



# Annual Information Form

**For the Year Ended December 31, 2022**

**Dated March 10, 2023**

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# SPECIAL NOTES TO READER

## FORWARD LOOKING INFORMATION

Certain of the statements contained herein including, without limitation, management plans and assessments of future plans and operations, Pieridae Energy Limited's ("Pieridae" or the "Company") 2023 outlook and budget, Pieridae's future business plan and strategy, Pieridae's criteria for evaluating acquisitions and other opportunities, Pieridae's intentions with respect to future acquisitions and other opportunities, plans and timing for development of undeveloped and probable resources, timing of when the Corporation may be taxable, estimated abandonment and reclamation costs, plans regarding hedging, wells to be drilled, the weighting of commodity expenses, expected production and performance of oil and natural gas properties, results and timing of projects, access to adequate pipeline capacity and third-party infrastructure, growth expectations, supply and demand for oil, natural gas liquids, and natural gas, industry conditions, government regulations and regimes, capital expenditures and the nature of capital expenditures and the timing and method of financing thereof, may constitute "forward-looking statements" or "forward-looking information" within the meaning of applicable securities laws (collectively "forward-looking statements"). Words such as "may", "will", "should", "could", "anticipate", "believe", "expect", "intend", "plan", "potential", "continue", "shall", "estimate", "expect", "propose", "might", "project", "predict", "forecast", "goal", "target", and similar expressions may be used to identify these forward-looking statements. These statements reflect management's current beliefs and are based on information currently available to management.

Forward-looking statements involve significant risk and uncertainties. A number of factors could cause actual results to differ materially from the results discussed in the forward-looking statements including, but not limited to, the risks associated with oil and gas exploration, development, exploitation, production, processing, marketing and transportation, loss of markets, volatility of commodity prices, currency fluctuations, imprecision of resources estimates, environmental risks, competition from other producers, incorrect assessment of the value of acquisitions, failure to realize the anticipated benefits of acquisitions, delays resulting from or inability to obtain required regulatory approvals, ability to access sufficient capital from internal and external sources and the risk factors outlined under "Risk Factors" and elsewhere herein. The recovery and resources estimate of Pieridae's reserves provided herein are estimates only and there is no guarantee that the estimated resources will be recovered. As a consequence, actual results may differ materially from those anticipated in the forward-looking statements.

Forward-looking statements are based on a number of factors and assumptions which have been used to develop such forward-looking statements, but which may prove to be incorrect. Although Pieridae believes that the expectations reflected in such forward-looking statements are reasonable, undue reliance should not be placed on forward-looking statements because Pieridae can give no assurance that such expectations will prove to be correct. In addition to other factors and assumptions which may be identified in this document, assumptions have been made regarding, among other things: the impact of increasing competition; the general stability of the economic and political environment in which Pieridae operates; the timely receipt of any required regulatory approvals; the ability of Pieridae to obtain and retain qualified staff, equipment and services in a timely and cost efficient manner; the ability of the operator of the projects which Pieridae has an interest in to operate the field in a safe, efficient and effective manner; the ability of Pieridae to obtain financing on acceptable terms; the ability to replace and expand oil and natural gas resources through acquisition, development and exploration; the timing and costs of pipeline, storage and facility construction and expansion and the ability of Pieridae to secure adequate product transportation; future oil and natural gas prices; currency, exchange and interest rates; the regulatory framework regarding royalties, taxes and environmental matters in the jurisdictions in which Pieridae operates; timing and amount of capital expenditures; future sources of funding; the ability of Pieridae to execute a EPCC contract with a creditworthy counterparty; production levels; weather conditions; success of exploration and development activities; access to gathering, processing and pipeline systems; advancing technologies; and the ability of Pieridae to successfully market its oil and natural gas products.

Readers are cautioned that the foregoing list of factors is not exhaustive. Additional information on these and other factors that could affect Pieridae's operations and financial results are included in reports on file with Canadian securities regulatory authorities and may be accessed through the SEDAR website ([www.sedar.com](http://www.sedar.com)), and at Pieridae's website ([www.pieridaenergy.com](http://www.pieridaenergy.com)).

Although the forward-looking statements contained herein are based upon what management believes to be reasonable assumptions, management cannot assure that actual results will be consistent with these forward-looking statements. Investors should not place undue reliance on forward-looking statements. These forward-looking statements are made as of the date hereof and Pieridae assumes no obligation to update or review them to reflect new events or circumstances except as required by applicable securities laws.

Forward-looking statements contained herein concerning the oil and gas industry and Pieridae's general expectations concerning this industry are based on estimates prepared by management using data from publicly available industry sources as well as from reserve reports, market research and industry analysis and on assumptions based on data and knowledge of this industry which Pieridae believes to be reasonable. However, this data is inherently imprecise, although generally indicative of relative market positions, market shares and performance characteristics. While Pieridae is not aware of any misstatements regarding any industry data presented herein, the industry involves risks and uncertainties and is subject to change based on various factors.

## PRESENTATION OF INFORMATION

The information contained in this Annual Information Form (“AIF”) is presented as at December 31, 2022, except where otherwise noted.

In this AIF, unless otherwise noted, all dollar amounts are expressed in Canadian dollars.

This AIF and certain documents incorporated by reference herein make reference to certain financial measures that are not recognized by International Financial Reporting Standards (“IFRS”), sometimes referred to as Generally Accepted Accounting Principles (“GAAP”). These financial measures do not have standardized meanings prescribed by IFRS and therefore are referred to a non-GAAP measure. These non-GAAP measures may not be comparable to similar measures presented by other issuers. An example of a non-GAAP financial measure in this AIF is Netbacks. Netbacks are per boe and per mcf performance measures used in the analysis of operational activities. Pieridae assess netbacks to assess the operational and financial performance of the Corporation versus third party crude oil and natural gas producers. Investors are cautioned that these non-GAAP financial measures should not be construed as alternatives to other measures of financial performance calculated in accordance with GAAP. For information regarding the non-GAAP financial measures used by the Corporation, including a reconciliation to the most comparable GAAP measure for each such non-GAAP measure, see “Non-GAAP Measures” in Pieridae’s Management Discussion and Analysis (“MD&A”) for the years ended December 31, 2022, and 2021. The MD&A is available on SEDAR at [www.sedar.com](http://www.sedar.com)

## ABBREVIATIONS AND CONVERSIONS TABLE

The following are abbreviations of terms used in this AIF and a conversion table from Imperial to Metric units. Additional terms relating to reserves and other oil and gas information have the meanings set forth in Appendix C: Definitions used for Reserve Categories. .

<i>Legal</i>	
ABCA	<i>Business Corporations Act (Alberta)</i>
APA	<i>Partnership Act (Alberta)</i>
BCCA	<i>Company Act (British Columbia)</i>
CBCA	<i>Canada Business Corporations Act</i>
NBCCA	<i>Business Corporations Act (New Brunswick)</i>
NI 51-101	<i>National Instrument 51-101 - Standards of Disclosure for Oil and Gas Activities</i>
QBCA	<i>Business Corporations Act (Quebec)</i>

<i>Industry</i>			
Bbl	Barrel	Mcf/d	Thousand cubic feet per day
Bbls	Barrels	MMbtu	Million British Thermal Units
Bbls/d	Barrels per day	MMcf	Million cubic feet
Boe	Barrel of oil equivalent <sup>(1)</sup>	GJ	Gigajoules
Boe/d	Barrel of oil equivalent per day	CAD\$	Canadian dollars
NGLs	Natural gas liquids	USD\$	United States of America dollars
Mcf	Thousand cubic feet		
AECO	Natural gas reference price, being the natural gas storage facility located at Suffield, Alberta		
WTI	West Texas Intermediate, the USD\$ reference price at Cushing, Oklahoma for the crude oil standard grade		

**Table 1: Conversion Factors**

To Convert From	To	Multiply By
Mcf	Cubic metres	28.317
Cubic metres	Cubic feet	35.315
Bbls	Cubic metres	0.159
Cubic metres	Bbls	6.289
Feet	Metres	0.305
Meters	Feet	3.281
Miles	Kilometres	1.609
Kilometres	Miles	0.621
Acres	Hectares	0.405
Hectares	Acres	2.471
Gigajoules	MMbtu	0.950
MMbtu	gigajoules	1.053

# PIERIDAE ENERGY LIMITED

## NAME, ADDRESS AND INCORPORATION

Pieridae was formed on October 24, 2017, by the amalgamation of Pétrolia Inc. and Pieridae Energy Limited (“**Former Pieridae**”) pursuant to a plan of arrangement effected under the CBCA (the “**PEL Arrangement**”). The Corporation acquired all of the issued and outstanding shares of Ikkuma Resources Corp. (“**Ikkuma**”) on December 20, 2018, pursuant to a plan of arrangement effected under section 193 of the ABCA (the “**IKK Arrangement**”). In consideration for the shares of Ikkuma, the Corporation issued 21.6 million of its common shares, valued at approximately \$56.1 million, to the then shareholders of Ikkuma. On October 17, 2019, Ikkuma changed its name to Pieridae Alberta Production Ltd.

The Company is a reporting issuer, or the equivalent, in British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Québec, New Brunswick, Nova Scotia, Prince Edward Island and Newfoundland and Labrador. The common shares of the Corporation trade on the TSX under the symbol “PEA”. The Corporation is extra-provincially registered in Alberta and Québec.

Pieridae Energy Limited (corporation number 10341223) (the “**Company**” or “**Pieridae**”) maintains its head office at 308 – 4th Avenue S.W., Suite 3100, Calgary, Alberta, Canada T2P0H7

## DESCRIPTION OF OUR BUSINESS

### Mission & Strategy

Pieridae is a Canadian energy producing company headquartered in Calgary, Alberta. Through a number of corporate and asset acquisitions, we have grown from inception to managing a significant upstream and midstream portfolio concentrated in the Canadian Foothills, producing conventional natural gas, natural gas liquids (“**NGLs**”), condensate and sulphur.

From 2011 to 2021 Pieridae has been focused on becoming the first Canadian owned liquefied natural gas (“**LNG**”) producer to integrate (a) upstream natural gas resource development and production from its western Canadian asset base and (b) midstream activities consisting primarily of raw natural gas processing and transportation of the treated natural gas by pipeline to the site of the proposed Goldboro LNG Facility where further processing and liquification would produce LNG for sale to customers for export. In July 2021, the Company publicly announced that after many years of effort and progress toward realizing its strategy of becoming an integrated LNG entity, we were not able to meet the key conditions necessary to make a positive final investment decision (“**FID**”) on the Project in the scope and configuration previously contemplated. As a result, the Project was suspended.

In late July 2021, as a result of the suspension of the Goldboro LNG Project and approaching debt payment obligations, the Company initiated a formal strategic review process, which concluded without a material transaction on January 24, 2022, following a determination by management and the Board of Directors (“**Board**”) that the various alternatives presented were not sufficiently compelling relative to the Company’s standalone prospects.

Following conclusion of the Strategic Review, Management and the Board have reexamined Pieridae’s strategy. During the past year Pieridae has transformed its strategic focus toward growing and sustaining its upstream and midstream exploration and production (“**E&P**”) business. Management is enthusiastic about the current and future growth prospects of Pieridae’s existing asset base in the Canadian Foothills and believes successful execution of its long-term strategic goals will deliver significant value to Pieridae’s stakeholders. To do so, we will focus on the following core pillars of our evolving corporate strategy:

- Prove our Foothills resource upside by successfully investing in our identified drilling opportunities.
- Develop and implement a midstream strategy to maximize the value of our significant midstream infrastructure.
- Improve capital structure and financial flexibility.
- Instill and drive a high-performance culture.
- Implement a carbon emissions management plan.
- Apply technology solutions to improve profitability.
- Seek new markets for our products.
- Develop and implement a “New Ventures” strategy.

Management continues to take a strategic approach to growth and capital allocation to fully utilize the advantages of the long-term nature of Pieridae’s low-decline reserve base and supporting infrastructure, and to focus on creating long lasting

shareholder value. Operational discipline, safe, effective, and efficient operations, community and Indigenous partnerships, cost control, and pursuing opportunities to further embed ESG considerations into our corporate strategy are fundamental to the Company's strategic vision.

