk assessment method that identifies potential hazards and assesses the adequacy of existing or proposed safeguards to manage the risks of our operations.

To promote and measure safety performance, Pembina uses a comprehensive, balanced scorecard that includes both leading and lagging metrics. Leading metrics on this scorecard include leadership visibility in the field, positive safety recognitions, contractor inspections and recognizing when personnel stop work due to unsafe conditions. These metrics drive proactive cultural behaviours by leaders, employees and contractors to sustain and improve our safety performance. The scorecard also includes traditional lagging metrics such as Total Recordable Injury Frequency ("TRIF"), vehicle incidents and product releases classified as Tier 1 process safety events. These leading and lagging safety performance metrics are also one of the factors used to determine employee short-term incentive plan payments.



To support a learning culture, an Incident Review Panel meets every other month to review selected incidents to identify and share investigation root causes, lessons learned and track corrective actions. Participants in the Incident Review Panel include the executive team, operations and project leaders and safety specialists. In addition, an Executive Safety Committee meets on a quarterly basis to set and evaluate strategies, priorities, performance targets and HSE key metrics.

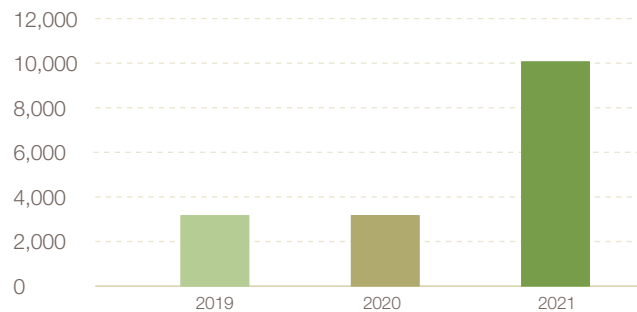
## 2021 Performance

In 2021, we were deeply saddened by the death of a subcontractor at a Pembina pipeline construction site. Pembina is committed to doing everything it can to learn from this incident and has completed an independent third-party assessment of our contractor safety program to identify enhancement opportunities. Learnings from the incident investigation and third-party assessment have been shared across Pembina and actions have been taken to strengthen our procedures and protocols. We continue to believe that all incidents are preventable and reinforce that nothing is more important than the safety of our employees, contractors and communities.

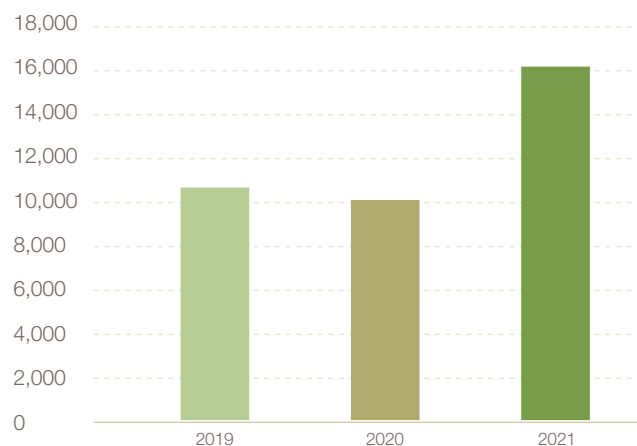
Pembina's Positive Safety Recognition and Hazard Identification ("Hazard IDs") indicators are designed to proactively engage all levels of the organization in positive safety discussions, to promote safety awareness and reduce or eliminate preventable incidents. In 2021, over 10,000 Hazard IDs and 16,000 Positive Safety Recognitions were completed. Both indicators have increased when compared to 2020 and 2019 performance as a result of enhanced project safety statistic reporting and enhanced focus and leadership emphasis on conducting and reporting these activities. Positive Safety Recognition and Hazard IDs demonstrate a strong culture of recognizing positive safety actions taken and identifying hazards before they become incidents, which is key to preventing losses of all types.



### Hazard Identification



### Positive Safety Recognition



While Pembina continued to deliver a safety record in 2021 that was better than industry average, including zero lost time employee injuries, we did see an increase in our TRIF for employees and contractors relative to 2020 as work returned to pre-pandemic levels. Performance in 2021 was more closely aligned to 2019.

Our aim is to always decrease our TRIF values and we are working to do so through increased leadership presence in the field, contractor safety focus and increased emphasis on human factors and human performance in safety. Notably, in 2021, the Aux Sable and Palermo facilities achieved seven years with no recordable injuries.

## Looking Forward: 2022 and Beyond

Pembina has built a strong foundation to support our culture of “Zero by Choice” and recognizes that opportunities to mature our culture and improve safety performance need to be continually pursued and must remain a top priority. Inherent in our OMS, continuous improvement opportunities for our Safety Program will be identified via leading and lagging metrics, incident reporting, audits and other assurance tools. Pembina uses this information to improve, adjust and progress our safety performance and culture.

In 2021, Pembina was successful in safely starting-up our first propane marine export facility, Prince Rupert Terminal (“PRT”), on Watson Island, British Columbia. As part of our OMS, Pembina completed dry commissioning of PRT in March 2021, and began safely loading propane onto vessels destined for international markets in April 2021. The safe start-up of this new facility was a major step in providing new market solutions and helping add incremental value to Western Canadian hydrocarbons.







We have recognized that contractor safety is critical for sustained long-term safety performance as often it is our contractors who are exposed to our highest risk hazards every day. We are working to enhance our contractor safety program including our contractor selection, onboarding, performance assurance and reporting. Pembina is in the early phases of implementing these improvements and will continue this focus through 2022 and 2023.

**To sustain and grow our culture, Pembina is focusing on strengthening our leadership capability by defining and refining leadership behaviours, competencies, training and tools.**

Pembina has started to see improved performance after focusing on increased visibility of leadership in the field where the work is occurring. Leadership visibility in the field, where highest hazard work takes place, is critical in supporting safety culture and communicating and validating safety requirements. As part of Pembina's safety scorecard, we measure leadership engagements in the field. This metric encompasses leadership at all levels from front line supervisors to executives. In addition, we have added Positive Safety Recognitions as a leading metric to our safety scorecard, where employees and contractors have stopped work to assess changed conditions or an identified risk. When leaders recognize employees and contractors for stopping work, they reinforce a culture of safety first over schedule and budget targets.

Finally, we will be looking at increasing our risk literacy across the organization including how to use existing tools to establish and identify risks. This focus on risk identification will help inform our Safety Program ensure the required controls are in place and effective.



#### Analyst Corner

[Health, Safety & Environment Policy](#)

[Website - Health and Safety](#)

[2022 Management Information Circular – Safety, environment and operational excellence committee \(page 52\)](#)

[2021 Annual Information Form – Safety Program \(page 49\)](#)

#### Reporting Frameworks

WEF (GRI:2018 403-9a&b)

# Responsible Asset Management

At Pembina, operating safely, reliably and as committed custodians of the environment minimizes the impacts of our operations and supports the sustaining success of our employees, communities, customers and investors.

As set out in our OMS program, described in the Governance section, we take a complete lifecycle approach to managing our assets that includes planning, construction, operation, decommissioning and reclamation activities.

This section covers a number of the ways in which we are focused on responsibly managing our assets: integrity management, spill prevention and mitigation, waste management, water management, land use and restoration, biodiversity and cyber security. Our ESG performance tables, included at the end of this report, contain more detailed metrics on many of these topics.

## Integrity Management

### Our Approach

Maintaining the condition and integrity of our energy infrastructure (pipelines, storage tanks, gas processing plants and NGL processing facilities) is essential to sustaining energy reliability and environmental protection. We design, build and maintain our assets in accordance with robust regulatory frameworks, industry best practices and our comprehensive Integrity Management Program (“IMP”), which is a component of our OMS. Specifically, we use the IMP to guide our evaluations of existing assets and help conduct our risk assessments to align on what further testing and integrity work we should be conducting to maintain safe operations.



Pembina’s Damage Prevention and Public Awareness Programs are dedicated to worker and public safety, protection of the environment and upholding the integrity of Pembina’s infrastructure. This commitment to excellence meets or exceeds the regulatory requirements in the areas Pembina operates.

Pembina’s **Damage Prevention Program** ensures the safety of those living and working near our assets through the development, implementation and management of robust control programs, effective surveillance and monitoring techniques, and the education of stakeholders and communities. The Damage Prevention Program mitigates the risk of external mechanical damage with safe ground disturbance education and supervision, pipeline crossing assessment, right-of-way patrol, land use and encroachment monitoring, and depth of cover management.

The **Public Awareness Program** defines and executes the ways in which we inform stakeholders about the presence of our assets in their communities, the steps required to prevent damage to the assets and the role of those community stakeholders in recognizing, reporting and responding to pipeline and facility emergencies. While infrequent, we realize that failures can occur, making it critical that we have effective emergency response practices and responders available as well as ensuring we integrate any learnings into operational reliability and safety processes going forward.



## 2021 Performance

For the first time this year, we are reporting our percentage of pipelines inspected. Through our integrity evaluations, in 2021, we inspected 23% of our natural gas pipelines and 29% of our liquid pipelines. This metric will vary year-over-year as we utilize the IMP to complete detailed risk assessments and integrity evaluations to assess where to focus our inspections.

If we do encounter situations where we have any potential concerns about the integrity of an asset, Pembina takes proactive steps. In 2021, as part of our integration of recently acquired assets, we identified pipeline integrity related concerns with the Vancouver Jet Fuel Pipeline which prompted a proactive shut down of the system on April 30, 2021. Upon completion of numerous integrity activities, including integrity digs and hydrostatic testing, the pipeline was safely returned to service mid-2022.

Pembina responded to over

# 16,000

ground disturbance notifications, ensuring safe ground disturbance activity in proximity to a pipeline

Pembina engaged with over

# 58,000

external stakeholders, notifying them of the presence of a pipeline, and promoting pipeline safety obligations and living and working safely around a pipeline

Pembina completed over

# 2,000

pipeline patrols as part of a robust surveillance and monitoring program



Pembina damage prevention and public awareness protection program has contributed to

# zero

third party pipeline strikes in 2021



For our facilities, Pembina executed a number of activities in 2021 aimed at improving safety and minimizing environmental impact of our operations through inspection including:

- Proactive fitness for service assessments campaign was conducted for equipment in cyclic service and aging assets;
- Trial of additional non-intrusive inspection techniques; and
- Deployment of industry proven and widely utilized risk-based inspection methodology to optimize inspections and plant turnarounds.

## Looking Forward: 2022 and Beyond

Pembina looks forward to continuing its strong performance in asset integrity. Pembina participates in various industry research and development projects, including:

- Working with vendors to improve in-line inspection tool detection and sizing capabilities, and developing new inspection technologies;
- Surveillance and monitoring of pipeline right-of-ways using satellite technologies; and
- Understanding anomaly behavior, improving assessment techniques and developing suitable repair methods.



Analyst Corner

[2021 Annual Information Form – Integrity Management \(page 47-48\)](#)

[Website - Responsible Asset Management](#)

Reporting Frameworks

SASB EM-MD-540a.2



## Spill Prevention & Mitigation

### Our Approach

Pembina strives to avoid spills and releases to the environment and mitigates risk through our comprehensive Damage Prevention and Public Awareness and Asset Integrity Management Programs described in detail above, and all other components of the OMS including in particular the Environmental Management and Emergency Management Programs.

Pembina's Environmental Management Program provides guidance on regulatory requirements and Pembina's commitment to environmental protection for all phases in the lifecycle of an asset: project planning and construction, operation, decommissioning and reclamation.

In the unlikely event of an incident, our Emergency Management Plan ensures we have processes around timely communications, deployment of equipment and resources, and access to trained personnel to support any type of incident, including spills. The success of this program requires commitment, training and discipline to keep our operations running, our communities safe and impact to the environment at a minimum. Our Emergency Management Plan uses various criteria such as product type, risk, operational conditions and regulatory requirements to determine how we approach our spill and release exercises and plans. Pembina leverages relationships with specialist response contractors and mutual aid partners to ensure we have appropriate resources available in all areas in the event they are required. In 2021, we conducted Emergency Response Training that included specific spill response requirements and equipment use in order to continue to enhance our Emergency Management Program capabilities.

### 2021 Performance

In 2021, we reformulated our spill metrics to align with sustainability reporting frameworks. This included focusing disclosure on reportable pipeline incidents and rail releases, and specifying the amount of hydrocarbon spills, as this is the most relevant type of spill for our company. This allows us to better communicate our risks and risk management approach. This resulted in a change to the 2019 and 2020 figures we previously reported, and as such they are no longer comparable.

