



## INDEPENDENT PRACTITIONER’S LIMITED ASSURANCE REPORT

To the management of Pembina Pipeline Corporation (‘Pembina’)

We have undertaken a limited assurance engagement, in respect of the year ended December 31, 2023, on certain quantitative performance information disclosed in the accompanying Selected Environmental Indicators Report (the ‘Report’) and as described below.

### Subject matter information and applicable criteria

The scope of our limited assurance engagement, as agreed with management, comprises the following performance information (collectively, the ‘subject matter information’) and criteria:

Key Performance Indicator	Applicable Criteria
<ul style="list-style-type: none"> <li>▪ Scope 1 Greenhouse Gas (GHG) Emissions</li> <li>▪ Scope 2 GHG Emissions</li> </ul>	The World Resources Institute/ World Business Council for Sustainable Development GHG Protocol a Corporate Accounting and Reporting Standard (‘GHG Protocol’) & GHG Protocol Scope 2 Guidance ( <i>Supplement to the GHG Protocol</i> )
<ul style="list-style-type: none"> <li>▪ Total Scope 1 &amp; 2 GHG Emissions Intensity</li> </ul>	GHG Protocol & Internally developed criteria
<ul style="list-style-type: none"> <li>▪ Physical Throughput</li> </ul>	Internally developed criteria

\* *Barrel of oil equivalent.*

Other than as described in the table above, which sets out the scope of our engagement, we did not perform assurance procedures on the remaining information included in the Report, and accordingly, we do not express a conclusion on this information.

There are no mandatory requirements for the preparation or publication of GHG performance metrics. As such, Pembina applies the GHG Protocol and its own internally developed criteria, which is presented in Appendix 1 and 2 of the Report (the ‘applicable criteria’).

### Management’s Responsibility

Management is responsible for the preparation and presentation of the subject matter information in accordance with the applicable criteria.

Management is also responsible for such internal control as management determines necessary to enable the preparation and presentation of the subject matter information that is free from material misstatement, whether due to fraud or error. This responsibility includes determining Pembina’s objectives in respect of sustainability performance and reporting, including the identification of stakeholders and material issues, and selecting or developing appropriate criteria.

### Practitioner’s Responsibilities

Our responsibility is to express a limited assurance conclusion on the subject matter information based on evidence we have obtained. We conducted our limited assurance engagement in accordance with Canadian Standards on Assurance Engagements (CSAE) 3000 *Attestation Engagements Other than Audits or Reviews of Historical Financial Information* and CSAE 3410 *Assurance Engagements on*



*Greenhouse Gas Statements.* These standards require that we plan and perform our procedures to obtain a meaningful level of assurance about whether the subject matter information is properly prepared and presented, in all material respects, as the basis for our limited assurance conclusion.

A limited assurance engagement involves assessing the suitability of the criteria used by the Entity in preparing the subject matter information in the circumstances of the engagement, assessing the risks of material misstatement, whether due to fraud or error, and responding to the assessed risks as necessary in the circumstances.

We exercised professional judgment and maintained professional skepticism throughout the engagement. Our procedures were designed and performed to obtain evidence that is sufficient and appropriate to provide a basis for our conclusion.

The procedures performed in a limited assurance engagement vary in nature and timing from and are less in extent than for a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed. Accordingly, it is not a guarantee that a limited assurance engagement conducted in accordance with this standard will always detect a matter that causes the practitioner to believe that the subject matter information is materially misstated.

Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the decisions of users of our report.

The nature, timing and extent of procedures performed depends on our professional judgment, including an assessment of the risks of material misstatement, whether due to fraud or error, and involves obtaining evidence about the subject matter information.

The engagement was conducted by a multidisciplinary team which included professionals with suitable skills and experience in both assurance and in the applicable subject matter, including environmental, social and governance aspects.

### **Assurance approach**

Our engagement included, amongst others, the following procedures:

- Inquiries with relevant staff at the corporate, business unit and facility level to understand the data collection and reporting processes for the subject matter information;
- Assessment of the suitability and application of the criteria in respect of the subject matter information;
- Where relevant, performing walkthroughs of data collection and reporting processes for the subject matter information;
- Comparing the reported data for the subject matter information to underlying data sources on a sample basis;
- Inquiries of management regarding key assumptions and, where relevant, the re-performance of key calculations;
- Completion virtual site visits, including walkthroughs of data collection and reporting processes and interviews with senior management and relevant staff; and,
- Reviewing the presentation of the subject matter information in the Report to determine whether the information presented is consistent with our overall knowledge of, and experience with the sustainability and GHG emissions performance of Pembina.