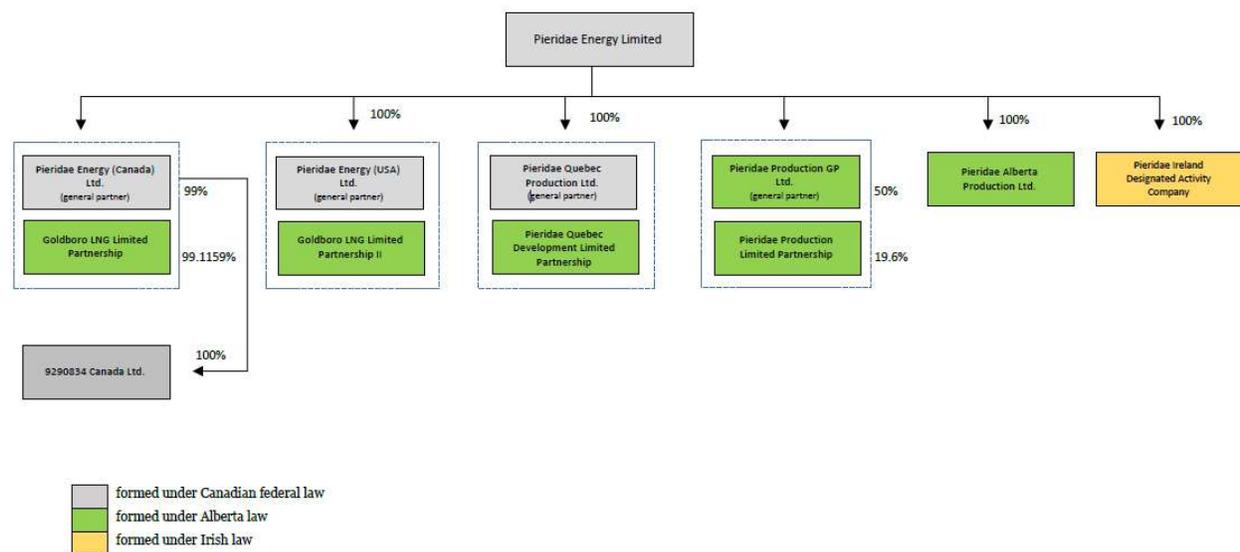
The Company's senior management is comprised of an experienced team of professionals in all key operational areas of the organization. Refer to "Directors and Executive Officers" in this AIF.

## INTERCORPORATE RELATIONSHIPS

The Table 2 below describes the intercorporate relationships among Pieridae and its subsidiaries.

The percentages indicated in Table 2 represent the percentage of votes that attach to all voting securities of the subsidiary that are beneficially owned, or controlled or directed, directly or indirectly by the Company.

**Table 2: Corporate Structure**



### Pieridae Energy Limited

Pieridae, which is described above, is the ultimate majority shareholder or majority voting partner, as the case may be, of the following entities:

#### Pieridae Energy (Canada) Ltd.

Pieridae Energy (Canada) Ltd. ("Pieridae Canada") is the sole general partner of Goldboro LNG Limited Partnership. Pieridae Canada was incorporated on February 14, 2012, under the CBCA and is extra-provincially registered under the ABCA and under the *Corporations Registration Act* (Nova Scotia).

#### Goldboro LNG Limited Partnership

Goldboro LNG Limited Partnership ("Goldboro Canada LP") was formed on December 11, 2012, under the APA for the purposes of developing, constructing, and operating the proposed Goldboro LNG Facility (excluding Train Two) and of procuring long-term conventional natural gas supply from its affiliates in Canada and transporting the natural gas to the proposed Goldboro LNG Facility for use as feed gas and fuel in the production of LNG from Train One.

#### 9290834 Canada Ltd.

9290834 Canada Ltd. ("9290834") was incorporated on May 11, 2015, under the CBCA and is extra-provincially registered under the ABCA and under the *Corporations Registration Act* (Nova Scotia). 9290834, in its capacity as agent and bare trustee of Pieridae Canada and Goldboro Canada LP, holds legal title to the lands on which the proposed Goldboro LNG Facility is being developed and is proposed to be constructed and operated.

### **Pieridae Energy (USA) Ltd.**

Pieridae Energy (USA) Ltd. (“**Pieridae USA**”) is the sole general partner of Goldboro LNG Limited Partnership II. Pieridae USA was incorporated on August 16, 2013, under the CBCA and is extra-provincially registered under the ABCA and under the *Corporations Registration Act* (Nova Scotia).

### **Goldboro LNG Limited Partnership II**

Goldboro LNG Limited Partnership II (“**Goldboro USA LP**”) was formed on September 24, 2013, under the APA for the purposes of developing, constructing and operating Train Two of the proposed Goldboro LNG Facility, procuring long-term natural gas supply from its affiliates in Canada and producers in the U.S.A. and transporting the natural gas to the proposed Goldboro LNG Facility for use as feed gas and fuel in the production of LNG from Train Two. No such supply agreement has yet been entered into by Goldboro USA LP with any such producers.

### **Pieridae Québec Production Ltd.**

Pieridae Québec Production Ltd. (“**Québec Production**”) is the sole general partner of Pieridae Québec Development Limited Partnership. Québec Production was incorporated on December 27, 2017, under the CBCA and is extra-provincially registered under the ABCA and under the QBCA.

### **Pieridae Québec Development Limited Partnership**

Pieridae Québec Development Limited Partnership (“**Québec Development LP**”) was formed on April 13, 2018, under the APA for the purposes of acquiring and developing natural gas resource properties in Québec. Québec Development LP is the owner of the resource properties situated in Québec formerly held by Pétrolia Inc.

### **Pieridae Production GP Ltd.**

Pieridae Production GP Ltd. (“**Production GP**”) is the sole general partner of Pieridae Production Limited Partnership. Production GP was incorporated on February 5, 2013, under the ABCA and is extra-provincially registered under the NBBCA.

### **Pieridae Production Limited Partnership**

Pieridae Production Limited Partnership (“**Production LP**”) was formed on February 27, 2013, under the APA for the purposes of acquiring and developing natural gas resource properties in New Brunswick.

### **Pieridae Alberta Production Ltd.**

Pieridae Alberta Production Ltd. (“**Alberta Production**”) was incorporated on October 18, 1979, as “Rambler Explorations Ltd.” under the BCCA. It changed its name to “Ramcor Resources Inc.” on January 11, 1985, to “Rampton Oil Corporation” on June 1, 1993, to “Rampton Resource Corporation” on July 17, 1996, to “PanTerra Exploration Corp.” on August 15, 2002, and to “PanTerra Resource Corp.” on September 1, 2004. On October 27, 2005, the corporation continued out of British Columbia and into Alberta as “PanTerra Resource Corp.”. The corporation changed its name to “Ikkuma Resources Corp.” (“**Ikkuma**”) on September 19, 2014, and to “Pieridae Alberta Production Ltd.” on October 17, 2019. Alberta Production is extra-provincially registered under the ABCA, the *Business Corporations Act* (British Columbia) and *The Business Corporations Act* (Saskatchewan).

### **Pieridae Ireland Designated Activity Corporation**

Pieridae Ireland Designated Activity Corporation was incorporated on January 4, 2021, under the laws of Ireland with company registration number 686057 for the purpose of acting as the sole authorized representative of Pieridae in accordance with Article 27 of the European Union (“**EU**”) General Data Protection Regulation.

## **THREE YEAR HISTORY OF THE BUSINESS**

The following is a summary description of the major events which influenced the general development of the Company and its predecessors, and which are material to the current business of the Company. Pieridae has developed during its history from a private corporation with no oil and gas producing assets to a publicly traded upstream and midstream entity with optionality related to its proposed Goldboro LNG development project.

## Developments in 2020

### Extension of Key Deadlines with Uniper

On May 5, 2020, Uniper and Pieridae negotiated an extension of key deadlines under its 20-year offtake agreement to June 30, 2021, by which date the Company is required to make a positive FID for the Company's proposed Goldboro LNG facility. Under the agreement, the expected date for the first commercial deliveries of gas to Uniper is between August 31, 2025, and February 28, 2026.

### AER Decision Regarding the Transfer of Licenses Associated with the Shell Foothills Assets

On May 15, 2020, the Alberta Energy Regulator ("AER") rejected Shell's application to transfer the licenses associated with the Shell Foothills Assets to Alberta Production and create new licenses for Shell for equipment being retained by Shell under the Shell Acquisition. The decision was based on the AER's interpretation that it did not have the authority to create the new licenses for Shell and there were practical and regulatory consequences to having Pieridae and Shell each having AER licenses for equipment and plant on the same site. This issue only applies to the Waterton and Jumping Pound gas plants.

Shell and Alberta Production moved swiftly to evaluate options on the transfer applications and sought clarity from the AER on an appropriate path forward.

On January 4, 2021, Shell resubmitted the applications to transfer the licenses for the Shell Foothills Assets to Alberta Production..

### Pieridae Graduates to the TSX

On June 1, 2020, Pieridae's common shares were approved for listing on the Toronto Stock Exchange ("TSX") and began trading on the TSX at the opening of the market on July 3, 2020, under the symbol "PEA". Concurrent with the TSX listing, the common shares of Pieridae were de-listed from the TSXV.

### KBR Alters its Position Regarding the Goldboro LNG Contract

On July 13, 2020, Pieridae received written notice from KBR regarding the firm's exit from fixed price energy projects in order to refocus on its government services business, resulting in them no longer being prepared to negotiate and conclude a lump-sum turnkey engineering, procurement, construction and commissioning ("EPCC") contract in relation to the proposed Goldboro LNG Facility.

### Pieridae Secures a \$6 Million Account-Security Guarantee Facility from Export Development Canada

On July 29, 2020, Pieridae announced it had received approval from Export Development Canada ("EDC") for a \$6 million guarantee facility as part of EDC's Account Performance Security Guarantee ("APSG") program. The program provides a 100% guarantee to the issuing bank of certain of Pieridae's existing and future letters of credit ("LCs"). The APSG allowed Pieridae to release certain cash collateral requirements provided as security for certain existing and potential future LCs.

### Appointment of SVP, LNG

Effective August 27, 2020, Pieridae engaged Andy Mukherjee as Senior Vice-President LNG. Mr. Mukherjee served in this role until the suspension of the Company's Goldboro LNG project and departed the Company in early 2022.

### Engagement of Bechtel

On September 29, 2020, Pieridae signed a services agreement with Bechtel related to Pieridae's Goldboro LNG Facility. Some of the key deliverables in the services agreement are:

- i. Initiating a detailed review of the scope and design of the Goldboro LNG Facility and developing a comprehensive EPCC execution plan by March 31, 2021.
- ii. Delivering a final lump sum, turnkey EPCC contract price proposal by May 31, 2021; and
- iii. Conducting a meaningful engagement with the Nova Scotia Mi'kmaq First Nations including their participation in the construction of a large-scale work camp at the Goldboro LNG Facility site.

On September 30, 2020, Pieridae signed a Letter of Award selecting Black Diamond Group and 13 Nova Scotia Mi'kmaq communities to exclusively negotiate the contract to build a \$720 million workforce lodge and amenities during the four-year construction phase of the Goldboro LNG Facility. The lodge will be home to approximately 5,000 workers who will build the multi-billion-dollar Goldboro LNG Facility. Black Diamond will be responsible for the lodge, and the Mi'kmaq will provide hospitality services such as catering, housekeeping and guest services.

## Developments in 2021

### Appointment of COO

On April 1, 2021, the Company hired Darcy Reding as Chief Operating Officer (“COO”). Darcy is a professional engineer with over thirty years of industry experience and proven track record operating complex sour gas assets; someone well positioned to take full advantage of the opportunities Pieridae’s assets offer. Professional engineer Darcy Reding brought 30+ years of experience to the role along with a proven track record.

### Pieridae Releases its Inaugural ESG Report

On June 22, 2021, we published Pieridae’s inaugural ESG Report. This report is the continuation of our sustainability journey to demonstrate Pieridae’s commitment to achieving an authentic ESG outcome through caring deeply about what we stand for as a company, and by responding to our stakeholders’ needs and concerns.

### Suspension of the Goldboro LNG Project

On July 2, 2021, the Company announced that after many years of effort and progress toward realizing its strategy of becoming an integrated LNG entity, it was not able to meet the key conditions necessary to make a positive final investment decision (“FID”) on the Project in the scope and configuration previously contemplated. As a result, the Project was suspended.

### Resignation of CFO

On July 5, 2021, the Company announced the resignation of Rob Dargewitz as CFO, effective July 30, 2021. On that date Adam Gray, VP and Controller, was appointed interim CFO.

### Initiation of Strategic Review Process

On July 26, 2021, the Company announced, as a result of the suspension of the Goldboro LNG Project and approaching debt payment obligations, the initiation a formal strategic review process under the supervision of a special committee of the Board, and in collaboration with a leading financial advisory firm. The purpose of the Strategic Review was to identify, examine and consider a range of strategic alternatives. Such strategic alternatives may have included, but were not limited to, a corporate sale, merger, a sale of a material portion of Pieridae’s assets or other transactions, or a combination thereof.

## Developments in 2022

### Updated Credit Agreement Reached with TEC and Conclusion of the Strategic Review

On January 4, 2022, Pieridae announced it had reached an agreement with its senior secured lender to extend payment of the \$50 million term loan deferred fee and to amend certain other terms and covenants of the Credit Agreement first signed in October of 2019, related to the purchase of Shell’s Foothills assets.