In 2021, we recorded a total of nine reportable pipeline incidents, which included releases of products including, but not limited to, brine, condensate and crude, with volumes ranging from 0.01 bbls to 53 bbls. Of these, one incident was considered significant, a 53 bbls release of crude in the Swan Hills area in January 2021<sup>11</sup>. The spill was fully recovered through our emergency response work and the site has been restored. The remaining eight reportable pipeline incidents spills ranged between 0.01 and 31 bbls. The 31 bbls spill was an on-lease brine spill in which 90% of the total volume was recovered. All other reportable pipeline incident releases were under 3 bbls.

This year we are also reporting on hydrocarbon incidents from pipelines and other assets. There were four hydrocarbon spills in 2021, 68% of the total volume of which related to the Swan Hills crude pipeline release incident. The remaining three hydrocarbon spill incidents were between 1 and 21 bbls (one crude oil and two diesel fuel releases). All spilled volumes were successfully recovered.

<sup>11</sup> Significant Incident is defined as a release of a commodity product from a pipeline that must be reported to an external agency or authority, such as a federal, provincial or state regulator, and that includes one or more of the following: a serious injury or fatality; an unintentional ignition or fire; a liquid release of greater than 8 m<sup>3</sup> (50 barrels); a solids release (mineral concentrates and/or sulphur) of greater than 200 kg to land and/or any solids release (including mineral concentrates) to a body of water; or a rupture or breach of a pipe, tank, or containment.





## Looking Forward: 2022 and Beyond

We are continuing to work to align with standardized spill metrics. In 2021, we integrated all quantitative Operational Safety, Emergency Preparedness & Response metrics from the SASB oil & gas midstream industry standards. We will be using this data and disclosure to understand where we have opportunities to focus and mitigate for spills going forward.

In addition, we will continue to conduct Emergency Response Training to ensure we have the appropriate skills and resources available if needed.



### Analyst Corner

[Health, Safety & Environment Policy](#)

[Website - Responsible Asset Management](#)

### Reporting Frameworks

SASB EM-MD-540a.1

SASB EM-MD-540a.3

SASB EM-MD-160a.4





## Waste Management

### Our Approach

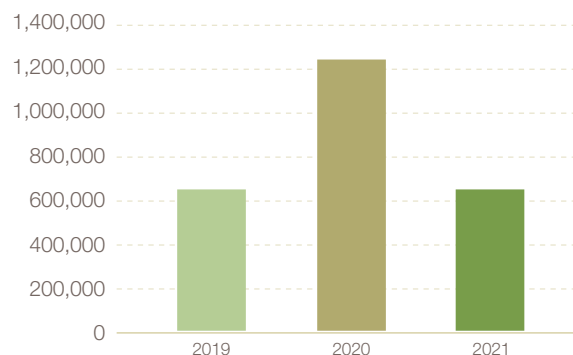
Pembina recognizes that minimizing waste is an important element of reducing our impact on the environment and is engaged in identifying opportunities to treat, recycle or divert our waste. Pembina actively manages hazardous and non-hazardous waste generated throughout various processes in our operations. The significant majority (94%) of the waste generated by Pembina is non-hazardous.

For quality assurance with respect to waste management, each year we participate in a waste receiver assessment program to review, assess and score waste receivers for ongoing or future use by Pembina.

### 2021 Performance

In 2021, we saw a 47% decrease in our total volume of non-hazardous waste produced (656,136 metric tonnes in 2021 compared to 1,244,823 metric tonnes in 2020).

**Total Non-Hazardous Waste (metric tonnes)**



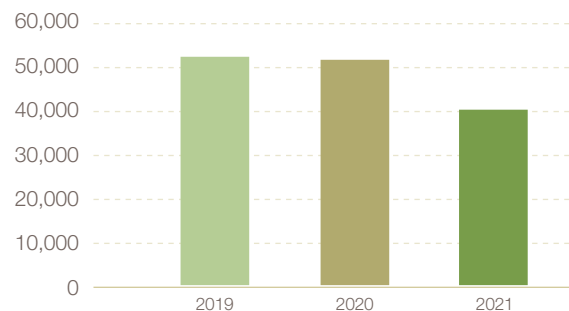
Non-hazardous waste is calculated using best available operational data such as internal meters. The reported weights have inherent limitations in terms of the completeness of asset inclusion and the potential accuracy of uncalibrated meters.

Based on this data, the 2021 reduction in non-hazardous waste volumes is primarily attributable to a reduction in cavern development activities at Pembina storage facilities. Washing conducted during cavern development produces non-hazardous water waste called brine. A portion of the brine is stored and re-used in cavern operations to displace hydrocarbons while the remainder is disposed.

In addition, in 2021, non-hazardous waste volumes further decreased, including but not limited to an increase in producers electing to complete their own water separation processes in the context of gas processing, resulting in less non-hazardous wastewater generated by Pembina.

Finally, in 2021, Pembina made an adjustment to our waste quantification methodology to exclude hydrocarbon product volumes trucked to transfer stations, in alignment with GRI reporting standards.

**Total Hazardous Waste (metric tonnes)**



Pembina's total hazardous waste also decreased materially, by approximately 25% from 2020 to 2021. A significant portion of this reduction is attributable to decreased disposal of contaminated soil at Vancouver Wharves due to decreased maintenance activities and construction at the site in 2021 compared to 2020.

For 2021 data, Pembina proactively sought third-party limited assurance over the hazardous waste metric. This was our first year pursuing limited assurance and reflected a strategic decision to improve the accuracy of our data. Improving the quality and understanding of our hazardous waste metric will support operational improvements in the future. Historically, meters used to determine hazardous waste have been maintained and calibrated in accordance with operational requirements of the associated facilities unless subject to regulatory requirements. As such, the limited assurance conclusion is qualified with a scope limitation as a result of a lack of meter calibration. Please see KPMG's limited assurance opinion found [here](#).

## Looking Forward: 2022 and Beyond

Pembina will continue to enhance the quality of waste data based on learnings from our 2021 limited assurance work. In particular, we are currently implementing a digital waste manifesting pilot project to improve data accuracy and tracking. Full-scale implementation following the pilot will help identify opportunities to treat, recycle or divert waste away from disposal facilities.



Analyst Corner

[Website - Responsible Asset Management](#)

[KPMG Limited Assurance Opinion](#)



## Water Management

### Our Approach

We strive to reduce water usage whenever possible and avoid potential impacts to water resources.

We aim to return as much water back into the hydrologic cycle as possible. We adhere to strict regulations around water withdrawal and discharge, and only when we cannot return the water back into the hydrologic cycle, do we send volumes to water treatment or disposal facilities.

### 2021 Performance

Pembina's total water withdrawal was 1,630,629 m<sup>3</sup>, a 14% reduction from 2020.

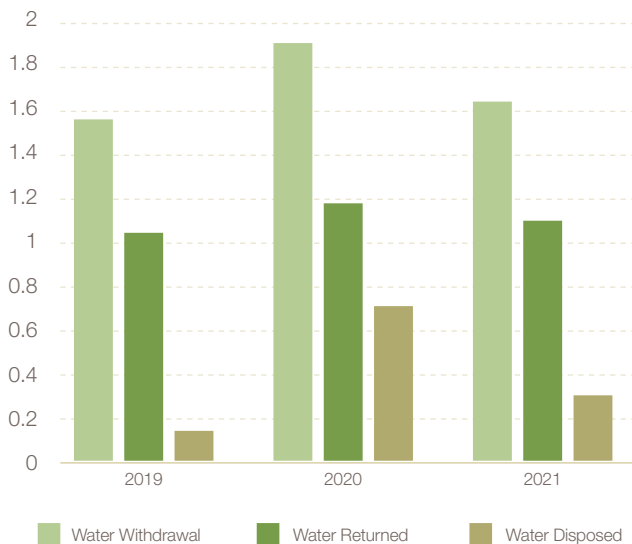
As described in the Waste Management section above, this reduction is due in part to a decrease in cavern development activities at our storage facilities. In 2021, water disposed decreased by more than 50%, also due to the decrease in cavern development. Water returned to the environment remained relatively unchanged.

For 2021 data, Pembina proactively sought third-party limited assurance over the total water withdrawal metric. This voluntary verification demonstrates the importance of this data and our commitment to managing our water use. Increased data accuracy will improve our tracking, measurement, and management ability. Historically, meters used to determine water withdrawal have been maintained and calibrated in accordance with operational requirements of the associated facilities unless subject to regulatory requirements. As such, the limited assurance conclusion is qualified with a scope limitation as a result of a lack of meter calibration. Please see KPMG's limited assurance opinion found [here](#).

### Looking Forward: 2022 and Beyond

We will use the learnings from the limited assurance of the 2021 data to enhance the quality of water performance data going forward. As we better understand our water usage, we will be able to identify focus areas and opportunities to reduce water use and mitigate impacts.

Water Management (million m<sup>3</sup>)



Analyst Corner

[Website - Responsible Asset Management](#)

[KPMG Limited Assurance Opinion](#)





## Land Use & Restoration

### Our Approach

Pembina takes its responsibility to mitigate impacts to land and restore our sites very seriously. Our first step is to make sure we understand the baseline conditions of a site prior to construction. Then, through a multitude of mitigation measures, including in accordance with the Environmental Management Program of the OMS, we look to reduce the potential for impact throughout the full asset lifecycle of construction, operation and maintenance work.

Once construction is complete, Pembina commences reclamation work on any disturbed lands and right-of-ways to restore them to equivalent land capability and similar land use with adjacent areas. In non-agricultural areas, we monitor restoration success focused on natural recovery to reduce the potential of introducing plant species into an area, and in agricultural lands, we work closely with landowners to bring the land back to production in a timely manner.

In addition, upon closure of an asset, we work diligently to return the site to its original land equivalency state.

Although Pembina is not an oil and gas producer, it has a portfolio of legacy abandoned well sites obtained through acquisition of other companies. Each year, we work to progress our reclamation and remediation efforts to reduce the number of inactive wells and address historic contamination.

### 2021 Performance

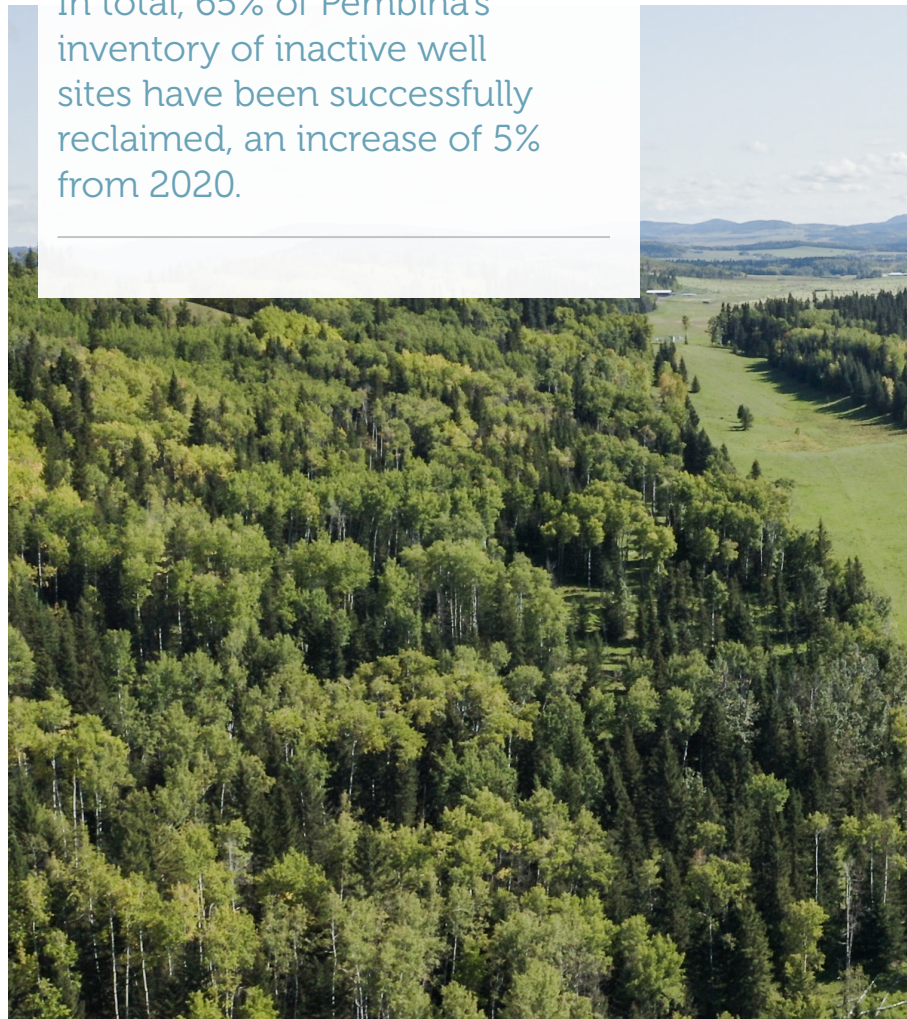
In this year's report, Pembina enhanced its disclosure to include new acreage metrics that address how much of our pipeline areas were disturbed and restored.