## **Our Independence and Quality Management**

We have complied with the relevant rules of professional conduct/code of ethics applicable to the practice of public accounting and related to assurance engagements, issued by various professional accounting bodies, which are founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

The firm applies Canadian Standard on Quality Management 1, *Quality Management for Firms that Perform Audits or Reviews of Financial Statements, or Other Assurance or Related Services Engagements* which requires the firm to design, implement and operate a system of quality management, including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

## **Significant Inherent Limitations**

Historical non-financial information, such as that contained in the Report, is subject to more inherent limitations than historical financial information, given the qualitative characteristics of the underlying subject matter and methods used for determining this information. The absence of a significant body of established practice on which to draw allows for the selection of different but acceptable evaluation techniques, which can result in materially different measurements and can impact comparability. The nature and methods used to determine such information, as described in the applicable criteria, may change over time, and it is important to read Pembina's GHG reporting methodology available in Appendix 1 and 2 of the Report.

## **Conclusion**

Our conclusion has been formed on the basis of, and is subject to, the matters outlined in this report. We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion. Based on the procedures performed and evidence obtained, no matters have come to our attention to cause us to believe that Pembina's subject matter information for the year ended December 31, 2023, have not been prepared and presented, in all material respects, in accordance with the applicable criteria.

Our conclusion on the subject matter information does not extend to any other information, reports or documents that accompany, are presented with, or contain the subject matter information and our assurance report.

## **Restriction on Use**

Our report is intended solely for use by Pembina for the purpose(s) set out in our engagement agreement. Our report may not be suitable for any other purpose and is not intended for use or reliance by any third parties. While KPMG LLP acknowledges that disclosure of our report may be made, in full, by the Pembina in the Report, KPMG LLP does not assume or accept any responsibility or liability to any third party in connection with the disclosure of our report.

A handwritten signature in black ink that reads 'KPMG LLP'. The signature is written in a cursive, slightly slanted style. Below the signature is a horizontal line that starts under the 'K' and ends under the 'P', with a small upward tick at the end.

**Chartered Professional Accountants**

Calgary, Canada  
March 28, 2024

## Selected Environmental Indicators Report

Years ended December 31, 2023

As part of Pembina Pipeline Corporation’s (“Pembina”) continued commitment to refine its reporting methodology, Pembina engaged KPMG LLP (“KPMG”) to undertake a limited assurance engagement on Pembina’s reported 2023 greenhouse gas (“GHG”) emissions and emissions intensity, the latter using physical throughput as the denominator. The following GHG data are included in the assurance scope. Pembina intends to use this GHG data in future Environmental, Social, and Governance (“ESG”) reporting.

Pembina has calculated its GHG emissions in accordance with the requirements of the World Resource Institute/World Business Council for Sustainable Development Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard Revised Edition (the “GHG Protocol”) and in accordance with internally developed criteria included in Appendix 1, which form an integral part of this report.

Subject Matter	Key Performance Indicator	Units (metric tonnes CO <sub>2</sub> e)
		2023
Climate Change	Scope 1 GHG Emissions*	2,842,868
	Scope 2 GHG Emissions (Location-based)*	1,202,075
	Scope 2 GHG Emissions (Market-based)*	1,126,088

\*Emissions data are collected for CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, and HFCs in metric tonnes and converted to tonnes of CO<sub>2</sub> equivalent based on global warming potentials issued by the United Nations Intergovernmental Panel on Climate Change (IPCC) in their Fifth Assessment Report (AR5).

Pembina measures and records physical throughput volumes for each of its assets in accordance with internally developed criteria included in Appendix 2, which form an integral part of this report.

Subject Matter	Key Performance Indicator	Units (BOE)
		2023
Climate Change	Physical Throughput	1,074,136,401

The assured GHG emissions and physical throughput shown in the above tables are used to calculate Pembina’s GHG emissions intensity for 2023.