Under the updated terms of the Credit Agreement, the \$50 million deferred fee is now incorporated as part of the overall loan due on October 16, 2023. However, the deferred fee will not accrue interest while outstanding. Additionally, certain other modifications to the Credit Agreement were negotiated, including the continued waiver of the requirement to hedge 60 per cent of production on an 18-month rolling basis, through the end of February 2022. This waiver was extended through 2022 and through April 1, 2023 as of the date of this AIF.

On January 24, 2022, Pieridae announced that following a rigorous process, the Strategic Review was concluded without a material transaction. Several factors contributed to the conclusion of the process including the negotiated amendment with our senior secured lender, and the improving outlook for oil and natural gas market fundamentals. In light of these factors, Management and the special committee of the Board determined that the various alternatives presented were not sufficiently compelling relative to the Company’s standalone prospects.

### AER Shell License Transfer

On January 31, 2022, Shell and Pieridae filed a request with the AER to withdraw the license transfer application for the Foothills assets from Shell to Pieridae. The AER approved the request. After recent changes to AER regulations, both Shell and Pieridae decided to revise the application and resubmit at a future date under the new regulatory framework. Pieridae continues to own the Shell Foothills Assets and has responsibility for their continued safe operation. Shell remains the licensee of record.

On December 15, 2022, Shell and Pieridae entered into an Interim Operating Agreement which governs the operating relationship between the two entities related specifically to the operations of the former Shell assets during the interim period before the AER license transfer is complete. On the same date Shell and Pieridae also entered into a number of new and amended commercial agreements associated with the purchase and marketing of sulphur and NGLs.

### Appointment of Officers

On March 24, 2022, the Company announced the appointment of Darcy Reding as President and COO after serving as the Company's COO since joining Pieridae in April 2021. Additionally, interim CFO Adam Gray was appointed permanent CFO.

### 2023 Goals and Objectives

The following corporate goal categories have been approved by the Board of Directors:

Priority	Description	Measurement
Achieve annual operating and financial targets	Maximize our financial performance by increasing production, reducing the cost of operation while maintain a safe working environment and minimizing controllable incidents.	Daily production, budgeted operating expense, budgeted general and administrative expense. EBITDA target
Capital Allocation and Access to Capital	Develop and maintain a capital structure that reduces the cost of capital, ensures adequate financing to accomplish operating and capital goals and prepare for future growth opportunities.	Cost of capital reduced; corporate optimization/development programs achieve IRR thresholds; asset rationalization activities achieve minimum quantitative thresholds using corporately adopted decision making criteria, including quantitative metrics
HSE&R performance	Continue to maintain and improve our HSE culture by continuously identifying unsafe practices, reducing number of incidents and minimizing the impact of the company's operations on the environment.	Health measured against industry safety standard (TRIF); safety measured against Line of Defense compliance; environmental stewardship measured against zero tolerance for regulatory sanctions; reclamation and remediation spend obligations and objectives met.
Strategic Execution	Develop and progress strategies that achieve our long-term goals of reducing the cost of production, improve our competitive advantage in the marketplace, grow our market footprint and reduce overall corporate risk.	Implement a Central Alberta cost-reduction and production-flow rationalization strategy; develop a long-term sulphur advantage; develop a carbon management plan & engage commercially on a carbon management solution.
Social and Governance Advancement	Advance a socially responsible work environment that encourages a high-performance culture.	Communicate an updated strategy and mission/vision/values; conduct an employee engagement survey, implement action plan based on results; minimize voluntary attrition; improve diversity; foster Indigenous relationships and reconciliation.

## BUSINESS DESCRIPTION

Through a series of mergers and acquisitions, Pieridae has become a significant mid-sized capitalized oil and gas entity including midstream operatorship, and now owns three large, deep cut, sour gas plants and associated sulphur forming facilities, together with various pipelines which are connected to the TC Energy NOVA pipeline system in Alberta (the “NOVA system”).

Our business plan is to revitalize Pieridae’s extensive foothill natural gas-focused footprint by drilling shallow, deep, or offset reservoirs, reducing environmental impact by limiting further footprint expansion. The majority of Pieridae’s reservoirs are “conventional” and occur within the complexly deformed part of the basin. As such, drilling technologies and subsurface understanding of these areas requires unique technical skills which Pieridae possesses but is rare within much of the Western Canada Sedimentary Basin.

### Property Description

As at December 31, 2022, the Company’s land holdings are located in the provinces of Alberta, British Columbia (“BC”), Saskatchewan and New Brunswick. These lands cover a total area of approximately 1,074,393 acres on a gross basis and approximately 835,738 acres on a net basis. The following table describes the Company’s land holdings categorized by province, and by cash generating unit (“CGU”). The Company did not have proved reserves or production during the year ended December 31, 2022, in Saskatchewan, New Brunswick or Quebec.

**Table 3: Land Holdings**

Areas	Gross Acres	Net Acres	Working Interest (%)
BC NORTHEAST <sup>(1)</sup>	98,890	90,877	92%
NORTHERN ALBERTA	253,200	183,690	73%
CENTRAL ALBERTA	570,435	414,525	73%
SOUTHERN ALBERTA	115,458	110,234	95%
SASKATCHEWAN	485	485	100%
<b>Total Western Canada</b> <sup>(2)</sup>	<b>1,038,467</b>	<b>799,811</b>	<b>81%</b>
NEW BRUNSWICK <sup>(3)</sup>	35,927	35,927	100%
QUÉBEC <sup>(4)</sup>	0	0	0%
<b>Total Eastern Canada</b>	<b>35,927</b>	<b>35,927</b>	<b>100%</b>
<b>GRAND TOTAL</b>	<b>1,074,393</b>	<b>835,738</b>	<b>78%</b>

<sup>(1)</sup>Included in the Northern Alberta CGU.

<sup>(2)</sup>Pieridae Alberta Production Ltd.

<sup>(3)</sup>Pieridae Production Limited Partnership – Pieridae Energy Limited owns 19.656% of the partnership.

<sup>(4)</sup>Pieridae Québec Development Limited Partnership – Bill 21 enacted by the National Assembly of Quebec on August 23, 2022, which terminated all land permits in the province of Quebec. Refer to “Industry Conditions”.

### British Columbia

#### BC Northeast

The Sierra and Ekwana areas are located roughly between 45 km and 85 km east of Fort Nelson, BC which was acquired as part of an acquisition from Husky Energy in 2017. Pieridae’s working interest in the Sierra asset consists of approximately 26.2 mmcf/d of production from the Pine Point Formation and is currently shut-in due to infrastructure constraints. Ekwana is currently producing approximately 6.5 mmcf/d from the Jean Marie Formation which is transported southward in the NOVA system.

While this area contains significant Total Proved + Probable reserve, Pieridae considers it non-core as it is outside our primary Foothills operating area. In mid-2022 a disposition agreement was executed, however this transaction failed to close in March of 2023. Management will continue marketing this asset.

### Alberta

#### Northern Alberta

The Northern Alberta (which includes the Ojay field across the border in BC) starts 100 km southwest of Grande Prairie, Alberta and continues southeast to Hinton, Alberta. The area represents approximately 10% of the Company’s production for the year ended December 31, 2022, and consists of approximately 253,200 gross acres (approximately 183,690 net acres) representing an average 73% working interest. The area has multiple gas dehydrators, compressors, transportation pipelines and gas gathering systems connected to the NOVA system. All production of conventional gas and NGLs from the Northern Alberta CGU are processed at non-operated processing facilities.

### Central Alberta

The Central Alberta area straddles the areas north of the town of Rocky Mountain House and south along the Foothills to the Jumping Pound field west of Cochrane Alberta, including the Jumping Pound Gas Plant and the Caroline Gas Complex as further described below. As at December 31, 2022, the Company had an interest in approximately 570,435 gross acres (approximately 414,525 net acres) representing an average 73% working interest. Central Alberta represented 61% of the Company's production for the year ended December 31, 2022. Conventional natural gas and NGLs from the Central Alberta CGU are processed by Pieridae-owned and non-operated processing facilities.

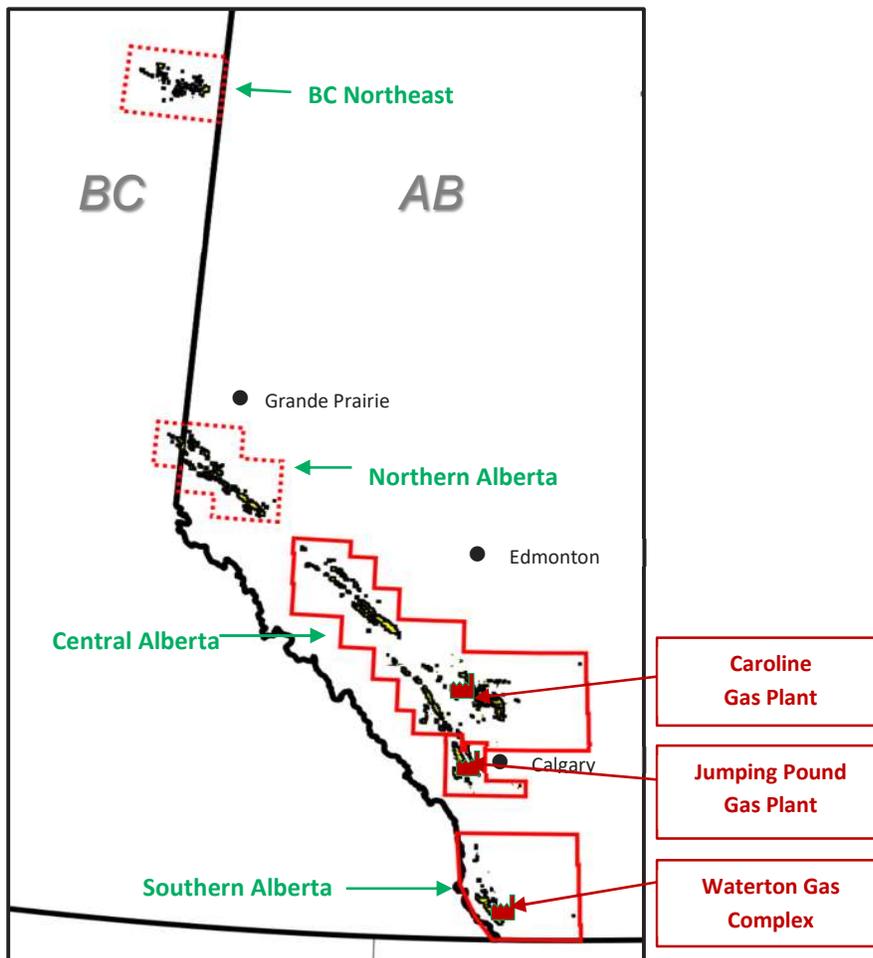
### Southern Alberta

The Southern Alberta area consists of the Waterton field and Waterton Gas Complex in southwest Alberta. As of December 31, 2022, the area consists of approximately 115,458 gross acres (approximately 110,234 (net acres) representing an average 95% working interest. Southern Alberta represented 27% of the Company's production for the year ended December 31, 2022. These production assets represent some of the most prolific natural gas fields in North American history with continued, long term remaining reserves.

### Facilities and Infrastructure

Pieridae owns three (3) large sour natural gas processing facilities: the Jumping Pound Gas Plant (100% working interest), the Waterton Complex (100% working interest) and the Caroline Gas Complex (74% working interest). Combined they represent over 750mmcf/d of potential processing capacity and have NGL fractionation capabilities. For the year ended December 31, 2022, these facilities operated at an average of 66% of current throughput capacity, representing significant opportunities for Pieridae for future development or acquisition of additional connected reserves.

The facilities are connected to the NOVA system and possess the capability to recover NGLs and Sulphur. They are also connected to CP Rail and can transport LPG's and sulphur to all points in North America. Additionally, Pieridae owns a significant amount of upstream transportation pipelines that interconnect with these facilities and provide sales points at multiple locations along NOVA system.



## New Brunswick

On March 4, 2013, Former Pieridae entered into an agreement with Contact Exploration Inc. (subsequently Kicking Horse Energy Inc., which was subsequently acquired by ORLEN Upstream Canada Ltd.) to establish Production LP to acquire and develop natural gas resources in New Brunswick. The Company originally held a 16.98% interest in Production LP, which increased as a result of additional investments in 2015 to 19.656%. Pieridae is entitled to contribute an additional \$14.1 million to Production LP prior to any further funding by the other partner, thereby increasing its ownership to 50%.

As of December 31, 2022, the Company held a 19.656% interest, as a limited partner, in Production LP and held a 50% interest, as a shareholder, in Production LP's general partner, Production GP. The Company's interest in Production LP and in Production GP are accounted for in the Company's consolidated financial statements using the equity method.

## Oil and Gas Wells

The following table sets forth the number and status of wells in which Pieridae has a working interest as at December 31, 2022.