As of 2021, Pembina's operating pipelines comprise an approximately 67,000-acre footprint of which nearly 89% is fully restored to pre-construction land capability.

Notably, during the period of 2017 to 2021, Pembina's operating pipeline footprint increased approximately 11% primarily due to expansion of the Peace Pipeline system (Phases III to VII).

For 2021, we completed restoration on 1.4% (approximately 936 acres) of Pembina's total land base.

Pembina works on an ongoing basis to conduct well site reclamation activity at legacy sites obtained through past acquisitions. In 2021, Pembina successfully obtained seven well site reclamation certificates. In total, 65% of Pembina's inventory of inactive well sites have been successfully reclaimed, an increase of 5% from 2020.





## Looking Forward: 2022 and Beyond

We continue to advance our work to reclaim impacted lands and think sustainably about future development opportunities. Establishing a foundation of high-quality land use and restoration data aligned to recognized standards is an important first step to better understand our land use data and opportunities for improvement.

Pembina continues to advance historical well site reclamation activities. Pembina is also taking significant steps towards advancing remediation and reclamation of a number of other sites within our inventory of historic contamination.



Analyst Corner

[Website - Responsible Asset Management](#)

[2021 Annual Report – Abandonment Costs \(page 51\)](#)

[2021 Annual Report – Decommissioning Provision \(page 90, 110\)](#)

Reporting Frameworks

SASB EM-MD-160a.3





## Biodiversity

### Our Approach

Pembina has 18,000 km of pipelines in our system covering an area that is home to thousands of local species. As part of our commitment to environmental stewardship, we continually minimize our footprint and create safe solutions to protect the wildlife that makes the land and water near our assets their home.

Wildlife management is a large component of environmental management during a construction project, from the project development stage to implementation of site-specific protection measures. We work diligently to ensure appropriate mitigations are followed to protect biodiversity of the areas in which operate, with particular attention paid to the protected vegetation and wildlife.



We are committed to biodiversity, and sustainability is a key pillar of our [community investment strategy](#). Pembina has supported the following organizations to support biodiversity research and grow conservation areas:

**Calgary Zoo**  
**Alberta EcoTrust**  
**Ducks Unlimited**  
**Project Forest**  
**Ann & Sandy Cross Conservation Area**



### 2021 Performance

For 2021, Pembina is reporting for the first time on the biodiversity metric of operations within areas of endangered species habitat.

Pembina's operations intersect with only one publicly delineated endangered species habitat, that of the Ord's Kangaroo Rat, a species designated as engaged in Alberta under the Species at Risk Act ("SARA") (Canada). Only 0.9% of Pembina's Alberta footprint is identified to be within Ord's Kangaroo Rat habitat.

Although direct impacts were not identified, Ord's Kangaroo Rat habitat was encountered in two past Pembina projects. In each case, wildlife monitoring occurred and, where required, mitigation was applied to reduce impacts on the Kangaroo Rat dens we encountered. During a recent construction project, for example, we successfully utilized an innovative solution to mitigate impacts by using shipping containers to create a sound barrier and reduce operational nighttime light impacts on Kangaroo Rat population.





## Looking Forward: 2022 and Beyond

Pembina continues to monitor for biodiversity impacts arising from our operations.

In Alberta, we look for opportunities to reduce our footprint and target construction timing to reduce impacts in Key Wildlife and Biodiversity Zones and grizzly bear habitat. During operations, we are reducing our footprint by decreasing brushing widths in support of habitat recovery for additional species such as caribou (threatened).

As noted in the Indigenous and Community Engagement section of this report, Pembina is also committed to advancing environmental sustainability through community partnerships such as Project Forest.

As this is Pembina's first year providing disclosure on biodiversity data, we look forward to continuing to build our understanding of our performance in this area and identify future opportunities for improvement.



### Analyst Corner

[Website – Sustainability Stories 2021 part 1](#)

[Website – Sustainability Stories 2021 part 2](#)

### Reporting Frameworks

SASB EM-MD-160a.2

WEF (GRI 304-1)



Cyber Security & Data Privacy

Our Approach

At Pembina, we have a robust program for identifying and mitigating cyber security risks, enhancing the skills and capabilities of our people, processes and technology. Pembina’s cyber security program aligns to the National Institute of Standards and Technologies Cyber Security Framework (“NIST CSF”), a world renown framework for managing cyber security.

There are three core components to our cyber security approach:

Governance	Ongoing guidance to measure success and adherence to cyber best practices; routine training and testing of the workforce on cyber risks and appropriate behaviours.
Risk & Compliance	Focus on evolving regulatory requirements, management of Pembina’s third party(s) and supply chain risks; assurance that the architecture, processes and controls are in place within Pembina’s Operational Technology and Information System assets.
Security Operations	Continuous round-the-clock monitoring to identify potential vulnerabilities, irregular or threat activities as well as global trends and incidents; automatic response capabilities on technical platforms for protection on known threats and ongoing cyber-attacks; ongoing maintenance of cyber technology platforms and incident response activation capabilities.



## 2021 Performance

### In 2021, Pembina had no significant cyber security breaches.

A third-party NIST CSF assessment was completed in support of developing a five-year plan recognizing evolving industry standards and regulations.

Pembina also integrated cyber security risk management into supply chain processes to establish expectations for Pembina's suppliers, technologies and service providers.

Finally, Pembina supplemented the cyber security awareness program with operation-specific cyber security training.

### Looking Forward: 2022 and Beyond

Pembina has commenced implementation of the third-party NIST CSF assessment, with a focus on asset management, identity management, supply chain risk management and incident response. We also continue to mature and evolve cyber security within our operational field assets and embed cyber security processes within the business.



#### Analyst Corner

[2022 Management Information Circular - Cyber Security \(page 32-33\)](#)

[2021 Annual Information Form – Cyber Security \(page 97\)](#)



# Indigenous and Stakeholder Engagement



## Indigenous Engagement

### Our Approach

Pembina acknowledges and respects those who have inhabited lands and waters since time immemorial. We recognize the profound relationships that Indigenous people have with the land on which we operate.

Pembina plays a role in advancing the Truth and Reconciliation Commission of Canada's Calls to Action, and recognizes the spirit and intent of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) as a framework for reconciliation within the context of the Canadian Constitution, existing laws and jurisprudence on Indigenous and treaty rights.



## 2021 Performance

Pembina updated our Indigenous & Tribal Relations Policy, aligning our engagement with Indigenous and Tribal communities to the Truth and Reconciliation Commission of Canada's Call to Action 92, Business and Reconciliation. The updated Policy outlines our commitments to community engagement, relationship building, economic development and community investment. This policy supports consistency of approach in our engagement with Indigenous and Tribal communities and ensures that good governance serves as a strong foundation as we move forward.

Pembina is honoured to have been chosen to participate in two Indigenous-led partnerships, which are centred on environmental stewardship, Indigenous prosperity and economic inclusion. For more information on our equity partnerships with the Haisla

Nation and the WIPG, please see the Indigenous Engagement section of our [website](#).

In 2021, we have advanced our ESG disclosure by introducing the key metric of Indigenous procurement spend. It directly demonstrates our efforts to increase Indigenous inclusion within our supply chain. Procurement spend has multiple potential impacts including economic benefit, training and employment. Pembina's Indigenous procurement spend was \$101 million in 2021. In addition, improvements were made to our supply chain management programs to increase Indigenous inclusion by implementing Pembina's Supplier Code of Conduct and embedding a contractor Local Indigenous Involvement Plan requirement into our processes for bid evaluation. Pembina's suppliers are expected to respect human rights, informed by the principles of UNDRIP.

## CHINOOK PATHWAYS

Chinook Pathways is an Indigenous-led and industry operator partnership pursuing potential equity ownership in the Trans Mountain Pipeline and Expansion (collectively, Trans Mountain).



Western Indigenous Pipeline Group is immensely proud of the strong partnership we have formed with Pembina. We invited Pembina to partner with us as a result of their strong safety and operational track record, but equally because we share the same values in how we work with our Indigenous communities. With WIPG and Pembina as equal partners, Chinook Pathways is redefining how Indigenous communities and industry can work together to support economic reconciliation in Canada."

**Chief David Jimmie**

Chief and CEO, Squiala First Nation

Chairman and VP Finance, Western Indigenous Pipeline Group

## Looking Forward: 2022 and Beyond

In 2022, we launched an enhanced five-year Indigenous Engagement Strategy and Path to Reconciliation as our commitment to reconciliation, long-term relationship building with Indigenous communities in our operating areas and expanding Pembina's social and economic benefits to communities. It outlines Pembina's path to reconciliation, focuses on four directions and is aligned with the Truth and Reconciliation Commission of Canada's Call to Action Number 92.

- > **Lifecycle Alignment** – Building, maintaining and formalizing long-term relationships with Indigenous and Tribal communities near our projects and operations, and embedding Indigenous inclusion and engagement in governance, internal policies, standards and processes for decision making.
- > **Economic Reconciliation** – Supporting equitable access to jobs, training and education opportunities, and working with Indigenous communities to gain long-term sustainable benefits from economic development projects. This also includes ensuring procurement opportunities are available to Indigenous contractors within Pembina's asset areas.
- > **Community Development** – Creating long-term community relationships and collaboratively identifying sustainable partnerships based on community needs and opportunities in alignment with Pembina's Community Investment focus areas.
- > **Cultural Appreciation** – Providing Indigenous cultural awareness training and educational opportunities for Pembina senior leadership and employees, while recognizing there are many distinct Indigenous communities and Tribes with unique languages, cultures, traditions, rights, priorities and protocols.

We are also looking at other initiatives to further strengthen our Indigenous engagement in the future including:

- > In 2023, we aim to publish a report which focuses on our engagement with Indigenous and Tribal communities, and further communicates our Path to Reconciliation.
- > As described in our Employee Well-Being and Culture section, mandatory Indigenous Cultural Awareness Training will begin to be implemented in 2022 for all employees. Specialized Indigenous Cultural Awareness Training for team leaders, executives and our Board will be delivered in 2022 and 2023.
- > We are working to further progress our supply chain initiatives, which includes exploring additional opportunities to partner with Indigenous contractors, leveraging the integration of our Indigenous Business Registry into our Supply Chain systems, and working with our prime contractors to increase Indigenous economic engagement.



### Analyst Corner

[Indigenous & Tribal Relations Policy](#)

[Website – Indigenous Engagement](#)

[2021 Annual Information Form – Indigenous Relations \(page 58 - 59\)](#)

[2021 Annual Information Form – Indigenous Land Claims and Consultation Obligations \(page 95-96\)](#)

### Reporting Frameworks

WEF (GRI 405-1b)

WEF (Adapted from GRI-201-1)





## Community & Stakeholder Relations

### Our Approach

Our commitment to the communities in which we operate is a cornerstone of Pembina's approach to sustainability, and an enduring source of value for our company. We understand the important role we play as neighbours, and are committed to giving back in ways that makes people's lives better and contribute to lasting, positive social change.

### Pembina values our relationships with all the communities in which we operate, and we do not take our presence for granted.

We intend to be long-standing members of these communities and understand our obligation as a business to contribute not only economically, but also socially through our Community Investment program.

Pembina's approach to community investment is guided by tailored engagement with each community. This approach enables us to understand what the people surrounding our projects value and how we can best support them. We work to conduct early, meaningful and ongoing engagement to understand needs and social issues, and then identify how partnerships and social investments – financial or otherwise – can help.

Pembina has three key pillars to its community investment strategy which help to support our sustainability strategy, ensure a balanced and responsive approach to community investment decisions and maximize our impact in the community.

## 01

### Strong Indigenous Communities

Our goal is to work alongside Indigenous communities to promote Indigenous values, support spiritual, social and economic well-being, and advance reconciliation and self-determination. See [page 54](#) for further details on our Indigenous Engagement approach.

## 02

### Safe, Inclusive, and Connected Communities

Our goal is to ensure communities are safe, inclusive places where all members have equal access to opportunities, services and spaces that foster a strong sense of belonging. Thriving local economies provide everyone with opportunities to succeed.