Subject Matter	Key Performance Indicator	Units (metric tonnes CO <sub>2</sub> e/BOE)
		2023
Climate Change	Total Scope 1 and 2 GHG Emissions Intensity**	0.00370

\*\*GHG emissions intensity is calculated using Scope 2 GHG Emissions (Market-based).



## Appendix 1

### Greenhouse gas (GHG) reporting evaluation criteria

- Pembina has selected the Operational Control approach to define its 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.
- Pembina reports Scope 1 (direct emissions from operations such as stationary fuel combustion, mobile combustion, fugitive, flaring, vented emissions and formation CO<sub>2</sub>) and Scope 2 (indirect emissions from purchased and imported electricity and heat consumption).
- 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. The regulated facilities were verified by third party verifiers and confirmed applicable regulated default emission factors were used.
- Energy consumption used to quantify the Scope 1 emissions includes all types of fuels consumed by Pembina operations, including natural gas, diesel, gasoline, propane and jet fuel etc. Fuel consumption is based on a combination of invoiced amounts provided by third party suppliers, meter readings and system generated reports.
- Location-based Scope 2 emissions are calculated using emission factors from Environment and Climate Change Canada's most recent 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 Protected Areas' Technology Innovation and Emissions Reduction ("TIER") benchmark emission intensity factor.
- Market-based Scope 2 emissions are calculated using supplier-specific emission factors instead of grid emission factors. A location-based approach as stated in the previous bullet is still applied to assets where contractual instruments do not exist, or where supplier-specific emission factors are not available.
- Purchased electricity is included within Scope 2 emissions. Electricity, imported heat, and imported hydrogen consumption are based on invoiced amounts provided by third party suppliers, with the exception of certain assets, which were estimated.
- 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.
- Small emissions associated with lease automatic custody transfer equipment ("LACTs"), risers, valves sites, meter stations and communications towers have been accounted for by adding an



additional 0.5% to the total corporate Scope 1 emissions. Based on previous engineering studies, this amount is conservative.



## Appendix 2

### Physical throughput reporting evaluation criteria

- Consistent with the approach applied to GHG emissions reporting in Appendix 1, Pembina has selected the Operational Control approach to define its organizational boundaries.
- Physical throughput volumes are based on measurement at the facility inlet or pipeline receipt point and are reported in throughput barrels of oil equivalent, “BOE”.
- Natural gas products are measured in dekatherms (“DTh”) and are converted to cubic feet using measured, actual gas heating values.
- Pembina follows the Alberta Energy Regulator (“AER”) conversion factor to convert from one thousand cubic meters (“e<sup>3</sup>m<sup>3</sup>”) to one thousand cubic feet (“MCF”).
- All products originally measured in, or already converted to MCF are converted to BOE using a 6:1 ratio.
- Pembina’s physical throughput volumes are the aggregated total physical volumes moving through Pembina’s assets in a specified reporting period, excluding volumes from assets that are dependent upon other Pembina assets.
- Physical throughput volumes exclude volumes from assets that are dependent on other Pembina assets. Asset dependence indicates the asset would likely not operate independently without another one or more of Pembina’s assets. In these cases, the volumes of the dependent asset are not counted. As a result, several receipt points, bypass volumes, and all marketing sales volumes are excluded given their dependency on Pembina assets.
- Storage volumes and terminal (truck and rail) volumes are also excluded given their interdependency on Pembina assets, as well as low correlation to emissions even in periods of high turnover and transport.
- Since Pembina has limited insight into certain joint ventures, proxies are used when necessary and appropriate. The only proxy currently used is Alliance system volumes to represent Aux Sable volumes (which is a Pembina operated asset, while Alliance is not). Since Aux Sable receives, extracts, and markets the volumes as reported under the Alliance pipeline, this is a reasonable proxy. For emissions purposes, Aux Sable volumes are included in Pembina’s total physical throughput using Alliance volumes at their delivery point as a proxy (1:1).
- Pembina reports revenue throughput volumes in its MD&A. These volumes differ from physical throughput volumes primarily due to take-or-pay (“TOP”) shortfall volumes being included in revenue throughput volumes. TOP shortfall volumes earn revenue due to contractual obligations,



but there is no physical molecule flow related to this revenue. Therefore, there is no molecule to include in the physical throughput volumes.