**TABLE 4: Oil and Gas Wells**

LOCATION	PRODUCING				NON-PRODUCING				SERVICE WELLS	
	Oil		Natural Gas		Oil		Natural Gas		Gross	Net
	Gross <sup>(1)</sup>	Net <sup>(2)</sup>	Gross	Net	Gross	Net	Gross	Net		
ALBERTA	2	2	383	287	8	7	383	286	5	4
BRITISH COLUMBIA	-	-	65	61	-	-	68	62	3	3
SASKATCHEWAN	-	-	-	-	-	-	5	5	-	-
QUÉBEC	-	-	-	-	9	7	-	-	-	-
<b>TOTAL</b>	<b>2</b>	<b>2</b>	<b>448</b>	<b>348</b>	<b>17</b>	<b>14</b>	<b>456</b>	<b>353</b>	<b>8</b>	<b>7</b>

<sup>(1)</sup> "Gross" wells mean the number of wells in which Pieridae has a working interest or a royalty interest that may be convertible to a working interest.

<sup>(2)</sup> "Net" wells mean the aggregate number of wells obtained by multiplying each gross well by Pieridae's percentage working interest therein.

## OTHER BUSINESS INFORMATION

### Forward Contracts and Marketing

The Company has a commodity price hedging policy that requires management to undertake hedging portions of its expected cashflows over multiple time frames. The hedging targets are adjusted on an ongoing basis depending upon market conditions, budget forecasts, and cash flow expectations. Hedging activities typically extend no further than 24 months, but this may be adjusted by the Board if deemed necessary as a result of market conditions. Other constraints around the hedging program may be imposed as part of contractual commitments, such as covenants imposed by debt lenders. These types of contractual commitments are reviewed continuously with the counterparty to ensure that contractual commitments can be met while maintaining flexibility around commodity prices. Other than as disclosed in the consolidated financial statements, Pieridae is not bound by any agreement (including any transportation or marketing agreements), directly or through an aggregator, under which it is precluded from fully realizing, or may be protected from the full effect of, future market prices for natural gas, NGLs or sulphur. Pieridae manages obligations or commitments for future physical deliveries of natural gas and products to ensure they do not vary significantly from Pieridae's future forecasted production. Refer to Note 18 "Financial Instruments and Risk Management – Market Risk" in the consolidated financial statements for further discussion on the Company's commodity hedging activities.

### Competitive Conditions

The oil and natural gas industry is competitive. Pieridae has a strong competitive position in its core areas (see "Business Description – Property Description"). Companies operating in the petroleum industry must manage risks which are beyond the direct control of Company personnel. Among these risks are those associated with exploration, environmental damage, commodity prices, foreign exchange rates, international political or economic conditions and interest rates. The oil and natural gas industry is competitive and Pieridae competes with a substantial number of other entities, some of which have greater technical or financial resources. Pieridae attempts to enhance its competitive position by operating in areas where it believes its technical personnel can reduce some of the risks associated with exploration, production and marketing because they are familiar

with the areas of operation. Management believes that Pieridae will be able to explore for and develop new production and reserves with the objective of increasing its cash flow and reserve base. See “Risk Factors – Competition”.

### Seasonality

The level of activity in the Canadian oil and gas industry is influenced by seasonal weather patterns. Wet weather and spring thaw can make the ground unstable. Consequently, municipalities and provincial transportation departments enforce road bans that restrict the movement of rigs and other heavy equipment, thereby reducing activity levels during these windows. Further, certain of our oil and gas producing assets are in areas that are considered inaccessible for various environmental or wildlife considerations at various time of the year. There can be no assurance that these seasonal factors will not adversely affect the timing and scope of Pieridae’s exploration and development activities, which could in turn have an adverse impact on Pieridae’s business, operations, and prospects. Refer to the “Risks Factors – Risks Related to Pieridae’s Business and Industry” section of this AIF. Additionally, the realized price for natural gas and sulphur produced by the Company typically has a component of seasonality relating to the demand for commodities rising and falling due to changing supply and demand conditions during the year.

### Environmental, Social and Governance Policies

The Company endeavors to be responsible stewards of the environment, foster beneficial relationships with Indigenous Peoples of Canada and our stakeholders, and continue to grow our self-awareness and activities in promoting equity, diversity and inclusion within the Company, in support of Pieridae’s business vision and strategy. In 2022, the Company continued to advance its policy and governance framework under various ESG activities. We released our second annual ESG report in October 2022 which is available on our website at [www.pieridaenergy.com](http://www.pieridaenergy.com) along with the associated ESG performance tables.

The Company’s operations are highly regulated by various governmental agencies and regulatory frameworks with respect to, among others, environmental protection. Environmental consequences can be difficult to identify, whether in terms of level, timeline or impact. Compliance with such legislation may require significant expenditures or result in operational restrictions. Breach of such requirements may result in suspension or revocation of necessary licenses and authorizations, civil liability for pollution damage and the imposition of material fines and penalties, all of which might have a significant negative impact on earnings and overall competitiveness of the Company. For a description of the financial and operational effects of environmental protection requirements on the capital expenditures, earnings and competitive position of the Company see “Industry Conditions – Environmental Regulations” and “Risk Factors – Environmental”.

The Company has adopted policies relating to health, safety and environmental matters. The Company’s objective is to pursue its business strategy while ensuring that its operations meet applicable laws and safety standards and account for environmental and social impacts. Occupational and community health and safety are key concerns in the planning and performance of exploration work. Special attention is also paid to local community and business relationships, as well as environmental protection.

In Alberta, the Company’s Vice President, Drilling, Completions & HSE and Manager of HSE oversee all of the Health, Safety and Environmental policy development, implementation and enforcement for the Company and report regularly to the senior management team, the Reserves and HSE Committee of the Board of Directors and to the Board of Directors. The Pieridae HSE structure includes personnel health, safety, emergency response and environmental roles stationed at each of the main facilities supporting the large network of dedicated and competent employees.

### Employees, and Specialized Skill and Knowledge

The following table summarizes Pieridae’s full-time equivalent (“FTE”) employees as at December 31, 2022:

**Table 5: Pieridae Employees**

Business Segment	Employees
Upstream	210
Corporate	75
<b>Total</b>	<b>285</b>

Pieridae also engages contractors and service providers. Pieridae employs individuals with various professional skills in the course of pursuing its strategy including geology, geophysics, engineering, financial and business skills. Drawing on extensive experience in the oil and gas industry, with a particular focus on exploration and development of natural gas reserves in the Alberta and BC Foothills play, Pieridae’s management team has a demonstrated track record of bringing together all of the key components required to realize Pieridae’s evolving strategy.

Refer to the section entitled “Risk Factors” in this AIF for further information on employee and other workforce related risks affecting Pieridae.

## PRESENTATION OF OIL AND GAS RESERVES AND PRODUCTION INFORMATION

### Oil and Gas Advisories

**Barrel of Oil Equivalency:** Pieridae has adopted the standard of 6 Mcf:1 bbl when converting natural gas to barrel of oil equivalent. Condensate and other NGLs are converted to oil equivalent at a ratio of 1 bbl:1 bbl. Barrels of Oil Equivalent (“**BOEs**”) may be misleading, particularly if used in isolation. A boe conversion ratio of 6 Mcf:1 bbl is based roughly on an energy equivalency conversion method primarily applicable at the burner tip and does not represent a value equivalency at the Company’s sales point. Given the value ratio based on the current price of oil as compared to natural gas and NGLs are significantly different from the energy equivalency of 6 Mcf:1 bbl and 1 bbl:1 bbl, respectively, utilizing a conversion ratio at 6 Mcf:1 bbl for natural gas and 1 bbl:1 bbl for NGLs may be misleading as an indication of value.

**Use of Estimates:** The discounted and undiscounted net present value of future net revenues attributable to Pieridae’s reserves do not represent the fair market value of Pieridae’s reserves. There is no assurance that the forecast prices and costs assumptions applied by Pieridae’s independent reserves evaluator in evaluating the reserves of the Company will be attained, and variances could be material. The estimates of Pieridae’s oil, conventional natural gas and NGLs provided in this AIF or otherwise referred to in this AIF are estimates only and there is no guarantee that the estimated reserves will be recovered. Actual oil, conventional natural gas and NGLs may be greater than or less than the estimates provided in this AIF or otherwise referred to in this AIF, and the difference may be material.

The determination of oil, conventional natural gas and NGLs involves the preparation of estimates that have an inherent degree of associated risk and uncertainty. The estimation and classification of reserves is a complex process involving the application of professional judgment combined with geological and engineering knowledge to assess whether specific classification criteria have been satisfied. Knowledge of concepts including uncertainty and risk, probability and statistics, and deterministic and probabilistic estimation methods is required to properly use and apply reserves definitions. In addition, rules set forth in the Canadian Oil and Gas Evaluation Handbook (the “**COGE Handbook**”) and NI 51-101 override professional judgments as to volumes of recovery, well productivity and other factors.

The information set forth in this AIF relating to Pieridae’s reserves and future net revenues constitutes forward-looking statements which are subject to certain risks and uncertainties. See “Forward-Looking Information” and “Risk Factors”. Unless otherwise specified, the NGLs reported by Deloitte Touche Tohmatsu Limited (“**Deloitte**”), the Company’s independent qualified reserves evaluator, that are referred to in this AIF are reported on a combined basis with any condensate as required under NI 51-101.

### Reserves Disclosure

Reserves are classified as proved reserves, probable reserves, or possible reserves according to the certainty associated with the estimates, and further classified into developed and undeveloped as applicable. Additional clarification of the classification of reserves, the certainty levels associated with reserves estimates and the effect of aggregation are provided in the COGE Handbook. Refer to *Appendix C “Definitions Used for Reserve Categories”*.

The qualitative certainty levels referred to in the definitions of proved reserves, probable reserves, possible reserves, developed reserves, developed non-producing reserves, developed producing reserves and undeveloped reserves are applicable to individual reserves entities (which refers to the lowest level at which reserves calculations are performed) and to reported reserves (which refers to the highest-level sum of individual entity estimates for which reserves are presented). Reported reserves should target the following levels of certainty under a specific set of economic conditions:

- at least a 90% probability that the quantities actually recovered will equal or exceed the estimated proved reserves.
- at least a 50% probability that the quantities actually recovered will equal or exceed the sum of the estimated proved plus probable reserves
- at least a 10% probability that the quantities actually recovered will equal or exceed the sum of the estimated proved plus probable plus possible reserves.

A qualitative measure of the certainty levels pertaining to estimates prepared for the various reserves categories is desirable to provide a clearer understanding of the associated risks and uncertainties. However, the majority of reserves estimates are prepared using deterministic methods that do not provide a mathematically derived quantitative measure of probability. In principle, there should be no difference between estimates prepared using probabilistic or deterministic methods.

In multi-well pools, it may be appropriate to allocate total pool reserves between the developed and undeveloped categories or to sub-divide the developed reserves for the pool between developed producing and developed non-producing. This allocation should be based on the estimator's assessment as to the reserves that will be recovered from specific wells, facilities and completion intervals in the pool and their respective development and production status.

## STATEMENT OF RESERVES DATA AND OTHER OIL AND GAS INFORMATION

### Disclosure of Reserves Data

The following tables are based on the Reserves Report prepared by Deloitte, an independent qualified reserves evaluator, effective as of December 31, 2022, and dated and prepared as of March 2, 2023 (the "**Deloitte Reserves Report**"). The tables show the estimated share of Pieridae's oil, natural gas and NGL reserves in its properties and the present value of estimated future net revenue for these reserves, after provision for Alberta gas cost allowance, using forecast price and cost assumptions. All evaluations of the present worth of estimated future net revenue in the Deloitte Reserve Report are stated after provision for estimated future capital expenditures, both before and after income taxes, but, except where otherwise indicated, prior to indirect costs, well abandonment and disconnect costs and surface lease reclamation costs and do not necessarily represent the fair market value of the reserves. The Deloitte Reserves Report was prepared in accordance with the standards included in the COGE Handbook and NI 51-101.

It should not be assumed that the estimates of future net revenues presented in the tables below represent the fair market value of the reserves. There are numerous uncertainties inherent in estimating quantities of crude oil, NGL and natural gas reserves and the future cash flows attributed to such reserves. The reserve and associated cash flow information set forth in this AIF are estimates only. The recovery and reserve estimates of the crude oil, NGL and natural gas reserves provided herein are estimates only and there is no guarantee that the estimated reserves will be recovered. Actual oil, natural gas and NGL reserves may be greater than or less than the estimates provided herein. In general, estimates of economically recoverable crude oil and natural gas reserves and the future net cash flows therefrom are based upon a number of variable factors and assumptions, such as historical production from the properties, production rates, ultimate reserve recovery, timing and amount of capital expenditures, marketability of crude oil and natural gas, royalty rates, the assumed effects of regulation by governmental agencies and future operating costs, all of which may vary materially from actual results. For those reasons, among others, estimates of the economically recoverable crude oil and natural gas reserves attributable to any particular group of properties, classification of such reserves based on risk of recovery and estimates of future net revenues associated with reserves may vary and such variations may be material. The actual production, revenues, taxes and development and operating expenditures with respect to the reserves associated with Pieridae's assets may vary from the information presented herein and such variations could be material. See "Risk Factors" in this AIF.