## 03

### A Sustainable Future

Our goal is for communities, government and industry to work together to protect the natural environment for future generations. Citizens benefit from a sustainability-driven economy that improves energy and environmental outcomes and contributes to local economic prosperity.



## 2021 Performance

In 2021, consistent with 2020, Pembina invested \$5.6 million in our communities to improve access to healthcare, protect the environment, support Indigenous reconciliation and enhance the safety and inclusivity of local communities. Moreover, for every dollar invested, other community stakeholders contributed an additional \$0.36 toward community investment priorities, more than twice the leverage ratio of our peer companies. This demonstrates how our corporate investments can catalyse other partners to contribute.

Pembina employees also worked side-by-side with our community partners, volunteering a total of 2,456 hours throughout 2021, an increase from 2020. See our ESG Performance Table for our performance on our community engagement.

The total value of Pembina's Community Investment to communities where we operate, including our cash and in-kind investments, employee giving and employee time and other investments, was \$8.4 million.

Through Pembina's community investment program, we focus on making donations that drive sustainable outcomes and work to protect the natural environment for future generations. Our partnership with the following organizations supports this focus and Pembina's journey to adapt, respond and contribute to a more sustainable future.

### Project Forest

Pembina began working with Project Forest to rewild landscapes and collaborate with Indigenous communities on ecological reconciliation to restore their traditional lands to a state much closer to what they used to be. Through Pembina's support, one 2021 project will sequester approximately 47,000 metric tonnes of CO<sub>2</sub> once the trees reach maturity. Click [here](#) to learn more.

Pembina's support of both the Golden Ranches and Swan River Ecological Reconciliation projects is industry leading and has been monumental in our success! We can't wait to continue to grow and strengthen our partnership over the coming years," says Mike Toffan, Founder and Executive Director of Project Forest.

### Women Building Futures

As referenced in the Employee Well Being and Culture section of this report, Pembina has partnered with Women Building Futures on a new Power Engineer Accelerator Program, which works to remove barriers and support women to enter an in-demand career in the industry. To learn more about this partnership click [here](#).

"We're thrilled to be partnering with Pembina Pipeline Corporation and Inter Pipeline to help increase women's participation in power engineering," says Jess Thomson, Director Stakeholder & Government Relations with WBF. "We know these careers provide life-changing economic security for women in our communities. We look forward to delivering an exciting program with great opportunity for employment."

### Ducks Unlimited Canada

Pembina's ongoing commitment to Ducks Unlimited Canada has resulted in investment in five properties across Saskatchewan and Alberta to date, for a total of 1,108 acres of conserved land through the revolving land conservation program. Click [here](#) to learn more about this partnership.

Pembina continues to demonstrate its strong commitment to sustainability," says Scott Stephens, Ducks Unlimited Canada's national director of business development. "Through its generous contributions to wetland conservation and restoration across the Canadian Prairies, Pembina is helping to build a brighter future for wildlife and our communities."



## Looking Forward: 2022 and Beyond

As part of our commitment to meaningful engagement, being responsive to local needs and our obligation as a responsible business to address broader societal issues, Pembina will continue to find ways to address opportunities to improve safety, equality and inclusion within communities, advance Indigenous reconciliation and drive energy and environmental sustainability.

Our focus is to continue to support our employees by amplifying charitable efforts through our employee giving program, PATH (Pembina Actions That Help), through volunteer opportunities, and in giving campaigns that support current social issues.



Analyst Corner

[Community Relations Policy](#)

[Website - Community Engagement](#)

[2022 Management Information Circular \(page 31\)](#)

[2021 Annual Information Form – Community Relations \(page 58\)](#)

Reporting Frameworks

WEF (Adapted from GRI-201-1)



# Data Tables & Appendices

## ESG Performance Table <sup>1</sup>

Governance				
<b>Economic Value Generated and Distributed <sup>2</sup></b>	<b>Unit</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
Total Economic Value Generated <sup>3,4</sup>	\$ millions	3120	3444	3938
<b>Total Economic Value Distributed <sup>3,5</sup></b>				
Operating and General & Administrative Expenses <sup>3,6</sup>	\$ millions	413	450	480
Employee Wages and Benefits <sup>7</sup>	\$ millions	339	370	440
Total Tax Paid <sup>3,8</sup>	\$ millions	241	390	456
Payments to Providers of Capital <sup>3,9</sup>	\$ millions	1634	1959	1981
Community Investments <sup>10</sup>	\$ millions	10	6	6
<b>Income Taxes Paid</b>	<b>Unit</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
Canadian Income Taxes Paid <sup>11</sup>	\$ millions	130	295	321
U.S. Income Taxes Paid <sup>12</sup>	\$ millions	10	0	34
<b>Financial Investment Contribution Disclosure</b>	<b>Unit</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
Total Capital Expenditures Minus Depreciation <sup>3, 13</sup>	\$ millions	1253	546	147
Share Buybacks and Dividend Payments <sup>3, 14</sup>	\$ millions	1323	1530	1538
<b>Competitive Behaviour</b>	<b>Unit</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
Political Contributions <sup>15</sup>	\$ millions	N/C	N/C	0.005



<sup>1</sup> Use of N/C in these tables signifies that the content is a new metric for Pembina and historical values have not been calculated or reported.

<sup>2</sup> This economic section accounts for all Pembina assets excluding equity accounted investees. "Equity accounted investees" means Pembina's working interest in Alliance Pipeline, Aux Sable, Ruby Pipeline, CKPC, Veresen Midstream, Grand Valley I Limited Partnership, Fort Corp and Cedar LNG.

<sup>3</sup> The terms are non-GAAP financial measures as they are financial measures that are not specified, defined or determined in accordance with Canadian generally accepted accounting principles ("GAAP"). Please refer to the "Non- GAAP and Other Financial Measures" section on [page 80 - 83](#) of this document for additional information regarding these non-GAAP measures. This report also refers to certain other terms commonly used to satisfy sustainability reporting requirements. These terms are not necessarily used by Pembina in the management of business.

<sup>4</sup> Total Economic Value Generated represents net revenue. Together with Total Economic Value Distributed, these metrics indicate the value created for stakeholders and local economies. Values have increased since 2019 due to higher market prices, higher volumes, increase of assets placed into service, the Kinder Morgan Canada Acquisition and higher recoverable costs. These increases were partially offset by lower storage and rail terminal revenue, expiration of contracts on certain Oil Sands assets, lower volumes on the Vantage Pipeline and the impact of the lower U.S. dollar exchange rate.

<sup>5</sup> Total Economic Value Distributed on an accruals basis includes operating costs, employee wages and benefits, payments to providers of capital, total tax paid and community investments. Together with Total Economic Value Generated, these metrics indicate the value created for stakeholders and local economies. Historical 2020 and 2019 values were amended to correct the taxes included. Values have increased since 2019 due to the overall growth of the company.

<sup>6</sup> Operating and General & Administrative Expenses includes operating expenses plus general and administrative expenses less personnel expenses. This metric is included within Economic Value Distributed. Historical 2020 and 2019 values were amended to exclude property tax. Values have increased since 2019 due to a larger asset base in 2021 following the Kinder Morgan Canada acquisition and additional assets placed into service, increased power costs due to higher pool prices, and an increase in optimization project costs.

<sup>7</sup> Employee Wages and Benefits includes salaries and wages, share based compensation, short-term incentive plans, pension plans and other employee benefits. This metric is included within Economic Value Distributed. Values have increased since 2019 due to higher incentive costs primarily driven by the change in Pembina's share price. Changes in employee head count year-over-year also had an effect.

<sup>8</sup> Total Tax Paid includes current income taxes and property taxes. This metric is included within Economic Value Distributed. Values have increased since 2019 due to increasing tax obligations from higher monthly installments and increasing revenue.

<sup>9</sup> Payments to Providers of Capital includes dividends paid, interest paid and repurchase of common share costs. This metric is included within Economic Value Distributed. Historical 2020 and 2019 values were amended to update net finance costs to interest paid and include the repurchase of common shares. The increase in 2020 and 2021 compared to 2019 is due to higher dividend payments, higher net finance costs associated with higher interest expense and losses on non-commodity related derivative financial instruments.

<sup>10</sup> Community Investments include direct cash investments in the reporting period to support initiatives within the communities where we work. This metric is included within Economic Value Distributed. Assets excluded from Community Investment data include Aux Sable, Cedar LNG and Veresen Midstream. This number has decreased since 2019 due to a decline in community activities and budget during the COVID-19 pandemic. Rounding differs from the value reported in the Indigenous and Stakeholder Engagement section.

<sup>11</sup> Current Canadian income taxes paid. Values have increased since 2019 due to increased revenue, higher monthly installments and early payment of taxes related to break fee in 2021.

<sup>12</sup> Current U.S. income taxes paid. A 2020 California tax settlement was paid in 2021 (\$15 million). Values have increased since 2019 due to increased revenue and higher monthly installments.

<sup>13</sup> Along with Share Buybacks and Dividend Payments, Total Capital Expenditures Minus Depreciation indicates Pembina's net investment in the company.

<sup>14</sup> Along with Total Capital Expenditures Minus Depreciation, Share Buybacks and Dividend Payments indicate Pembina's net investment in the company.

<sup>15</sup> This figure covers both our Canadian and U.S. assets as well as Pembina subsidiaries. This metric aligns with GRI 415-1.



## Energy Transition and Climate

Climate Change Management	Unit	2019 <sup>6,7</sup>	2020	2021
Scope 1 GHG Emissions <sup>1, 2, 3, 4, 5</sup>	tonnes CO <sub>2</sub> e	1,774,682	1,745,245	1,827,793
Methane (CH <sub>4</sub> ) <sup>8</sup>	tonnes CO <sub>2</sub> e	121,382	131,325	118,482
Methane GHG Emissions as a Percentage of Scope 1 GHG	Percentage (%)	N/C	N/C	6.5
Percentage Scope 1 GHG under Emissions-Limiting Regulation <sup>9</sup>	Percentage (%)	62	83	81
Total Scope 2 GHG Emissions <sup>1, 2, 10</sup>	tonnes CO <sub>2</sub> e	1,251,655	1,386,511	1,307,661
Scope 1 & 2 GHG Emissions Intensity <sup>11</sup>	tonnes CO <sub>2</sub> e/boe	0.00294	0.00304	0.00297

## Scope 3 GHG Emissions <sup>12</sup>

Fuel and Energy Related Activities <sup>13</sup>	tonnes CO <sub>2</sub> e	N/C	N/C	241,847
Waste Generated in Operations <sup>14</sup>	tonnes CO <sub>2</sub> e	N/C	N/C	740
Business Travel <sup>15</sup>	tonnes CO <sub>2</sub> e	N/C	135	179
Employee Commuting <sup>16</sup>	tonnes CO <sub>2</sub> e	N/C	N/C	2,975
Upstream Leased Assets <sup>17</sup>	tonnes CO <sub>2</sub> e	N/C	N/C	2,963
Investments <sup>18</sup>	tonnes CO <sub>2</sub> e	N/C	N/C	984,068

Energy Use	Unit	2019	2020	2021
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Total Electricity Consumption <sup>19</sup>	GWh	2,161	2,309	2,418
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Air Quality <sup>20</sup>	Unit	2019	2020	2021
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NO <sub>x</sub> Emissions <sup>21</sup>	tonnes	3,467	3,232	3,189
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SO <sub>x</sub> Emissions <sup>22</sup>	tonnes	1,651	1,725	2,389
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Volatile Organic Compounds (VOCs) <sup>23</sup>	tonnes	4,879	6,218	5,267
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Particulate Matter (PM10)	tonnes	N/C	N/C	268
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<sup>1</sup> Pembina has selected the Operational Control approach to define our organizational boundaries for GHG reporting and includes all material sources and sinks associated with facilities and operations (both corporate and pipeline) that are in direct operational control by Pembina and Pembina subsidiaries.

<sup>2</sup> Values reported represent gross emissions emitted to the atmosphere before accounting for offsets, credits or other similar mechanisms that have reduced or compensated for emissions. For increased transparency, GHG emissions reported include those considered below reporting thresholds under regulatory reporting regimes.

<sup>3</sup> Scope 1 emission sources in the reported data include emissions from stationary combustion equipment, fugitive emission leaks, as well as flaring, incineration, venting and mobile equipment operated by Pembina. Immaterial sources of emissions such as physical and chemical processing emissions, construction activities and non-routine events such as emissions from spills are excluded from reported emissions.