The present value of future net revenue before and after income taxes has been estimated by Deloitte. The estimates of the after-income tax value of future net revenue have been prepared based on before income tax reserves information and includes assumptions and estimates of Pieridae's tax pools provided by management of the Company and the sequences of claims and rates of claim thereon. The values shown may not be representative of future income tax obligations, applicable tax horizon or after-tax valuation. The after-tax net present value of Pieridae's oil and natural gas properties reflects the tax burden of its properties on a stand-alone basis. It does not provide an estimate of the value of Pieridae as a business entity, which may be significantly different.

All evaluations of future net revenue contained in the Deloitte Reserves Report are after the deduction of royalties, development costs, production costs and abandonment and reclamation costs but before consideration of indirect costs such as administrative, overhead and other miscellaneous expenses. It should not be assumed that the undiscounted or discounted net present value of future net revenue attributable to reserves estimated by Deloitte represent the fair market value of those reserves. There is no assurance that the forecast price and cost assumptions contained in the Deloitte Reserves Report will be attained and variations could be material. Other assumptions and qualifications relating to costs and other matters are summarized herein. The recovery and reserve estimates described herein are estimates only. The actual reserves associated with Pieridae's properties may be greater or less than those calculated. See "Risk Factors".

The historical production information used by Deloitte came from Pieridae. The Company also provided Deloitte with other required information, such as operating statements and land data. Deloitte incorporated all this data into its analysis in accordance with standards set out in the COGE Handbook. The standards in the COGE Handbook require Deloitte to plan and perform an assessment of the Company's reserves data in order to obtain reasonable assurance as to whether such reserves data are free of material misstatement.

Throughout the following summary tables differences may arise due to rounding.

In accordance with the requirements of NI 51-101, attached hereto are the following appendices:

Appendix A:	NI 51-101F2 Report on Reserves Data by Independent Qualified Reserves Evaluator
Appendix B:	NI 51-101F3 Report of Management and Directors on Oil and Gas Disclosure
Appendix C:	Definitions Used for Reserve Categories

**TABLE 6: Summary of Oil and Gas Reserves as of December 31, 2022**

Reserves Category	Light/Medium Crude Oil		Conventional Natural Gas <sup>(1)</sup>		Natural Gas Liquids	
	Gross (Mbbl)	Net (Mbbl)	Gross <sup>(5)</sup> (Mmcf)	Net (Mmcf)	Gross (Mbbl)	Net (Mbbl)
<b>Proved</b>						
Developed Producing <sup>(2)</sup>	-	15.9	641,674	530,944	19,821	15,133
Developed Non-Producing <sup>(3)</sup>	-	-	146,642	120,888	11,346	10,601
Undeveloped <sup>(4)</sup>	-	-	242,230	202,399	5,746	3,806
<b>Total Proved</b>	-	<b>15.9</b>	<b>1,030,546</b>	<b>854,231</b>	<b>36,913</b>	<b>29,540</b>
<b>Total Probable</b>	-	<b>6.6</b>	<b>405,867</b>	<b>326,706</b>	<b>12,755</b>	<b>9,941</b>
<b>Total Proved + Probable</b>	-	<b>22.5</b>	<b>1,436,413</b>	<b>1,180,937</b>	<b>49,669</b>	<b>39,481</b>

<sup>(1)</sup> Natural gas volumes include associated, and non-associated gas.

<sup>(2)</sup> “Developed Producing” reserves are those reserves that are expected to be recovered from completion intervals open at the time of the estimate. These reserves may be currently producing or, if shut-in, they must have previously been on production, and the date of resumption of production must be known with reasonable certainty.

<sup>(3)</sup> “Developed Non-Producing” reserves are those reserves that either have not been on production, or have previously been on production, but are shut in, and the date of resumption of production is unknown.

<sup>(4)</sup> “Undeveloped” reserves are those reserves expected to be recovered from known accumulations where a significant expenditure (e.g., when compared to the cost of drilling a well) is required to render them capable of production. They must fully meet the requirements of the reserves classification (proved, probable, possible) to which they are assigned.

<sup>(5)</sup> Gross refers to the working interest volumes before royalty deductions.

The following tables summarize the undiscounted value and the present value, discounted at 5%, 10%, 15% and 20%, of Pieridae’s estimated future net revenue based on forecast price and cost assumptions as of December 31, 2022.

**TABLE 7: Summary of Before-Tax Present Value of Future Net Revenue at December 31, 2022<sup>(1)</sup>**

Reserves Category <sup>(2)</sup>	Before Income Tax, Discounted at (%/year)					Unit Value Before Income Tax, Discounted at 10%/year
	0% (M\$)	5% (M\$)	10% (M\$)	15% (M\$)	20% (M\$)	\$/BOE
<b>Proved</b>						
Developed Producing	1,018,394	992,812	806,872	671,265	574,776	7.79
Developed Non-Producing	499,741	303,312	204,294	148,282	113,455	6.64
Undeveloped	684,965	369,663	212,272	125,927	75,237	5.65
<b>Total Proved</b>	<b>2,203,100</b>	<b>1,665,787</b>	<b>1,223,438</b>	<b>945,474</b>	<b>763,468</b>	<b>7.12</b>
<b>Total Probable</b>	<b>1,154,225</b>	<b>539,569</b>	<b>302,491</b>	<b>190,616</b>	<b>129,795</b>	<b>4.70</b>
<b>Total Proved + Probable</b>	<b>3,357,325</b>	<b>2,205,356</b>	<b>1,525,929</b>	<b>1,136,090</b>	<b>893,263</b>	<b>6.46</b>

<sup>(1)</sup> Future net revenue is estimated using forecast prices and costs – see “Pricing Assumptions – Forecast Prices and Costs – December 31, 2022” in this AIF.

<sup>(2)</sup> Values reflect abandonment and reclamation costs for all producing wells which have associated reserves, facilities, and pipelines and for all future locations assigned reserves in the Deloitte Reserves Report in the aggregate amount of \$525.6 million (undiscounted) for total proved reserves and \$543.3 million (undiscounted) for total proved plus probable reserves.

**TABLE 8: Summary of After-Tax Present Value of Future Net Revenue as of December 31, 2022 <sup>(1)</sup>**

Reserves Category <sup>(2)</sup>	After Income Tax, Discounted at (%/year)				
	0% (M\$)	5% (M\$)	10% (M\$)	15% (M\$)	20% (M\$)
<b>Proved</b>					
Developed Producing	787,407	755,531	610,346	505,791	431,880
Developed Non-Producing	380,982	228,282	152,801	110,211	83,662
Undeveloped	526,438	279,515	156,371	89,089	49,879
<b>Total Proved</b>	<b>1,694,826</b>	<b>1,263,328</b>	<b>919,518</b>	<b>705,091</b>	<b>565,421</b>
<b>Total Probable</b>	<b>886,219</b>	<b>410,652</b>	<b>229,442</b>	<b>144,182</b>	<b>97,830</b>
<b>Total Proved + Probable</b>	<b>2,581,045</b>	<b>1,673,980</b>	<b>1,148,960</b>	<b>849,273</b>	<b>663,251</b>

<sup>(1)</sup> Future net revenue is estimated using forecast prices and costs – see “Pricing Assumptions – Forecast Prices and Costs – December 31, 2022” in this AIF.

<sup>(2)</sup> Values reflect abandonment and reclamation costs for all producing wells, facilities, and pipelines and for all future locations assigned reserves in the Deloitte Reserves Report in the aggregate amount of \$525.6 million (inflated, undiscounted) for total proved reserves and \$543.3 million (inflated, undiscounted) for total proved plus probable reserves.

**TABLE 9: Total Future Net Revenue (Undiscounted) as of December 31, 2022 <sup>(1)</sup>**

Reserves Category	Revenue <sup>(2)</sup> (M\$)	Royalties (M\$)	Operating Costs (M\$)	Development Costs <sup>(3)</sup> (M\$)	Well Abandonment and Reclamation Costs (M\$)	Future Net Revenue Before Income Taxes (M\$)	Future Income Taxes (M\$)	Future Net Revenue After Income Taxes (M\$)
Proved Reserves	8,863,280	1,113,488	4,213,576	807,507	525,610	2,203,100	508,274	1,694,826
Proved + Probable Reserves	13,087,016	1,647,172	6,422,455	1,116,741	543,323	3,357,325	776,280	2,581,045

<sup>(1)</sup> Future net revenue is estimated using forecast prices and costs – see “Pricing Assumptions – Forecast Prices and Costs – December 31, 2022” in this AIF.

<sup>(2)</sup> Revenue includes product revenue and other income from facilities, wells and corporate if specified.

<sup>(3)</sup> Development costs include facility turnaround and consolidation capital for ongoing operations.

**TABLE 10: Future Net Revenue by Product Type as of December 31, 2022<sup>(1)</sup>**

Reserve Category	Product Type	Future Net Revenue Before Income Taxes (discounted at 10%/year) (M\$)	Unit Value Before Income Taxes (discounted at 10%/Year) (\$/BOE)
Proved Reserves	Conventional Natural Gas (including associated by-products)	1,222,159.0	7.12
	Light Medium and Crude Oil	1,278.5	
Proved + Probable Reserves	Conventional Natural Gas (including associated by-products)	1,524,371.4	6.46
	Light Medium and Crude Oil	1,557.4	

<sup>(1)</sup> Future net revenue is estimated using forecast prices and costs – see “Pricing Assumptions – Forecast Prices and Costs – December 31, 2022” in this AIF.

## Costs Incurred

The following table summarizes the capital expenditures made by Pieridae on oil and gas properties for the year ended December 31, 2022.

**TABLE 11: Capital Expenditures Made by Pieridae on Oil and Gas Properties for the Year Ended December 31, 2022**

Nature of Cost	Amount (M\$)
Acquisition Costs for Proved Properties	-
Acquisition Costs for Unproved Properties <sup>(1)</sup>	62
Exploration Costs	14,541
<b>Total Costs</b>	<b>14,603</b>

<sup>(1)</sup> Acquisition of the majority of unproved reserves in 2022 per Table 14 were on a “quit claim” basis for no monetary consideration.

## Pricing Assumptions – Forecast Prices and Costs

Deloitte employed the following pricing, exchange rate and inflation rate assumptions in estimating Pieridae’s reserves data using forecast prices and costs as of December 31, 2022.

**TABLE 12: Canadian Domestic Forecast <sup>(1)</sup>**

Year	Light Oil	Natural Gas	Natural Gas Liquids			Operating Cost Inflation Rate (%/Year)	Exchange Rate (\$US/\$Cdn)
	Canadian Light Sweet Crude <sup>(2)</sup> 40° API (\$Cdn/Bbl)	Alberta AECO (\$Cdn/Mcf)	Edmonton Propane (\$Cdn/Bbl)	Edmonton Butane (\$Cdn/Bbl)	Edmonton Pentanes Plus (\$Cdn/Bbl)		
<b>Historical</b>							
2013	93.36	3.17	38.54	77.44	103.52	0.90%	0.97
2014	94.00	4.50	42.93	59.43	101.47	1.90%	0.91
2015	57.00	2.69	5.35	33.70	55.15	1.10%	0.78
2016	52.22	2.16	8.71	31.45	52.43	1.40%	0.75
2017	62.11	2.16	27.56	40.96	62.85	1.60%	0.77
2018	75.39	1.61	29.54	45.93	81.62	2.30%	0.77
2019	66.93	1.80	27.00	39.40	62.65	1.50%	0.75
2020	45.90	2.25	15.81	20.82	46.58	0.75%	0.75
2021	79.80	3.61	45.92	40.30	81.87	3.30%	0.80
2022	119.92	5.36	50.48	63.89	121.46	6.7%	0.77
<b>Forecast</b>							
2023	103.16	4.44	41.25	54.35	105.00	0.00	0.74
2024	97.34	4.53	40.16	52.73	100.05	2.50	0.76
2025	94.21	4.37	40.04	51.08	96.97	2.00	0.76
2026	94.90	4.44	40.35	51.47	98.35	2.00	0.77
2027	96.48	4.52	41.01	52.32	99.98	2.00	0.76
2028	98.41	4.61	41.84	53.37	101.98	2.00	0.77
2029	100.38	4.70	42.67	54.43	104.03	2.00	0.77
2030	102.38	4.79	43.52	55.51	106.10	2.00	0.77
2031	104.43	4.88	44.39	56.63	108.22	2.00	0.77
<i>Escalation rate of 2% thereafter</i>							

<sup>(1)</sup> Forecast prices were estimated using the average of the escalated price forecasts of four independent reserve evaluators, namely Deloitte LLP, GLJ Petroleum Consultants Ltd., McDaniels & Associates Consultants Ltd. and Sproule Associates Limited. There is no assurance that the forecast prices and forecast factors used by Deloitte in the Deloitte Report will prove accurate and variances could be material.

<sup>(2)</sup> Edmonton Par prior to 2014.

Pieridae's weighted average realized sales prices for the year ended December 31, 2022, were \$41.36/bbl for NGLs and \$4.40/Mcf for natural gas, before considering the impact of derivative financial instruments.

## Production Estimates

The following table discloses, by product type, the volume of Pieridae's production estimated for the year ended December 31, 2023, as evaluated by Deloitte.

**TABLE 13: 2023 Production Estimates**

Reserves Category	Light/Medium Crude Oil (Bbl/d)	Conventional Natural Gas (MMcf/d)	Natural Gas Liquids (Bbl/d)	Combined (BOE/d)
<b>Proved</b>				
Developed Producing <sup>(1)</sup>	-	180.5	5,667.1	35,746.9
Developed Non-Producing <sup>(2)</sup>	-	3.2	420.1	949.0
Undeveloped	-	1.2	31.7	234.2
<b>Total Proved</b>	-	184.9	6,118.9	36,930.1
<b>Total Probable</b>	-	3.6	71.6	677.3
<b>Total Proved + Probable</b>	-	188.5	6,190.5	37,607.4

<sup>(1)</sup> Pieridae's Waterton field 2023 Proved Developed Producing "PDP" reserves production forecast comprises 25.9% of the total Corporate 2023 PDP production estimate. Of this amount, natural gas amounts to 39.6MMcf/d and NGLs amount to 2,667.6 Bbl/day, for combined production of 9,264 Boe/d.

<sup>(2)</sup> Refer to the discussion of Developed Non-Producing Reserves on page 24 of this AIF.

## Production History

The following table sets forth certain information in respect of production, product prices received, royalties, production costs and netbacks received by Pieridae for each quarter of its most recently completed fiscal year:

**TABLE 14: 2022 Quarterly Production History**

Reserves Category	Three months ended			Twelve months ended	
	Mar 31, 2022	Jun 30, 2022	Sep 30, 2022	Dec 31, 2022	Dec 31, 2022
<b>Average Daily Production</b>					
Light/Medium Crude Oil (bbl/d) <sup>(1)</sup>	-	-	-	-	-
Conventional Natural Gas (Mcf/d)	187,719	178,918	181,030	179,143	181,677
Condensate (bbl/d) <sup>(2)</sup>	3,201	2,864	2,911	2,469	2,860
Other NGLs (bbl/d) <sup>(3)</sup>	6,003	3,695	2,876	2,389	3,729
Combined (boe/d)	40,491	36,378	35,959	34,715	36,868
<b>Average Net Prices Received</b>					
Light/Medium Crude Oil (\$/bbl)	-	-	-	-	-
Conventional Natural Gas (\$/Mcf)	4.08	4.67	3.62	5.24	4.40
Condensate (\$/bbl)	106.13	116.60	105.83	117.67	111.18
Other NGLs (\$/bbl)	31.93	48.58	46.31	47.55	41.36
Combined (\$/boe)	33.86	39.60	31.90	40.02	36.25
<b>Royalties (\$/boe)</b>	5.25	7.08	6.33	3.73	5.61
<b>Production Costs (\$/boe)</b>	15.72	16.00	17.36	16.24	16.32
<b>Netback <sup>(4)</sup> Received (\$/boe)</b>	12.98	16.91	9.07	21.21	14.94

<sup>(1)</sup> The Company had no material light and medium crude oil production in 2022.

<sup>(2)</sup> Comprised of the condensate that is extracted in the field or that is otherwise sold separately from other NGLs either delivered to non-operated processing facilities or fractionated and processed at the Company's gas processing facilities. See "Business Description – Facilities and Infrastructure" for additional information.

<sup>(3)</sup> Represents NGLs (other than condensate) either delivered to non-operated processing facilities or fractionated and

processed at the Company's gas processing facilities. See "Business Description – Facilities and Infrastructure".

- (4) Calculated by management by subtracting royalties, operating and transportation costs from sales revenue (including sulphur revenue). These figures have not been adjusted for financial hedging gains or losses or third party and other income. Netback does not have any standardized meaning and should not be used for the purposes of drawing comparisons between the Company and other companies. For additional information regarding netbacks see "Non-GAAP Measures" in the Company's MD&A.

**TABLE 14a: Waterton Significant Field 2022 Quarterly Production History**

Reserves Category	Three months ended			Twelve months ended	
	Mar 31, 2022	Jun 30, 2022	Sep 30, 2022	Dec 31, 2022	Dec 31, 2022
<b>Average Daily Production</b>					
Light/Medium Crude Oil (bbl/d) <sup>(1)</sup>	-	-	-	-	-
Conventional Natural Gas (Mcf/d)	40,952	40,385	40,630	37,901	39,961
Condensate (bbl/d) <sup>(2)</sup>	1,689	1,410	1,483	1,265	1,461
Other NGLs (bbl/d) <sup>(3)</sup>	3,017	1,502	1,309	1,232	1,759
Combined (boe/d)	11,531	9,643	9,563	8,814	9,880
Percentage of Total Production	28%	27%	27%	25%	27%

<sup>(1)</sup> The Company had no material light and medium crude oil production in 2022.

<sup>(2)</sup> Comprised of the condensate that is extracted in the field or that is otherwise sold separately from other NGLs either delivered to non-operated processing facilities or fractionated and processed at the Company's gas processing facilities. See "Business Description – Facilities and Infrastructure" for additional information.

<sup>(3)</sup> Represents NGLs (other than condensate) either delivered to non-operated processing facilities or fractionated and processed at the Company's gas processing facilities. See "Business Description – Facilities and Infrastructure" for additional information.

## Reconciliation of Changes in Reserves and Future Net Revenue

### Reserves Reconciliation

The following table outlines the primary drivers of reserve changes during 2022, as at December 31, 2022:

**Table 15: Reserve Reconciliation**

	Light & Medium Oil			Conventional Gas			Natural Gas Liquids		
	Proved	Probable	Proved + Probable	Proved	Probable	Proved + Probable	Proved	Probable	Proved + Probable
	Mstb	Mstb	Mstb	MMcf	MMcf	MMcf	Mstb	Mstb	Mstb
<b>Opening Balance</b>	-	-		942,596	306,055	1,248,651	45,528	15,583	61,111
Production	(2)	-	(2)	(66,382)		(66,382)	(2,390)		(2,390)
Technical Revisions	1.8	0.1	1.9	3,626	35,045	38,672	(15,806)	(4,678)	(20,483)
Extensions	1	-	1	22,971	9,695	32,666	2	1	3
Acquisitions	-	-	-	-	-	-	-	-	-
Economic Factors	1	-	1	127,734	55,082	182,816	9,579	1,849	11,428
<b>Closing Balance</b>	-	-	-	1,030,545	405,877	1,436,423	36,913	12,755	49,669

## Additional Information Relating to Reserves Data

### Undeveloped Reserves

Undeveloped reserves are attributed by Deloitte in accordance with standards and procedures contained in the COGE Handbook. Proved undeveloped reserves are those reserves that can be estimated with a high degree of certainty and are expected to be recovered from known accumulations where a significant expenditure is required to render them capable of production. Probable undeveloped reserves are those reserves that are less certain to be recovered than proved reserves and are expected to be recovered from known accumulations where a significant expenditure is required to render them capable of production. Proved and probable undeveloped reserves have been assigned in accordance with engineering and geological practices as defined under

NI 51-101. In general, undeveloped reserves associated with Pieridae's assets are planned to be developed over the next five years.

In some cases, it will take longer than five years to develop these reserves. There are a number of factors that could result in delayed or cancelled development, including the following: (i) changing economic conditions (due to pricing, operating and capital expenditure fluctuations); (ii) changing technical conditions (including production anomalies, such as water breakthrough or accelerated depletion, or to changes in geological interpretation, including reservoir continuity and quality); (iii) multi-zone developments (for instance, a prospective formation completion may be delayed until the initial completion formation is no longer economic); (iv) a larger development program may need to be spread out over several years to optimize capital allocation and facility utilization; and (v) surface access issues (including those relating to land owners, weather conditions and regulatory approvals). For more information, see "Risk Factors" in this AIF.

### **Developed Non-Producing Reserves**

The Deep Basin area includes assets in the Sierra and Ekwana areas roughly 45 km east of Fort Nelson, British Columbia stretching 85 km east towards the Alberta border that were acquired as part of the 2017 acquisition from Husky. The Sierra asset consists of ~25 mmcf/d of production from the Pine Point formation and was shut in due to infrastructure constraints in September 2017. While the property is being actively marketed as for sale, the restart is currently contemplated for 2024 and is estimated to require \$30 million of capital primarily for sour gas related plant upgrades and pipelines. Sierra represents 14.9 MMboe in reserves and \$59.3 million NPV10 value within the proved non-producing category.

### **Significant Factors or Uncertainties**

The process of estimating reserves is complex. It requires significant judgments and decisions based on available geological, geophysical, engineering, and economic data. These estimates may change substantially as additional data from ongoing development activities and production performance becomes available and as economic conditions impacting oil and gas prices and costs change. The reserve estimates contained herein are based on current production forecasts, commodity prices and economic conditions. Pieridae's reserves are evaluated by Deloitte, an independent engineering firm.

Estimates made are reviewed and revised, either upward or downward, as warranted by new information. Revisions are often required due to changes in well performance, commodity prices, economic conditions, and governmental restrictions. Although every reasonable effort is made to ensure that reserve estimates are accurate, reserve estimation is an inferential science. Pieridae's actual production, revenues, taxes, development, and operating expenditures with respect to its reserves may vary from such estimates, and such variances could be material. See "Risk Factors – Reserves Estimates" in this AIF.

Pieridae estimates the total cost of future abandonment and reclamation for its existing wells, pipelines, associated production facilities and infrastructure and the expected timing of the costs to be incurred in future periods. The Company has a process for estimating these costs, which considers experience, applicable current regulations, technology and industry standards, actual and anticipated costs, the type, and depth of the well (or the nature and size of the pipeline or facility), and the geographic location. Pieridae expects to incur abandonment and reclamation costs on 627 gross (573 net) wells in due course; of these 42% (46% net) are currently producing. As at December 31, 2022, the Company has estimated its share of the total abandonment and reclamation costs for its existing active and economic wells, pipelines, and facilities to be \$509.5 million (inflated) undiscounted (approximately \$21.2 million discounted at 10%), of which Pieridae expects to pay approximately \$4.7 million over the next five financial years.

Of the discounted future abandonment and reclamation costs to be incurred over the life of Pieridae's proved plus probable reserves, approximately \$16.6 million have been deducted in estimating the discounted future net revenue in the Deloitte Report, which represents the Company's active, economic existing estimated abandonment and reclamation costs, plus all forecast estimates of abandonment and reclamation costs attributable to future development activity associated with the reserves.

## Future Development Costs

The following table sets forth development costs deducted in the estimation of the future net revenue attributable to the reserve categories noted below, using forecast prices and costs.

**TABLE 16: Future Development Costs <sup>(1)</sup>**

Year	Undiscounted Inflated Forecast Prices and Costs	
	Proved Undeveloped Reserves (M\$)	Proved + Probable Undeveloped Reserves (M\$)
2023	4.6	4.6
2024	30.6	30.6
2025	48.7	61.2
2026	73.4	73.4
2027	57.6	61.3
Remaining Years	47.9	158.9
<b>Total Undiscounted</b>	<b>262.8</b>	<b>390.0</b>

<sup>(1)</sup> Future net revenue estimated using forecast prices and costs – see “Pricing Assumptions – Forecast Prices and Costs – December 31, 2022” in this AIF.

Pieridae expects to fund the development costs of these reserves through a combination of the funds available from internally generated cash flow, non-core asset dispositions and the issuance of new equity and/or debt where and when the Board of Directors believes it is appropriate.

There can be no guarantee that funds will be available or that the Company will allocate funding to develop all of the reserves attributable in the Deloitte Report. Failure to develop those reserves could have a negative impact on Pieridae’s future cash flow.

The interest or other costs of external funding are not included in the reserves and future net revenue estimates set forth above and would reduce the reserves and future net revenue to some degree depending upon the funding sources utilized. Pieridae does not anticipate that interest or other funding costs would make further development of any of Pieridae’s assets uneconomic.

See “Risk Factors – Liquidity” in this AIF.

## Properties with no Attributed Reserves

The following table sets forth the gross and net acres of unproved properties held by Pieridae as at December 31, 2022, and the net area of unproved property for which Pieridae expects its rights to explore, develop and exploit to expire during the next year. Pieridae has an 72% working interest in its undeveloped land.

**TABLE 17: Unproved Properties – Undeveloped Land**

Location	Undeveloped Gross Acres <sup>(1)</sup>	Undeveloped Net Acres <sup>(2)</sup>	Net Area to Expire in 2023
Western Canada	524,366	400,509	7,040
Eastern Canada	35,927	35,927	-
<b>Total</b>	<b>560,293</b>	<b>436,436</b>	<b>7,040</b>

<sup>(1)</sup> “Gross Acres” are the total acres in which Pieridae has or had an interest.