<sup>4</sup> Scope 1 emissions are calculated using operational activity data (e.g. fuel consumption data from meters, measured survey data and engineered estimates) multiplied by an operationally derived or the applicable regulated default emission factor. Energy consumption used to quantify the Scope 1 emission includes all types of fuels consumed by Pembina operations, including natural gas, diesel, gasoline, propane and jet fuel. Fuel consumption is based on a combination of invoiced amounts provided by third party suppliers, meter readings and system generated reports.

<sup>5</sup> Pembina participates in the following applicable regulated emissions reporting programs: Environment and Climate Change Canada Greenhouse Gas Emissions Reporting Program, British Columbia Greenhouse Gas Industrial Reporting and Control Act, Alberta Specified Gas Reporting Regulations, Alberta Technology, Innovation and Emission Reduction Regulations, Saskatchewan Management and Reduction of Greenhouse Gases Regulations and Standards, Ontario Greenhouse Gas Emissions Reporting (O Reg. 390/18) and the US Environmental Protection Agency 40 CFR Part 98 Reporting Regulations.

<sup>6</sup> Errors in excess of 5% were noted in our 2019 Scope 1 and 2 emissions resulting from incorrect application of our organizational boundary (operational control) to acquired assets. These values have been corrected in this report.

<sup>7</sup> Pembina has selected 2019 as our base year. Our base year recalculation policy is to recalculate base year emissions for any significant structural changes as a result of major acquisitions, divestments and mergers and meet our significance threshold of  $\pm 15\%$  of Base Year Scope 1+2 emissions.

<sup>8</sup> To align our reported metrics with our priority reporting frameworks, we have chosen to report methane emissions in metric tonnes of carbon dioxide equivalents moving forward. In 2021, methane emissions reduced to a level consistent with 2019 performance, following an increase in vented emissions at the Duvernay Gas Processing Plant for 2020 that was addressed with an operational improvement in 2021. Methane emissions also declined in part based on a fugitive emissions leak detection and repair program implemented in 2020 across 100% of our Canadian 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.

<sup>9</sup> Such as a carbon tax or emission trade system (e.g., Alberta Technology, Innovation and Emission Reduction regulations effective 2020).

<sup>10</sup> Scope 2 emissions are indirect emissions from purchased and imported electricity and heat consumption. Scope 2 emissions are calculated using location-based emission factors from the most recent Environment and Climate Change Canada's National Inventory Report (NIR) for Canadian facilities, U.S. Environmental Protection Agency's Emissions & Generation Resource Integrated Database (eGRID) for US facilities and Alberta Environment and Parks Technology, Innovation and Emission Reduction (TIER) benchmark emission intensity factor for imported heat medium. Initial preparation has begun to prepare Pembina for a transition to market based methodology in the future. Due to the lack of data availability for contractual energy purchases to calculate facility specific emission factors for all operations, market-based emissions are considered equal to location-based emissions.

<sup>11</sup> Reported emissions intensity values for 2019 and 2020 have been revised from prior reporting to reflect a methodological change to throughput calculation.

<sup>12</sup> We have expanded our Scope 3 GHG emissions reporting to include fuel- and energy-related activities, waste generated in operations, business travel, employee commuting, upstream leased assets and investments. These numbers are based on estimated calculations.

<sup>13</sup> Estimated value is calculated using the volume of fuel and electricity consumed and purchased and location-specific upstream emission factors.

<sup>14</sup> Estimated value is currently limited to emissions from the transportation of waste generated.

<sup>15</sup> 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.

<sup>16</sup> The Greenhouse Gas Protocol Quantis Scope 3 Evaluator online tool was used to estimate employee commuting emissions for an organization of 1,001 to 2,500 employees. This scope 3 category contributes a relatively small amount of emissions compared to other categories. Additional Pembina-specific information may be used to improve this estimation in future years.

<sup>17</sup> Emissions in this category is limited during this reporting year to those associated with our corporate headquarters in Calgary.

<sup>18</sup> Value reported reflects Pembina's 50% interest in both Alliance Pipeline Limited Partnership and Alliance Pipeline L.P. and 45% interest in Veresen Midstream only.

<sup>19</sup> The increase in Total Electricity Consumption since 2019 is driven by both an increase in electrical consumption due to increased physical volumes processed as well as data validation, refinement and more robust tracking.

<sup>20</sup> Air quality emissions data is calculated based on the regulatory requirements where we operate and includes emissions at, or above, regulatory reporting thresholds. This methodology can lead to year-on-year variations as some facilities oscillate between falling above or below the reporting threshold.

<sup>21</sup> 2021 decrease attributable to reduced throughput at Duvernay Field Hub.

<sup>22</sup> In April 2021, equipment was added at the Hythe Gas Plant to treat sour gas and produce sulphur, resulting in an increased sulphur oxide emissions.

<sup>23</sup> Reportable VOC emissions are highly variable. For 2021, variance in VOCs attributable to Younger performance relative to regulatory reporting threshold.



## Employee Well-Being and Culture

Employees	Unit	2019	2020	2021
<b>Total Employees (U.S. and Canada) <sup>1</sup></b>				
Full-Time Employees <sup>2</sup>	Number or count	2515	2415	2298
Part-Time Employees <sup>3</sup>	Number or count	127	48	51
Total Employees <sup>4</sup>	Number or count	2642	2463	2349
New Hires <sup>5</sup>	Number or count	494	166	234
Contractors <sup>6</sup>	Number or count	823	885	961
<b>Women (Canada) <sup>7</sup></b>				
Total Workforce	Number or count	634	597	558
% Total Workforce	Percentage (%)	27	27	27
Managers	Percentage (%)	N/C	N/C	21
Executive <sup>8</sup>	Percentage (%)	N/C	N/C	26
Board <sup>9</sup>	Percentage (%)	30	40	40
<b>Diversity and Inclusion (Canada) <sup>10</sup></b>				
Indigenous Peoples <sup>11</sup>	Number or count	88	87	98
Persons with Disabilities <sup>12</sup>	Number or count	18	15	28
Racialized Persons <sup>13</sup>	Number or count	261	257	293
<b>Retention (U.S. and Canada) <sup>14</sup></b>				
Turnover Rate, Total <sup>15</sup>	Percentage (%)	8.6	10.9	11.3
Turnover Rate, Voluntary <sup>16</sup>	Percentage (%)	4.9	3.1	4.7
<b>Demographic (U.S. and Canada) <sup>17</sup></b>				
Percentage Employees Aged 50+	Percentage (%)	25	25	26
Percentage Employees Aged Between 30 and 49	Percentage (%)	63	64	64
Percentage Employees Aged Under 30	Percentage (%)	12	11	10



<sup>1</sup> Total Employees includes personnel in all locations in Canada and the U.S. Metrics align with applicable GRI standards.

<sup>2</sup> Includes all full time, permanent employees as of December 31, 2021. Directors are exempt.

<sup>3</sup> All fixed term employee as of December 31, 2021. Part-time employees have decreased since 2019 due to decreased resourcing requirements during the COVID-19 pandemic.

<sup>4</sup> All fixed term and permanent employees as of December 31, 2021.

<sup>5</sup> Includes all fixed term (temporary) and permanent new hire employees in the reporting year. The number of new hires was lower in 2020 and 2021 compared to 2019 due to decreased resourcing requirements during the COVID-19 pandemic.

<sup>6</sup> Represents invoicing contractors as of December 31, 2021. Value differs from 2021 Annual Information Form due to expanded definition. This number fluctuates throughout the year based on business requirements.

<sup>7</sup> Our Women metrics represent permanent employees in Canada to align with our EDI targets. Metrics align with GRI 405-1.

<sup>8</sup> Our Executive team includes our officer team as well as vice presidents.

<sup>9</sup> This data includes female board members, represented as a percent of total independent directors.

<sup>10</sup> Our Diversity and Inclusion metrics are self-disclosed and represent permanent employees in Canada to align with our EDI targets.

<sup>11</sup> Number of Indigenous Peoples has increased in 2021. The progression of our EDI strategy in 2021 may have increased the number of Indigenous people hired and/or increased employee self-disclosure.

<sup>12</sup> Number of Persons with Disabilities has increased in 2021. The progression of our EDI strategy in 2021 may have increased the number of persons with disabilities hired and/or increased employee self-disclosure.

<sup>13</sup> Number of Racialized Persons has increased in 2021. The progression of our EDI strategy in 2021 may have increased the number of racialized persons hired and/or increased employee self-disclosure.

<sup>14</sup> This data represents all permanent employees in Canada and the U.S.

<sup>15</sup> Total turnover has increased since 2019 due in part to the economic downturn during the COVID-19 pandemic.

<sup>16</sup> Voluntary turnover decreased in 2020 due to the economic downturn during the COVID-19 pandemic.

<sup>17</sup> This data represents all permanent and fixed term employees in Canada and the U.S. Metrics align with GRI 405-1.





## Health and Safety

Workforce Health and Safety <sup>1</sup>	Unit	2019	2020	2021
<b>Fatalities <sup>2</sup></b>				
Employees	Number	0	0	0
Contractors <sup>3</sup>	Number	0	0	1
<b>Total Recordable Injury Frequency (TRIF) <sup>4</sup></b>				
Employees <sup>5</sup>	Rate	0.336	0.198	0.494
Contractors <sup>6</sup>	Rate	1.225	0.908	1.122
<b>Near Miss Frequency Rate (NMFR) <sup>7</sup></b>				
Employees	Rate	N/C	N/C	3.418
Contractors	Rate	N/C	N/C	2.539
<b>Preventable Motor Vehicle Incident Frequency (MVI) <sup>8</sup></b>				
Employees <sup>9</sup>	Rate	0.490	0.211	0.645
Contractors <sup>10</sup>	Rate	1.446	0.952	0.564

<sup>1</sup> Our Safety metrics include our Canadian and U.S. workforce.

<sup>2</sup> A Fatality is a death resulting from a work-related injury/illness.

<sup>3</sup> For 2021, we are deeply saddened to report a fatality of one of our subcontractors, which occurred at a construction site. Pembina is committed to doing everything it can to learn from this incident.

<sup>4</sup> TRIF is the number of recordable injuries per 200,000 hours of work.

<sup>5</sup> Our employee TRIF values were lower in 2020 due to decreased employee activity resulting from the COVID-19 pandemic. Values increased in 2021 compared to 2019 and 2020, which is a trend Pembina is working to monitor and manage.

<sup>6</sup> Our contractor TRIF values have stayed relatively consistent since 2019, but we are working to monitor and manage our recordable injuries as we strive towards zero.

<sup>7</sup> A Near Miss is an incident where no loss was sustained, but given a slight shift in position or time, damage, injury, or other loss could have occurred. Near Miss Frequency Rate (NMFR) is the number of near miss incidents per 200,000 hours of work, tracked as part of our Safety Program. It is an important leading indicator to manage safety incidents. Metric aligns with GRI 403.

<sup>8</sup> The number of preventable incidents per 1,000,000 kms driven.

<sup>9</sup> Our employee MVI values were lower in 2020 due to decreased employee activity resulting from the COVID-19 pandemic. Values increased in 2021 compared to 2019 and 2020, which is a trend Pembina is working to monitor and manage.

<sup>10</sup> Our contractor MVI values have fallen since 2019 due to improved contractor performance and decreased contractor activity in higher hazard conditions as a result of deferred projects due to the COVID-19 pandemic.



## Responsible Asset Management <sup>1</sup>

Integrity Management	Unit	2019	2020	2021
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### Pipeline Repairs and In-Line Inspections (ILIs) <sup>2</sup>

Percentage of Natural Gas Pipelines Inspected	Percentage (%)	N/C	N/C	23
Percentage of Hazardous Liquid Pipelines Inspected <sup>3</sup>	Percentage (%)	N/C	N/C	29

Spill Prevention & Mitigation	Unit	2019	2020	2021
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### Incidents (Spills, Releases and Significant Failures)

Number of Reportable Pipeline Incidents <sup>4</sup>	Number	4	10	9
Percentage Significant <sup>5</sup>	Percentage (%)	N/C	N/C	11
Accident Releases from Rail Transportation <sup>6</sup>	Number	N/C	N/C	0
Non-Accident Releases (NARs) from Rail Transportation <sup>7</sup>	Number	N/C	N/C	1

### Hydrocarbon Spills

Number of Hydrocarbon Spills <sup>8</sup>	Number	N/C	N/C	4
Aggregate Volume of Hydrocarbon Spills <sup>9</sup>	Barrels (bbls)	N/C	N/C	79
Volume of Hydrocarbon Spills in Arctic <sup>10</sup>	Barrels (bbls)	N/C	N/C	0
Volume of Hydrocarbon Spills in Unusually Sensitive Areas (USAs) <sup>11</sup>	Barrels (bbls)	N/C	N/C	0
Volume of Hydrocarbon Spills Recovered <sup>12</sup>	Barrels (bbls)	N/C	N/C	79

Waste Management <sup>13</sup>	Unit	2019	2020	2021
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### Total Waste (Non-Hazardous + Hazardous)

Total Non-Hazardous Waste <sup>14</sup>	metric tonnes	652,374	1,244,823	656,136
Total Hazardous Waste <sup>15</sup>	metric tonnes	52,123	51,103	40,083
Total Waste Generated	metric tonnes	704,497	1,295,926	696,219



Waste Management <sup>13</sup>	Unit	2019	2020	2021
<b>Waste to Disposal (e.g., Landfill, Incineration)</b>				
Non-Hazardous Waste (Excluding Produced Water) <sup>16</sup>	metric tonnes	109,636	84,428	28,713
Non-Hazardous Produced and Process Water Waste <sup>17</sup>	metric tonnes	539,700	1,156,782	622,104
Hazardous Waste	metric tonnes	50,545	26,064	39,954
Total Waste to Disposal	metric tonnes	699,881	1,267,274	690,771
<b>Waste Diversion (e.g., Recycled, Treatment)</b>				
Non-Hazardous Waste <sup>18</sup>	metric tonnes	3,038	3,613	5,319
Hazardous Waste <sup>19</sup>	metric tonnes	1,578	25,039	129
Total Waste Diversion	metric tonnes	4,616	28,652	5,448
Water Management	Unit	2019	2020	2021
Total Water Withdrawal <sup>20</sup>	million m <sup>3</sup>	1.555	1.900	1.631
Total Water Disposed (i.e., Regulated Disposal Facility or Deep Injection Well) <sup>21</sup>	million m <sup>3</sup>	0.152	0.711	0.307
Total Water Returned to the Environment	million m <sup>3</sup>	1.039	1.173	1.100
Total Fresh Water Consumed <sup>22</sup>	million m <sup>3</sup>	N/C	N/C	1.190
Land Use & Restoration	Unit	2019	2020	2021
Terrestrial Acreage Disturbed <sup>23</sup>	Acres	N/C	N/C	66,966
Percentage of Impacted Area Restored <sup>24</sup>	Percentage (%)	N/C	N/C	1
Biodiversity	Unit	2019	2020	2021
Percentage of Land Owned, Leased and/or Operated within Areas of Protected Conservation Status or Endangered Species Habitat <sup>25</sup>	Percentage (%) by acreage	N/C	N/C	0.9





<sup>1</sup> The Operational Control boundary has been selected for reporting of Pembina and Pembina subsidiaries.

<sup>2</sup> In-line inspection intervals for Pembina pipeline assets are dictated by regulatory requirements and Pembina's comprehensive IMP.

<sup>3</sup> In alignment with SASB hazardous liquid pipeline guidance, Pembina has elected to include all liquids pipelines in the calculation of this metric.

<sup>4</sup> This includes reportable spills, releases and significant failures. A Significant Failure Incident is defined as a release of a commodity product from a pipeline that must be reported to an external agency or authority, such as a federal, provincial or state regulator, and that includes one or more of the following: a serious injury or fatality; an unintentional ignition or fire; a liquid release of greater than 8 m<sup>3</sup> (50 barrels); a solids release (mineral concentrates and/or sulphur) of greater than 200 kg to land and/or any solids release (including mineral concentrates) to a body of water; or a rupture or breach of a pipe, tank or containment.

<sup>5</sup> A Significant Incident is defined as a release of a commodity product from a pipeline that must be reported to an external agency or authority, such as a federal, provincial or state regulator, and that includes one or more of the following: a serious injury or fatality; an unintentional ignition or fire; a liquid release of greater than 8 m<sup>3</sup> (50 barrels); a solids release (mineral concentrates and/or sulphur) of greater than 200 kg to land and/or any solids release (including mineral concentrates) to a body of water; or a rupture or breach of a pipe, tank or containment. Analyzing the percent significant helps focus our efforts on managing and preventing these incidents.

<sup>6</sup> Includes all releases of hazardous material from a derailment, collision or other rail-related accident that is required to be reported to regulatory or governmental agencies. Separating incidents from pipeline and rail operations as well as accident and non-accident releases helps identify the location of our liabilities and focus our mitigation measures.

<sup>7</sup> Non-Accident Releases (NARs) from Rail Transportation include all unintentional releases of a hazardous material while in transportation, including loading and unloading while in railroad possession that is not caused by a derailment, collision or other rail-related accident. Separating incidents from pipeline and rail operations as well as accident and non-accident releases helps identify the location of our liabilities and focus our mitigation measures. Pembina experienced one non-accident release from rail transportation in 2021 in relation to an empty liquified petroleum gas rail car at the PRT.

<sup>8</sup> Number of Hydrocarbon Spills provides focus on hydrocarbons versus spills of other materials. A spill is defined as reportable, greater than one barrel in volume, includes those that reach the environment, and excludes those that were contained within impermeable secondary containment.

<sup>9</sup> Aggregate Volume of Hydrocarbon Spills provides focus on hydrocarbons versus spills of other materials. A spill is defined as reportable, greater than one barrel in volume, includes those that reach the environment, and excludes those that were contained within impermeable secondary containment. The full volume of hydrocarbon spills which occurred in 2021 were recovered.

<sup>10</sup> Volume of Hydrocarbon Spills in Arctic is not applicable to Pembina's operations but is an important metric for industry to determine the impacts on a sensitive ecosystem.

<sup>11</sup> Volumes of Hydrocarbon Spills in Unusually Sensitive Areas determines if any hydrocarbon spills occurred in a drinking water or ecological resource area or specific species habitat. A spill is defined as reportable, greater than one barrel in volume, includes those that reach the environment, and excludes those that were contained within impermeable secondary containment. This is a SASB definition that is currently applicable to U.S. assets and operations only.

<sup>12</sup> Volume of Hydrocarbon Spills Recovered determines the volume of a hydrocarbon spill that was removed from the environment. The full volume of hydrocarbon spilled in 2021 was recovered.

<sup>13</sup> Hazardous waste data is collected for both solid and liquid sources; liquid waste is converted from m<sup>3</sup> to metric tonnes at a 1:1 conversion for disposal volumes of unknown composition. This represents a conservative estimate as these volumes are commonly water contaminated with hydrocarbons which have a specific gravity of less than one. The Redwater Complex on-site injection well composition is known and was used to estimate an average conversion ratio of 1.22 metric tonnes per m<sup>3</sup> which represents 87% of the hazardous waste in 2021.

<sup>14</sup> Non-hazardous waste is calculated using best available operational data such as internal meters. The reported weights have inherent limitations in terms of the completeness of asset inclusion and the potential accuracy of uncalibrated meters.

<sup>15</sup> Hazardous waste decreased in 2021 due to a reduction of maintenance activities and construction at Vancouver Wharves.

<sup>16</sup> Non-hazardous waste excluding produced water decreased primarily as the result of a change in methodology. The methodology change removed hydrocarbon product volumes trucked to transfer stations. This product does not follow Pembina's definition of waste which is aligned with the GRI. Previous years were not restated.

<sup>17</sup> Non-hazardous Produced and Process Water Waste decreased as Producers shipped less water to Pembina.

<sup>18</sup> Non-hazardous waste diverted increased in 2021 due to inclusion of previously unaccounted process water volumes from the Corunna facility, in the East NGL System. Previous years were not restated.

<sup>19</sup> Hazardous waste diverted decreased in 2021 due to reduced maintenance projects at Vancouver Wharves.

<sup>20</sup> 2021 Water Withdrawal Volumes declined compared to 2020 due to reduced cavern development as well as fewer pipeline projects requiring water. 2021 water withdrawal includes firewater at the Channahon Facility which was not previously accounted for. Previous years have not been restated.

<sup>21</sup> 2021 Water Disposal Volumes declined compared to 2020 due to reduced cavern development.

<sup>22</sup> 2021 Water Consumed is a new metric for Pembina and historical values have not been reported. Water withdrawn is not equivalent to the sum of disposal, returned and consumed because water is held in storage facilities for future use.

<sup>23</sup> Terrestrial Acreage Disturbed represents the footprint of Pembina's pipeline operations, including the pipeline right-of-way and associated pipeline infrastructure (e.g., valve sites). The assumed impact is restricted to rights-of-way that are, on average 18 meters in width centered over the ditch line. Facilities are excluded from the calculation. The disturbed area is in hectares and percentage disturbed vs reclaimed is based on a five-year return from impact to restored.

<sup>24</sup> Percentage of Impacted Area Restored represents the percentage of disturbed land that has undergone post construction restoration and reclamation efforts. To calculate the percentage of restoration of impacted right-of-way, Pembina assumes five years are required to return lands to a restored condition. For 2021, an incremental 1.4% of Pembina's total land base was restored (aligning to land disturbance five years prior in 2016).

<sup>25</sup> Percentage of Land Owned, Leased and/or Operated within Areas of Protected Conservation Status or Endangered Species Habitat designates operational areas that may require special measures to avoid impact. Pembina has evaluated area in provincial or national parks and habitat associated with a SARA species (e.g., Ord's Kangaroo Rat). Note that Ord's Kangaroo Rat is only mapped in Alberta and not Saskatchewan. These lands make up a relatively small percentage of our operational area.



## Indigenous and Stakeholder Engagement

Indigenous Engagement <sup>1</sup>	Unit	2019	2020	2021
Indigenous Spending <sup>2</sup>	\$ millions	N/C	N/C	101.2
Indigenous Communities Engaged for Services <sup>3</sup>	Number	N/C	N/C	34
Indigenous Suppliers Utilized <sup>4</sup>	Number	N/C	N/C	100
Community and Stakeholder Relations	Unit	2019	2020	2021

## Community Investment

Cash Investments <sup>5</sup>	\$millions	10.0	5.6	5.6
In-kind Investments <sup>6</sup>	\$millions	0.058	0.075	0.039
Employee Giving <sup>7</sup>	\$millions	3.3	3.1	2.1
Employee Time during Work Hours <sup>8</sup>	\$millions	0.47	0.11	0.15
Other <sup>9</sup>	\$millions	0.52	0.63	0.49
Total Investments <sup>10</sup>	\$millions	14.3	9.5	8.4

## Employee Volunteering

Employee and Contractor Hours Volunteered (During Working Hours) <sup>11</sup>	Hours	7927	1810	2456
Hours per Employee (During Working Hours) <sup>12</sup>	Hours	3.2	0.7	1.0



<sup>1</sup> Our Indigenous Engagement metrics include Canadian assets only.

<sup>2</sup> Indigenous Spending accounts for direct and indirect procurement costs for an Indigenous business based on the proportion of ownership. An Indigenous business is owned by a participating First Nation, Métis, Inuit Community/Settlement or their members, including a strategic partnership, corporation, joint venture, limited partnership, other entity or a combination of them.

<sup>3</sup> The number of Indigenous communities who have been engaged to provide services for Pembina. This indicates the number of communities that we engage with for procurement.

<sup>4</sup> Includes the number of Indigenous businesses engaged to provide services for Pembina. An Indigenous business is owned by a participating First Nation, Métis, Inuit Community/Settlement or their members, including a strategic partnership, corporation, joint venture, limited partnership, other entity or a combination of them.

<sup>5</sup> Includes direct cash investments in the reporting period to support community engagement activities. Assets excluded from Community Investment data include Aux Sable, Cedar LNG and VMLP. This number has decreased since 2019 due to a decline in community activities and budget during the COVID-19 pandemic. Rounding differs from the value reported in the Governance section. Value differs from 2022 Management Information Circular value of \$5.4M due to identification of additional qualifying investment.

<sup>6</sup> Community In-kind Investments include in-kind investments in the reporting period to support our community engagement. Assets excluded from Community Investment data include Aux Sable, Cedar LNG and VMLP. This number fluctuates year-over-year depending on availability of resources and assets.

<sup>7</sup> Employee Giving includes donations by Pembina employees that support community engagement. This number has decreased since 2019 due to a decline in community activities and budget during the COVID-19 pandemic as well as a reduction in employee head count.

<sup>8</sup> Employee Time during Work Hours includes all paid employee volunteer hours that support community engagement. A dollar value was determined using an average Pembina employee salary. Our values have decreased since 2019 as a result of gathering restrictions associated with the mitigation of health and safety risks associated with the COVID-19 pandemic and work from home requirements.

<sup>9</sup> Other Community Investments include costs associated with running the community investment function or managing contributions to the community. This would include staff salaries, overhead costs, research, travel and meals, communications, subscriptions, membership fees, etc. This number may fluctuate year-over-year based on needs.