<sup>(2)</sup> “Net Acres” is the aggregate of the total acres in which Pieridae has or had an interest multiplied by Pieridae’s working interest percentage held therein.

## CAPITAL STRUCTURE

### Common Shares

The authorized capital of the Company consists of an unlimited number of common shares without nominal value, of which 158,971,336 were issued and outstanding as of the date of this AIF. The common shares do not carry any exchange, exercise, conversion, redemption, or retraction rights.

The holders of the common shares are entitled to one vote per share at all meetings of shareholders of the Company and are entitled to dividends, if and when declared by the Board of the Company, and to the distribution of the residual assets of the Company in the event of the liquidation, dissolution or winding-up of the Company.

### Common Share Issuances

The following table discloses the securities of the Company that have been issued in the 12 months prior to the date of this AIF:

**TABLE 18: Share Issuances**

Date of Issuance	Issue Price per Share	Number of Shares Issued <sup>(1)</sup>
<b>2022</b>		
Various dates <sup>(1)</sup>	\$0.79	1,317,465

<sup>(1)</sup> Pieridae issued common shares to employees upon exercise of stock options in accordance with its Stock Option Plan.

Below is a list of the unlisted securities of the Company issued during the year ended December 31, 2022, including price per security, quantity issued and date of issuance.

**TABLE 19: Stock Options**

Quantity	Exercise Price (\$)	Issuance Date	Expiry
779,500	\$1.24	August 31, 2022	August 31, 2027
225,000	\$1.28	September 15, 2022	September 15, 2027

### Market for Securities

The Common Shares of the Company are listed and traded on the TSX under the symbol "PEA".

The following table sets forth the market price ranges and trading volumes of the Common Shares for the financial year ended December 31, 2022 and as at March 10, 2023.

**TABLE 20: Price Range and Trading Volume**

	Price Range		Shares Traded
	High (\$/share)	Low (\$/share)	
<b>2022</b>			
January	0.48	0.33	3,941,054
February	0.67	0.37	5,828,608
March	1.07	0.51	15,237,611
April	1.11	0.72	9,524,761
May	1.82	0.91	16,900,207
June	1.98	1.03	23,650,629
July	1.24	0.72	13,842,168
August	1.42	1.01	10,112,438
September	1.31	0.86	6,105,616
October	1.33	0.93	8,356,660
November	1.85	1.28	13,442,321
December	1.48	1.07	9,041,170
<b>2023</b>			
January	1.26	0.91	7,832,404
February	0.94	0.69	9,337,710
March 1-10	0.80	0.64	2,139,200

## Dividends and Dividend Policy

The Company is currently committed to retaining its earnings in order to finance future growth. As a result, the Company does not anticipate paying dividends in the foreseeable future. Any future decision to pay dividends will be at the discretion of the Board of Directors and will depend on the financial position of the Company, its results of operations and its capital requirements and such other factors as the Board of Directors considers relevant.

## DIRECTORS AND EXECUTIVE OFFICERS

### Directors of Pieridae

The following table presents the name and municipality of residence of the directors of the Company, their office held with the Company, the date on which they became directors and their principal occupations. Each director holds office until the next annual meeting of the shareholders of Pieridae or until his or her successor has been duly elected or appointed, unless they resign, or their office becomes vacant for any reason.

**TABLE 21: Directors of the Company**

NAME, CITY AND PROVINCE OF RESIDENCE AND AGE	POSITION WITHIN THE COMPANY	PRINCIPAL OCCUPATION	DIRECTOR SINCE	NUMBER OF SHARES OWNED OR CONTROLLED <sup>(1)</sup>
<b>Charles Boulanger</b> <sup>(2)(3)(30)</sup> Québec City, Québec, Canada Age: 65	Independent Director	CEO of Leddartech Inc. President of Moody Management Inc. Director at Chimie Parachem, Averno Technologies inc. and LeddarTech Inc.	October 24, 2017	352,795 <sup>(4)</sup> (0.22%)
<b>Richard Couillard</b> <sup>(5)(6)</sup> Calgary, Alberta, Canada Age: 72	Independent Director	President and CEO of CouilOil Energy Inc.	May 26, 2022	47,000 <sup>(7)</sup> (0.03%)
<b>Doug Dreisinger</b> <sup>(8)(9)(10)</sup> Calgary, Alberta, Canada Age: 62	Independent Director	Consultant on strategic and business development services predominantly in the energy and mineral processing sectors.	May 26, 2022	30,000 <sup>(11)</sup> (0.02%)
<b>Charle Gamba</b> <sup>(12)</sup> Bogota S.F., Columbia Age: 58	Independent Director	President and CEO of Canacol Energy Ltd., which he founded in 2008.	June 18, 2019 – May 26, 2022	n/a
<b>Gail Harding K.C.</b> <sup>(13)(14)(15)(30)</sup> Calgary, Alberta, Canada Age: 64	Independent Director	Serves on the boards of Meridian Credit Union (Chair, Risk Committee) and the Alberta Securities Commission (Chair, Human Resources Committee).	May 26, 2022	25,000 <sup>(16)</sup> (0.02%)
<b>Andrew Judson</b> <sup>(17)(18)(19)(30)</sup> Calgary, Alberta, Canada Age: 55	Independent Director	Director of Condor Energies Inc., Bonavista Energy Corporation and Drift Resource Technologies inc. and Senior Advisor for Fort Capital Advisors.	October 24, 2017	332,697 <sup>(20)</sup> (0.21%)

NAME, CITY AND PROVINCE OF RESIDENCE AND AGE	POSITION WITHIN THE COMPANY	PRINCIPAL OCCUPATION	DIRECTOR SINCE	NUMBER OF SHARES OWNED OR CONTROLLED <sup>(1)</sup>
<b>Patricia McLeod K.C.</b> <sup>(21)</sup> Calgary, Alberta, Canada Age: 54	Chair	Director on the boards of Alberta Innovates (Chair, Governance & HR Committee; Member, Executive Committee and Business Planning and Strategy Committee), the Green Line Board (Member, Governance & HR Committee and Budget & Risk Committee), MINDD Inc., and Board Chair of the Calgary Film Centre.	May 26, 2022	179,662 <sup>(22)</sup> (0.11%)
<b>Kjell Pedersen</b> <sup>(23)</sup> Stavanger, Norway Age: 70	Independent Director	Corporate Director	June 27, 2018 – May 26, 2022	n/a
<b>Kiren Singh</b> <sup>(24)(25)(26)(30)</sup> Canmore, Alberta Age: 57	Independent Director	Director of Travel Alberta (Chairperson, Audit, Finance and Risk Committee).	May 26, 2020	237,550 <sup>(27)</sup> (0.15%)
<b>Alfred Sorensen</b> Calgary, Alberta, Canada Age: 61	Chief Executive Officer and Director	President and CEO of former Pieridae Energy Limited since its founding in 2012, and CEO of Pieridae since its amalgamation in 2017.	October 24, 2017	12,299,053 <sup>(28)</sup> (7.74%)
<b>Myron A. Tétreault</b> <sup>(29)</sup> Calgary, Alberta, Canada Age: 55	Chair	Board Chair of Calafate Holdings Ltd., Lead Director of PHX Energy Services Corp. Co-founder and director of Fitzroy Developments Ltd., Fitzroyalty Land Opportunities Fund LP, and Board Chair of West Aspen Holdings Ltd. and Stoked Oats Ltd.	October 24, 2017 – May 26, 2022	n/a

<sup>(1)</sup> The directors have provided the information concerning the shares that they control as at March 10, 2023.

<sup>(2)</sup> Chair of the Audit Committee until its reorganisation on October 6, 2022. Thereafter Mr. Boulanger is the Chair of the Audit & Risk Committee.

<sup>(3)</sup> Member of the Reserves & HSE Committee until its reorganisation on October 6, 2022. Thereafter Mr. Boulanger is a member of the Reserves, Health, Safety and Environment Committee.

<sup>(4)</sup> Not including 205,000 shares that may be issued to him through options.

<sup>(5)</sup> Member of the Governance & ESG Committee until its reorganisation on October 6, 2022. Thereafter Mr. Couillard is a member of the Governance & Human Resources Committee.

<sup>(6)</sup> Chair of the Reserves & HSE Committee until its reorganisation on October 6, 2022. Thereafter Mr. Couillard is Chair of the Reserves, Health, Safety and Environment Committee.

<sup>(7)</sup> Not including 45,000 shares that may be issued to him through options.

<sup>(8)</sup> Member of the Governance & Human Resources Committee since October 6, 2022.

<sup>(9)</sup> Member of the Reserves & HSE Committee until its reorganisation on October 6, 2022. Thereafter Mr. Dreisinger is a member of the Reserves, Health, Safety and Environment Committee.

<sup>(10)</sup> Member of the Nomination & Compensation Committee until it ceased following a reorganisation on October 6, 2022.

<sup>(11)</sup> Not including 42,500 shares that may be issued to him through options.

<sup>(12)</sup> Mr. Gamba was a member of the Reserves & HSE Committee and the Governance & ESG Committee until his retirement from the board on May 26, 2022.

<sup>(13)</sup> Member of the Audit & Reserves Committee since October 6, 2022.

<sup>(14)</sup> Member of the Governance & ESG Committee until its reorganisation on October 6, 2022. Thereafter Ms. Harding is a member of the Governance & Human Resources Committee.

<sup>(15)</sup> Member of the Nomination & Compensation Committee until it ceased following a reorganisation on October 6, 2022.

<sup>(16)</sup> Not including 42,500 shares that may be issued to her through options.

- (17) Chair of the Nomination & Compensation Committee until it ceased following a reorganisation on October 6, 2022.
- (18) Member of Reserves, Health, Safety & Environment Committee since October 6, 2022.
- (19) Member of the Audit Committee until its reorganisation on October 6, 2022. Thereafter Mr. Judson is a member of the Audit & Risk Committee.
- (20) Not including 205,000 shares that may be issued to him through options.
- (21) Chair of the Board of Directors since May 26, 2022.
- (22) Not including 50,000 shares that may be issued to her through options.
- (23) and Chair of the Reserves & HSE Committee and Member of Governance & HSE Committee until his retirement from the board on May 26, 2022.
- (24) Chair of the Governance & ESG Committee until its reorganisation on October 6, 2022. Thereafter Ms. Singh is Chair of the Governance & Human Resources Committee.
- (25) Member of the Nomination & Compensation Committee until it ceased following a reorganisation on October 6, 2022
- (26) Member of the Audit Committee until its reorganisation on October 6, 2022. Thereafter Ms. Singh is a member of the Audit & Risk Committee.
- (27) Not including 225,000 shares that may be issued to her through options.
- (28) Not including 654,034 shares that may be issued to him through options.
- (29) Mr. Tetreault was Chair of the Board until his retirement on May 26, 2022.
- (30) Additional information about the members of the Audit & Risk Committee and their financial literacy is contained on pages 33 of this AIF.

**Patricia McLeod K.C.** — Chair of the Board

Ms. McLeod, K.C. is an experienced corporate board director, former senior legal professional and Privacy and Compliance Officer of multiple regulated companies. Ms. McLeod K.C. has held vice president and General Counsel roles in energy utilities and electricity retail, property development, insurance, and financial services companies. She has extensive corporate/commercial legal experience as well as advising on mergers and acquisitions, business development and joint ventures for large infrastructure projects. Ms. McLeod also serves on the boards of Alberta Innovates (Chair, Governance & HR Committee; Member, Executive Committee and Business Planning and Strategy Committee), the Green Line Board (Member, Governance & HR Committee and Budget & Risk Committee), and MINDD Inc.. Patricia is also the Board Chair of the Calgary Film Centre and a former Vice Chair of Calgary Economic Development. Ms. McLeod is a former Chair of the boards of Calgary Co-operative Association, the Real Estate Council of Alberta, the YWCA of Calgary and cSPACE Projects. She holds an MBA (Queens University) and Bachelor of Laws and a Bachelor of Commerce (University of Alberta) and an ICD.D (University of Calgary/Institute of Corporate Directors).

**Alfred Sorensen** – Chief Executive Officer and Director

Mr. Sorensen has been the chief executive officer of Pieridae Energy Limited since its amalgamation in 2017. Mr. Sorensen was also the chief executive officer of Pieridae Energy Limited, the predecessor corporation since its founding in 2012. He obtained a Bachelor of Commerce degree from the University of Alberta in 1983, qualified as a chartered accountant (CA) in 1987 and is currently a chartered professional accountant (CPA). Mr. Sorensen is a leading entrepreneur in the energy industry with over 30 years of Canadian and international experience. Mr. Sorensen served as the chief executive officer of Canadian Spirit Resources from 2013 to 2015. Mr. Sorensen has served as the Chairman of the Board of the Alberta Ballet Foundation since 2005.