<sup>10</sup> Total Investments includes cash investments, in-kind investments, employee giving, employee time during work hours and other investments.

<sup>11</sup> Employee and Contractor Hours Volunteered (During Working Hours) includes all paid employee and contractor volunteer hours that support community engagement. Our values have decreased since 2019 as a result of gathering restrictions associated with the mitigation of health and safety risks associated with the COVID-19 pandemic and work from home requirements, but increased in 2021 from 2020 as a result of the relaxation of these restrictions.

<sup>12</sup> Volunteer Hours per Employee (During Working Hours) includes all paid employee volunteer hours that support community engagement per employee. Our values have decreased since 2019 as a result of gathering restrictions associated with the mitigation of health and safety risks associated with the COVID-19 pandemic and work from home requirements, but increased in 2021 from 2020 as a result of the relaxation of these restrictions.



## SASB Content Index

The table shown below demonstrates the relationship between Pembina's reporting and SASB Oil & Gas – Midstream Sustainability Accounting Standard (October 2018).

Metric	SASB Code	Sustainability Report Reference
<b>Energy Transition and Climate</b>		
Scope 1 GHG Emissions	SASB EM-MD-110a.1	Data Tables – Energy Transition and Climate ( <a href="#">page 62</a> )
Methane GHG Emissions as a Percentage of Scope 1 GHG	SASB EM-MD-110a.1	Data Tables – Energy Transition and Climate ( <a href="#">page 62</a> )
Percentage Scope 1 GHG under Emissions-Limiting Regulation	SASB EM-MD-110a.1	Data Tables – Energy Transition and Climate ( <a href="#">page 62</a> )
NO <sub>x</sub> Emissions	SASB EM-MD-120a.1	Data Tables – Energy Transition and Climate ( <a href="#">page 62</a> )
SO <sub>x</sub> Emissions	SASB EM-MD-120a.1	Data Tables – Energy Transition and Climate ( <a href="#">page 62</a> )
Volatile Organic Compounds (VOCs)	SASB EM-MD-120a.1	Data Tables – Energy Transition and Climate ( <a href="#">page 62</a> )
Particulate Matter (PM10)	SASB EM-MD-120a.1	Data Tables – Energy Transition and Climate ( <a href="#">page 62</a> )
<b>Responsible Asset Management</b>		
Percentage of Natural Gas Pipelines Inspected	SASB EM-MD-540a.2	Data Tables – Responsible Asset Management ( <a href="#">page 67</a> )
Percentage of Hazardous Liquid Pipelines Inspected	SASB EM-MD-540a.2	Data Tables – Responsible Asset Management ( <a href="#">page 67</a> )
Number of Reportable Pipeline Incidents	SASB EM-MD-540a.1	Data Tables – Responsible Asset Management ( <a href="#">page 67</a> )
Percentage Significant	SASB EM-MD-540a.1	Data Tables – Responsible Asset Management ( <a href="#">page 67</a> )
Accident Releases from Rail Transportation	SASB EM-MD-540a.3	Data Tables – Responsible Asset Management ( <a href="#">page 67</a> )
Non-Accident Releases (NARs) from Rail Transportation	SASB EM-MD-540a.3	Data Tables – Responsible Asset Management ( <a href="#">page 67</a> )
Number of Hydrocarbon Spills	SASB EM-MD-160a.4	Data Tables – Responsible Asset Management ( <a href="#">page 67</a> )





Metric	SASB Code	Sustainability Report Reference
<b>Responsible Asset Management</b>		
Aggregate Volume of Hydrocarbon Spills	SASB EM-MD-160a.4	Data Tables – Responsible Asset Management ( <a href="#">page 67</a> )
Volume of Hydrocarbon Spills in Arctic	SASB EM-MD-160a.4	Data Tables – Responsible Asset Management ( <a href="#">page 67</a> )
Volume of Hydrocarbon Spills in Unusually Sensitive Areas (USAs)	SASB EM-MD-160a.4	Data Tables – Responsible Asset Management ( <a href="#">page 67</a> )
Volume of Hydrocarbon Spills Recovered	SASB EM-MD-160a.4	Data Tables – Responsible Asset Management ( <a href="#">page 67</a> )
Terrestrial Acreage Disturbed	SASB EM-MD-160a.3	Data Tables – Responsible Asset Management ( <a href="#">page 68</a> )
Percentage of Impacted Area Restored	SASB EM-MD-160a.3	Data Tables – Responsible Asset Management ( <a href="#">page 68</a> )
Percentage of Land Owned, Leased and/or Operated within Areas of Protected Conservation Status or Endangered Species Habitat	SASB EM-MD-160a.2	Data Tables – Responsible Asset Management ( <a href="#">page 68</a> )



## WEF Content Index

The table shown below demonstrates the relationship between Pembina's reporting and WEF metrics and disclosures (September 2020).

Metric	WEF Metric Reference	Sustainability Report Reference
<b>Governance</b>		
Total Economic Value Generated	WEF (Adapted from GRI 201-1)	Data Tables - Governance ( <a href="#">page 60</a> )
Operating and General & Administrative Expenses	WEF (Adapted from GRI 201-1)	Data Tables - Governance ( <a href="#">page 60</a> )
Employee Wages and Benefits	WEF (Adapted from GRI 201-1)	Data Tables - Governance ( <a href="#">page 60</a> )
Total Tax Paid	WEF (Adapted from GRI 201-1)	Data Tables - Governance ( <a href="#">page 60</a> )
Payments to Providers of Capital	WEF (Adapted from GRI 201-1)	Data Tables - Governance ( <a href="#">page 60</a> )
Community Investments	WEF (Adapted from GRI 201-1)	Data Tables - Governance ( <a href="#">page 60</a> )
Canadian Income Taxes Paid	WEF (Adapted from GRI 201-1)	Data Tables - Governance ( <a href="#">page 60</a> )
U.S. Income Taxes Paid	WEF (Adapted from GRI 201-1)	Data Tables - Governance ( <a href="#">page 60</a> )
Total Capital Expenditures Minus Depreciation	WEF (As Referenced in International Accounting Standard ("IAS") 7 and US GAAP Accounting Standards Codification ("ASC") 230)	Data Tables - Governance ( <a href="#">page 60</a> )
Share Buybacks and Dividend Payments	WEF (As Referenced in IAS 7 and US GAAP ASC 230)	Data Tables - Governance ( <a href="#">page 60</a> )



Metric	WEF Metric Reference	Sustainability Report Reference
<b>Energy Transition and Climate</b>		
Scope 1 GHG Emissions	WEF (Adapted from GRI 305:1, TCFD, GHG Protocol)	Data Tables – Energy Transition and Climate ( <a href="#">page 62</a> )
Methane (CH <sub>4</sub> )	WEF (Adapted from GRI 305:1, TCFD, GHG Protocol)	Data Tables – Energy Transition and Climate ( <a href="#">page 62</a> )
Methane GHG Emissions as a Percentage of Scope 1 GHG	WEF (Adapted from GRI 305:1, TCFD, GHG Protocol)	Data Tables – Energy Transition and Climate ( <a href="#">page 62</a> )
Total Scope 2 GHG Emissions	WEF (Adapted from GRI 305:2, TCFD, GHG Protocol)	Data Tables – Energy Transition and Climate ( <a href="#">page 62</a> )
Scope 3 - Fuel and Energy Related Activities	WEF (Adapted from GRI 305:3, TCFD, GHG Protocol)	Data Tables – Energy Transition and Climate ( <a href="#">page 62</a> )
Scope 3 - Waste Generated in Operations	WEF (Adapted from GRI 305:3, TCFD, GHG Protocol)	Data Tables – Energy Transition and Climate ( <a href="#">page 62</a> )
Scope 3 - Business Travel	WEF (Adapted from GRI 305:3, TCFD, GHG Protocol)	Data Tables – Energy Transition and Climate ( <a href="#">page 62</a> )
Scope 3 - Employee Commuting	WEF (Adapted from GRI 305:3, TCFD, GHG Protocol)	Data Tables – Energy Transition and Climate ( <a href="#">page 62</a> )
Scope 3 - Upstream Leased Assets	WEF (Adapted from GRI 305:3, TCFD, GHG Protocol)	Data Tables – Energy Transition and Climate ( <a href="#">page 62</a> )
Scope 3 - Investments	WEF (Adapted from GRI 305:3, TCFD, GHG Protocol)	Data Tables – Energy Transition and Climate ( <a href="#">page 62</a> )



Metric	WEF Metric Reference	Sustainability Report Reference
<b>Employee Well-Being and Culture</b>		
New Hires	WEF (Adapted, to include other indicators of diversity, from GRI 401-1a&b)	Data Tables – Employee Well-Being and Culture ( <a href="#">page 64</a> )
Women - Total Workforce	WEF (GRI 405-1b)	Data Tables – Employee Well-Being and Culture ( <a href="#">page 64</a> )
Women - % Total Workforce	WEF (GRI 405-1b)	Data Tables – Employee Well-Being and Culture ( <a href="#">page 64</a> )
Women - Managers	WEF (GRI 405-1b)	Data Tables – Employee Well-Being and Culture ( <a href="#">page 64</a> )
Women - Executive	WEF (GRI 405-1b)	Data Tables – Employee Well-Being and Culture ( <a href="#">page 64</a> )
Women - Board	WEF (GRI 405-1b)	Data Tables – Employee Well-Being and Culture ( <a href="#">page 64</a> )
Indigenous Peoples	WEF (GRI 405-1b)	Data Tables – Employee Well-Being and Culture ( <a href="#">page 64</a> )
Persons with Disabilities	WEF (GRI 405-1b)	Data Tables – Employee Well-Being and Culture ( <a href="#">page 64</a> )
Racialized Persons	WEF (GRI 405-1b)	Data Tables – Employee Well-Being and Culture ( <a href="#">page 64</a> )
Turnover Rate, Total	WEF (Adapted, to include other indicators of diversity, from GRI 401-1a&b)	Data Tables – Employee Well-Being and Culture ( <a href="#">page 65</a> )
Turnover Rate, Voluntary	WEF (Adapted, to include other indicators of diversity, from GRI 401-1a&b)	Data Tables – Employee Well-Being and Culture ( <a href="#">page 65</a> )
Percentage Employees Aged 50+	WEF (GRI 405-1b)	Data Tables – Employee Well-Being and Culture ( <a href="#">page 65</a> )
Percentage Employees Aged Between 30 and 49	WEF (GRI 405-1b)	Data Tables – Employee Well-Being and Culture ( <a href="#">page 65</a> )
Percentage Employees Aged Under 30	WEF (GRI 405-1b)	Data Tables – Employee Well-Being and Culture ( <a href="#">page 65</a> )





### Health and Safety

Fatalities – Employees	WEF (GRI:2018 403-9a&b)	Data Tables – Health and Safety ( <a href="#">page 66</a> )
Fatalities – Contractors	WEF (GRI:2018 403-9a&b)	Data Tables – Health and Safety ( <a href="#">page 66</a> )
TRIF – Employees	WEF (GRI:2018 403-9a&b)	Data Tables – Health and Safety ( <a href="#">page 66</a> )
TRIF – Contractors	WEF (GRI:2018 403-9a&b)	Data Tables – Health and Safety ( <a href="#">page 66</a> )

### Responsible Asset Management

Percentage of Land Owned, Leased and/or Operated within Areas of Protected Conservation Status or Endangered Species Habitats	WEF (GRI 304-1)	Data Tables – Responsible Asset Management ( <a href="#">page 68</a> )
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### Indigenous and Stakeholder Engagement

Cash Investments	WEF (Adapted from GRI 201-1)	Data Tables – Indigenous and Stakeholder Engagement ( <a href="#">page 70</a> )
In-kind Investments	WEF (Adapted from GRI 201-1)	Data Tables – Indigenous and Stakeholder Engagement ( <a href="#">page 70</a> )
Employee Giving	WEF (Adapted from GRI 201-1)	Data Tables – Indigenous and Stakeholder Engagement ( <a href="#">page 70</a> )
Employee Time during Work Hours	WEF (Adapted from GRI 201-1)	Data Tables – Indigenous and Stakeholder Engagement ( <a href="#">page 70</a> )
Community Investment - Other	WEF (Adapted from GRI 201-1)	Data Tables – Indigenous and Stakeholder Engagement ( <a href="#">page 70</a> )
Total Investments	WEF (Adapted from GRI 201-1)	Data Tables – Indigenous and Stakeholder Engagement ( <a href="#">page 70</a> )



## Definitions

For capitalized terms used herein that are not otherwise defined, refer to Pembina's Annual Information Form for the year ended December 31, 2021 filed at [www.sedar.com](http://www.sedar.com) (filed with the U.S. Securities and Exchange Commission at [www.sec.gov](http://www.sec.gov) under Form 40-F) and on Pembina's website at [www.pembina.com](http://www.pembina.com).

## Hyperlinking

Throughout this report we have provided external links, which provide additional context and further information for interested readers. These hyperlinks may change over time, and Pembina does not undertake any obligation to update such hyperlinks, except as required by applicable laws.

In addition, this report may contain links to other websites ("third-party websites"). Pembina does not assume responsibility or any liability for the accuracy or appropriateness of the information, data, opinions, advice or statements contained on third-party websites. In providing links to the other sites, Pembina is in no way acting as a publisher or disseminator of the material contained on the third-party websites and does not seek to monitor or control such third-party websites. A link to a third-party website should not be construed to mean that Pembina is affiliated or associated with the entity to which the website is linked. Pembina does not recommend or endorse any of the content on any third-party website, including, without limitation, any hyperlinks contained within third-party websites.

## Forward-looking Statements

This report 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 experience and its perception of historical trends. In some cases, forward-looking statements can be identified by terminology such as "continue", "anticipate", "schedule", "will", "expects", "estimate", "potential", "planned", "future", "outlook", "strategy", "protect", "trend", "commit", "maintain", "focus", "ongoing", "believe" and similar expressions suggesting future events or future performance.

In particular, this document contains forward-looking statements pertaining to, without limitation, the following: ESG goals and targets, including those related to GHG emissions reduction and EDI, and the benefits thereof; plans and strategies with respect to EDI initiatives and reducing GHG emissions; the impact certain ESG initiatives are expected to have on Pembina's business; expectations regarding Pembina's separate renewable energy power purchase agreements with TransAlta Corporation and a wholly-owned subsidiary of Capstone Infrastructure Corporation, including the combined emission offsets produced and timing thereof; Pembina's strategic plan, priorities and expected performance, including plans and strategies to improve Pembina's ESG performance; energy transition and low carbon energy, including Pembina's initiatives and approach thereto; anticipated environmental, community and economic benefits of certain growth projects, including the Cedar LNG project and the ACG; the Cedar LNG project, including the size, ownership and emissions thereof; ACG, including its anticipated capacity, composition, geographic scope, environmental impact, long-term operating goals and the expected benefits thereof for customers, communities, employees and shareholders; Garden Plains Wind Farm, including the expected start up date and emission offsets produced; the expansion of Pembina's value chain to incorporate various carbon capture and storage opportunities; the continued advancement and utilization of climate-related scenario analysis; the Cogeneration Facility at the Empress NGL Extraction Facility, including the in service date and benefits thereof; development opportunities and low carbon and new energy opportunities and strategy; strategies for Indigenous engagement, inclusion and reconciliation, including the timing for the release of Pembina's Indigenous engagement report and training to employees regarding Indigenous cultural awareness; the expansion and continued roll out of Pembina's EDI training program; plans to further develop continued community investment and engagement efforts; the incorporation of ESG processes and



metrics into Pembina's supply chain processes, including the expected timing thereof; the impact of ESG and safety measures on compensation methodologies; timing for the implementation of improvements to Pembina's contractor safety approach; strategies to protect the integrity of energy infrastructure; plans to continue to enhance the quality of tracking and reporting certain ESG data; future ESG expansion opportunities; and the implementation of waste management programs and the benefits thereof.

The forward-looking statements are based on certain assumptions that Pembina has made in respect thereof as at the date of this report regarding, among other things: Pembina's ability to achieve its ESG targets, including those related to GHG emissions reduction and EDI; energy transition, including the drivers and pace thereof; the availability of individuals with the skills required for Pembina's business and in the geographic locations in which Pembina operates necessary to achieve Pembina's GHG and EDI targets; that current technologies are sufficient to achieve reductions in GHG emissions targets; the availability of data, samples and information necessary to evaluate targets, goals, programs and strategies; the willingness of Indigenous stakeholders to engage in consultation and reconciliation efforts; successful collaboration with others to advance ESG goals; broad compliance with Pembina's plans, strategies, programs and goals across its reporting and monitoring systems among its employees, stakeholders and service providers; oil and gas industry exploration and development activity levels and the geographic region of such activity; that Pembina's future results of operations will be consistent with past performance and management expectations in relation thereto; the resiliency of Pembina's assets and growth opportunities under climate change scenarios; the success of Pembina's operations and growth projects; that projects will be completed and sanctioned as expected; that any required commercial agreements for projects can be reached; that counterparties to agreements will continue to perform their obligations in a timely manner; prevailing regulatory, tax and environmental laws and regulations; that all required regulatory and environmental approvals can be obtained on the necessary terms and in a timely manner; that there are no unforeseen material construction or other costs related current projects or operations; that there are no unforeseen events preventing the performance of contracts or the completion of the relevant facilities; the continued availability of capital at attractive prices to fund future capital requirements relating to existing assets and projects; the ability of Pembina to maintain current credit ratings; prevailing commodity prices, interest rates, carbon prices, tax rates and exchange rates; and certain other assumptions in respect of Pembina's forward-looking statements detailed in Pembina's Management Discussion and Analysis and Annual Information Form for the year ended December 31, 2021 and from time to time in Pembina's public disclosure documents available at [www.sedar.com](http://www.sedar.com), [www.sec.gov](http://www.sec.gov), and through Pembina's website at [www.pembina.com](http://www.pembina.com).

Although Pembina believes the expectations and material factors and assumptions reflected in these forward-looking statements are reasonable as of the date hereof, there can be no assurance that these expectations, factors and assumptions will prove to be correct. These forward-looking statements are not guarantees of future performance and are subject to a number of known and unknown risks and uncertainties including, but not limited to: the failure to realize the anticipated benefits and synergies of projects and transactions; material cost-overruns in respect of projects or a material delay to the expected operational date for projects; expectations and assumptions concerning, among other things: customer demand for Pembina's services; commodity prices, interest rates, inflation and foreign exchange rates; the regulatory environment and decisions, and Indigenous and landowner consultation requirements; reliance on third parties to successfully operate and maintain certain assets; labour and material shortages; reliance on key relationship and agreements and the outcome of stakeholder engagement; the strength and operations of the oil and natural gas industry and related commodity prices; non-performance or default by counterparties to agreement which Pembina or one or more of its subsidiaries has entered into in respect of its business; actions by joint venture partners or other partners which hold interests in certain of Pembina's assets; actions by governmental and regulatory authorities, including changes in climate change initiatives, regulatory processes or increased environmental regulation; changes in the political environment, in North America and elsewhere, and public opinion; fluctuations in operating



results; adverse, general economic and market conditions in Canada, North America and worldwide; constraints on, or the unavailability of adequate infrastructure and technology; ability to access sources of debt and equity capital; changes in credit ratings; litigation; technology and security risks including cyber-security risks; natural catastrophes and changes in weather patterns; and certain other risks and uncertainties detailed in Pembina's Management Discussion and Analysis and Annual Information Form for the year ended December 31, 2021 and from time to time in Pembina's public disclosure documents available at [www.sedar.com](http://www.sedar.com), [www.sec.gov](http://www.sec.gov) and through Pembina's website at [www.pembina.com](http://www.pembina.com).

This list of risk factors should not be construed as exhaustive. 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. 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.

### **Non-GAAP and Other Financial Measures**

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

In this document, Pembina has disclosed the following non-GAAP financial measures: net revenue, operating and general and administrative expenses, total tax paid, payments to providers of capital, total capital expenditures minus depreciation and share buybacks and dividend payments.

Non-GAAP financial measures disclosed in this document do not have any standardized meaning under International Financial Reporting Standards ("IFRS") and may not be comparable to similar financial measures disclosed by other issuers. The financial measures should not, therefore, be considered in isolation or as a substitute for, or superior to, measures of Pembina's financial performance, or cash flows specified, defined or determined in accordance with IFRS, including revenue, general and administrative expenses, taxes paid, dividends paid and capital expenditures.

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

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





### Net Revenue

Net revenue is a non-GAAP financial measure which is defined as total revenue less cost of goods sold, including product purchases. Management believes that disclosing to standardized WEF metrics is a useful tool for stakeholders, and net revenue is included on the WEF recommended list of metrics to disclose. Management utilizes net revenue to aggregate revenue generated by each of Pembina's divisions and to set comparable objectives. The most directly comparable financial measure to net revenue that is specified, defined and determined in accordance with GAAP and disclosed in Pembina's financial statements is revenue.

(\$ millions)	2019	2020	2021
Revenue	6,372	5,953	8,627
Cost of goods sold, including product purchases	(3,252)	(2,509)	(4,689)
<b>Net Revenue</b>	<b>3,120</b>	<b>3,444</b>	<b>3,938</b>

### Operating and General & Administrative Expenses

Operating and general and administrative expenses is a non-GAAP financial measure that is defined as general and administrative expenses, plus operating expenses, less corporate depreciation, employee costs, property taxes paid and community investments. Management believes that disclosing to standardized WEF metrics is a useful tool for stakeholders, and operating and general & administrative expenses is included on the WEF recommended list of metrics to disclose. The most directly comparable financial measure that is specified, defined and determined in accordance with GAAP and disclosed in Pembina's financial statements is general and administrative expenses.

(\$ millions)	2019	2020	2021
General and administrative expenses	296	246	306
Operating expenses	602	712	761
Corporate depreciation	(36)	(38)	(39)
Employee costs	(339)	(370)	(440)
Property taxes paid	(100)	(95)	(101)
Community investments	(10)	(5)	(6)
<b>Operating and general &amp; administrative expenses</b>	<b>413</b>	<b>450</b>	<b>480</b>



### Total Tax Paid

Total tax paid is a non-GAAP financial measure that is defined as the sum of income taxes and property taxes paid. Management believes that disclosing to standardized WEF metrics is a useful tool for stakeholders, and total tax paid is included on the WEF recommended list of metrics to disclose. The most directly comparable financial measure that is specified, defined and determined in accordance with GAAP and disclosed in the Pembina's financial statements is taxes paid.

(\$ millions)	2019	2020	2021
Taxes paid	141	295	355
Property taxes paid	100	95	101
<b>Total Tax Paid</b>	<b>241</b>	<b>390</b>	<b>456</b>

### Payments to Providers of Capital

Payments to providers of capital is a non-GAAP financial measure that is defined as dividends paid plus the repurchase of common shares and interest paid. Management believes that disclosing to standardized WEF metrics is a useful tool for stakeholders, and payments to providers of capital is included on the WEF recommended list of metrics to disclose. The most directly comparable financial measure that is specified, defined and determined in accordance with GAAP and disclosed in the Pembina's financial statements is dividends paid.

(\$ millions)	2019	2020	2021
Dividends paid	1,323	1,530	1,521
Repurchase of common shares	N/C	N/C	17
Interest Paid	311	429	443
<b>Payments to Providers of Capital</b>	<b>1,634</b>	<b>1,959</b>	<b>1,981</b>



### ***Total Capital Expenditures Minus Depreciation***

Total capital expenditures minus depreciation is a non-GAAP financial measure that is defined as capital expenditures less depreciation. Management believes that disclosing to standardized WEF metrics is a useful tool for stakeholders, and total capital expenditures minus depreciation is included on the WEF recommended list of metrics to disclose. The most directly comparable financial measure that is specified, defined and determined in accordance with GAAP and disclosed in the Pembina's financial statements is capital expenditures

(\$ millions)	2019	2020	2021
Capital Expenditures	1645	1029	658
Depreciation	(392)	(483)	(511)
<b>Total Capital Expenditures Minus Depreciation</b>	<b>1253</b>	<b>546</b>	<b>147</b>

### ***Share Buybacks and Dividend Payments***

Share buybacks and dividend payments is a non-GAAP financial measure that is defined as dividends paid plus the repurchase of common shares. Management believes that disclosing to standardized WEF metrics is a useful tool for stakeholders, and share buybacks and dividend payments is included on the WEF recommended list of metrics to disclose. The most directly comparable financial measure that is specified, defined and determined in accordance with GAAP and disclosed in the Pembina's financial statements is dividends paid.

(\$ millions)	2019	2020	2021
Dividends paid	1,323	1,530	1,521
Repurchase of common shares	-	-	17
<b>Share Buybacks and Dividend Payments</b>	<b>1,323</b>	<b>1,530</b>	<b>1,538</b>



Please contact [sustainability@pembina.com](mailto:sustainability@pembina.com) if you have any feedback or questions related to this report, or ESG and sustainability at Pembina.