**Charles Boulanger** — Director

Mr. Boulanger is the chief executive officer of Leddartech Inc., a private company that offers unique automotive ADAS (Advanced Driver Assistance System) and AD (autonomous driving) fusion and perception software solution. He is also the president of Moody Management Inc., a private investment firm. Mr. Boulanger has over 35 years of experience in senior management positions in several industrial sectors with companies such Shell Canada Limited, a subsidiary of Royal Dutch Shell, Irving Oil, a subsidiary of Irving Group of Companies, GSI Environmental Inc. and Prolab Technolub Inc. He currently sits on the boards of Chimie Parachem s.e.c., Averno Technologies Inc., and LeddarTech Inc. Mr. Boulanger earned a degree in mechanical engineering from Université Laval in 1981 and graduated from the senior management program at the International Center for Research and Studies in Management (CIREM) in 1990.

**Richard Couillard** — Director

Mr. Couillard is currently President and CEO of CouilOil Energy Inc. a private corporation. Mr. Couillard has over 40 years' experience in domestic and international oil and gas exploration, development and production activities which includes 21 years with Chevron Corporation in a variety of technical and management roles. The majority of his career has been focused on the Western Canadian Sedimentary Basin. Mr. Couillard's directorships have included Canadian Spirit Resources Inc. (2003-2020), Badger Infrastructure Solutions including its predecessors 2005-2015 and Kensington Energy Inc. 2002-2005. Mr. Couillard holds

a Bachelor of Science (Honours) degree in geology and geophysics and is a member of the Canadian Energy Geoscience Association (CEGA).

**Doug Dreisinger – Director**

Mr. Dreisinger has over 35 years' experience in the energy and chemical industry having worked in both domestic and international markets. He is a consultant providing strategic and business development services predominantly in the energy and mineral processing sectors. Mr. Dreisinger worked for Nexen (now CNOOC) for 20 years in positions ranging from Vice President Business Operations for the chemical business, to President of Global Energy Marketing and Trading. His skills and experience at Nexen include Natural Gas Trading/Marketing the LNG development of Aurora LNG in conjunction with their development partner, Inpex. Mr. Dreisinger is a former director of Connacher Oil & Gas Limited ("**Connacher**"), a privately held Calgary based exploration, development and production company. He is a member of the Association of Professional Engineers and Geoscientists of Alberta (APEGA).

**Gail Harding K.C. – Director**

Ms. Harding, K.C., is a corporate director with over 35 years' experience in legal/regulatory compliance, capital markets, M&A, governance and risk management. Until 2018 she served as the Chief Legal Officer at Canadian Western Bank Financial Group (TSX listed) and was previously a securities/corporate law partner at a national law firm. Ms. Harding serves on the boards of Meridian Credit Union (Chair, Risk Committee) and the Alberta Securities Commission (Chair, Human Resources Committee). She has previously served on the boards of the Alberta Electric System Operator, The Workers' Compensation Board (Alberta), AC Energy (TSX-V listed), Alberta Ballet and numerous subsidiaries of the CWB Financial Group. Ms. Harding was a recipient of both the Canadian General Counsel Award and the Women in Law Leadership Award. She holds a Master of Laws with a specialization in Energy and Infrastructure (York University), and a Bachelor of Laws and Bachelor of Education (University of Alberta) in addition to the ICD.D (University of Calgary/Institute of Corporate Directors) and FSA (Sustainability Accounting Standards Boards) designations and is a Fellow of the Canadian Institute of Bankers.

**Andrew Judson – Director**

Mr. Judson is a director of Condor Energies Inc., a public Canadian company operating oil and gas developments in Turkey and Kazakhstan. Mr. Judson also serves as a Senior Advisor for Fort Capital Advisors, a partner owned investment bank. In May 2022 Mr. Judson joined the Board of Bonavista Energy Corporation, a private Canadian energy producer, and in November 2022 he joined the Board of Drift Resource Technologies Inc., a private Canadian oilsands development company. Previously Mr. Judson was a Managing Director of Camcor Partners Inc. Mr. Judson has more than 25 years of experience in Canadian energy capital markets and has advised some of the largest institutional investors in Canada, the U.S.A. and Europe on energy investments.

**Kiren Singh – Director**

Ms. Singh is a financial executive and corporate director. Ms. Singh held executive roles including Chief Financial Officer, Vice President Risk Management and Treasurer during her 30-year international career in the energy sector where she led corporate and project financings and risk management programs representing privately held and publicly traded Canadian (Toronto Stock Exchange) and USA (New York Stock Exchange) corporations including Gibson Energy Inc., OPTI Canada Inc., Value Creation Inc., Exxon Mobil Corporation and Mobil Corporation in Calgary, AB, Fairfax, VA and Houston, TX. Ms. Singh also serves on the board of Travel Alberta (Chair, Audit, Finance and Risk Committee), and served on the boards of Dynamic Risk Assessment Systems (Chair, Audit and Risk Committee), Agriculture Financial Services Corp. (Chair, Audit, Finance and Risk Committee). She holds a Master of Business Administration and Bachelor of Commerce degrees (University of Calgary), a Chartered Financial Analyst designation (CFA Institute), CRM (Global Risk Management Institute) and ICD.D (University of Toronto).

## Officers of Pieridae

The following table sets forth the name and municipality of residence of the executive officers of the Company, the office they hold with the Company and their principal occupation during the last five years.

**TABLE 22: Officers of the Company**

NAME, CITY, PROVINCE AND COUNTRY OF RESIDENCE AND AGE	OFFICE HELD WITH THE COMPANY	PRINCIPAL OCCUPATION DURING THE LAST 5 YEARS	NUMBER OF SHARES OWNED OR CONTROLLED <sup>(1)</sup>
<b>Alfred Sorensen</b> Calgary, Alberta, Canada Age: 62	Chief Executive Officer and Director	CEO of Pieridae since its founding in 2012 and amalgamation in 2017. Interim COO January 4, 2021, to April 4, 2021	12,299,053 <sup>(2)</sup> (7.74%)
<b>Darcy Reding</b> Calgary, Alberta, Canada Age: 54	President and Chief Operating Officer	President since March 28, 2022, COO of Pieridae since April 5, 2021. VP Operations and Geotechnical of NAL Resources from 2013 to Jan 2021	33,000 <sup>(3)</sup> (0.02%)
<b>Adam Gray</b> Calgary, Alberta, Canada Age: 38	Chief Financial Officer	CFO since March 28, 2022. Interim CFO (July 30, 2021) and VP and Controller (since January 2020). Previously various roles with Northwest Redwater Partnership 2011-2019	180,000 <sup>(4)</sup> (0.11%)
<b>Thomas Dawson</b> Calgary, AB, Canada Age: 60	Senior Vice President, Marketing and Business Development	Senior Vice President, Marketing and Business Development of Pieridae since May 2012.	2,610,000 <sup>(5)</sup> (1.64%)

<sup>(1)</sup> The officers have provided the information concerning the shares that they control as at March 10, 2023.

<sup>(2)</sup> Not including 654,034 shares that may be issued to him through options.

<sup>(3)</sup> Not including 255,800 shares that may be issued to him through options.

<sup>(4)</sup> Not including 293,400 shares that may be issued to him through options.

<sup>(5)</sup> Not including 334,812 shares that may be issued to him through options.

As at the date of this information form, the Company's directors and officers beneficially owned, or controlled or directed, directly or indirectly, as a group, a total of 16,326,757 issued and outstanding shares, representing approximately 10.3% of the Company's issued and outstanding shares.

## Cease Trade Orders, Bankruptcies, Penalties or Sanctions

Other than as disclosed below, to the knowledge of the Company, and according to the information that the directors and officers have provided to it, none of them is or has been, within the ten years preceding the date of this AIF, a director, chief executive officer or chief financial officer of a company that was subject to an order that was issued while the director or executive officer was acting in the capacity as director, chief executive officer or chief financial officer, or was subject to an order that was issued after the director or executive officer ceased to be a director, chief executive officer or chief financial officer and which resulted from an event that occurred while that person was acting in the capacity as director, chief executive officer or chief financial officer. For the purposes of this paragraph, "order" refers to (i) a cease trade order, (ii) an order similar to a cease trade order, or (iii) an order that denied the relevant entity to any exemption under securities legislation.

Mr. Doug Dreisinger was a director of Connacher from June 3, 2015, to September 30, 2019. In May 2016 Connacher announced that, due to high debt and depressed oil prices, amongst other things, it had initiated proceedings at the Court of Queen's Bench of Alberta to seek creditor protection under the Companies' Creditors Arrangement Act ("CCAA"). On May 16, 2016 the TSX suspended trading of Connacher's common shares subject to an expedited review of Connacher's ability to meet the requirements for continued listing. Effective June 20, 2016, the common shares ceased to be listed on the TSX for failure to meet continued listing requirements. Connacher obtained a stay of proceedings, among other things, under the CCA. A pursuant to an Initial Order dated May 17, 2016. Under the Initial Order, Ernst & Young Inc. were appointed Monitor of Connacher during the CCAA proceedings. The stay of proceedings was extended multiple times to assist Connacher in undertaking two sale and investment solicitation processes. On September 30, 2019, Connacher announced that the Amended and Restated Plan of

Compromise and Arrangement (“Plan”) dated July 16, 2019 was sanctioned by the Court of Queen’s Bench of Alberta on July 16, 2019 in the proceedings under the CCAA. The Plan became effective September 30, 2019. All existing equity interests (including outstanding common shares) were cancelled for no consideration and the first lien lenders (First Lien Credit Agreement May 23, 2014) acquired all of Connacher’s new share capital and Connacher also ceased to be a reporting issuer. Upon the successful completion of the Plan, Mr. Dreisinger resigned from the Board. In January 2020 Mr. Dreisinger joined the “new” privately held Connacher as a director.

To the knowledge of the Company, none of its directors, executive officers or a shareholder holding a sufficient number of securities of the Company to affect materially its control:

- a) is, as at the date of this AIF, or has been within the 10 years before the date hereof, a director or executive officer of any entity (including the Company) that, while that person was acting in that capacity, or within a year of that person ceasing to act in that capacity, became bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or was subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold its assets, state the fact; or
- b) has, within the 10 years before the date of this AIF, become bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency, or become subject to or instituted any proceedings, arrangement or compromise with creditors, or had a receiver, receiver manager or trustee appointed to hold the assets of the director, executive officer or shareholder.

To the knowledge of the Company, none of its directors or executive officers, or any shareholder holding a sufficient number of securities to affect materially the control of the Company, has been subject to:

- a) any penalties or sanctions imposed by a court relating to securities legislation or by a securities regulatory authority or has entered into a settlement agreement with a securities regulatory authority; or
- b) any other penalties or sanctions imposed by a court or regulatory body that would likely be considered important to a reasonable investor in making an investment decision.

### Interest of Management and Others in Material Transactions

Except as disclosed in the notes to the consolidated financial statements, there is no material interest, direct or indirect, of any director, executive officer, shareholder who beneficially owns, directly or indirectly, more than 10 percent of the Company’s outstanding common shares, or of any associates or affiliates of such persons, in any transaction within the three most recently completed fiscal years or during the current fiscal year which has materially affected or will materially affect the Company.

### CONFLICTS OF INTEREST, AND INTERESTS OF EXPERTS

The fact that certain directors and officers of the Company are associated with other resource companies may lead to conflict-of-interest situations. If a director or officer is placed in a situation of conflict of interest, he or she shall abstain from taking part in discussions, decisions, and voting. There are currently no existing or potential material conflicts of interest between the Company and any director or officer.

Ernst & Young LLP (“EY”) are the external auditors who have prepared the independent auditors’ report to shareholders of the Company regarding the consolidated financial statements. EY confirmed to the Company that they are independent from the Company within the meaning of the code of ethics of the Institute of Chartered Professional Accountants of Alberta.

*Deloitte* is the petroleum consulting firm who has reviewed the technical report on the properties of the Company as at December 31, 2022, and which is referred to under “Property Description”. At the time of preparation of such report, Deloitte did not own any common shares of the Company.

### AUDIT & RISK COMMITTEE INFORMATION

#### Audit and Risk Committee Mandate

The Board has adopted a written mandate for the Audit and Risk Committee, which sets out the Audit and Risk Committee’s responsibility for (among other things) reviewing the Company’s financial statements and the Company’s public disclosure documents containing financial information and reporting on such review to the Board, ensuring the Company’s compliance with legal and regulatory requirements, overseeing qualifications, engagement, compensation, performance and independence of the

Company's external auditors, and reviewing, evaluating and approving the internal control systems that are implemented and maintained by management. A copy of the Audit and Risk Committee Mandate is attached to this AIF as Appendix "D".

### **Composition of the Audit & Risk Committee and Relevant Education and Experience**

The Audit & Risk Committee is comprised of Charles Boulanger, who serves as the chair of that committee, Gail Harding, Andrew Judson, and Kiren Singh (each of whom is considered to be an independent member of that committee) and all members are financially literate as defined in National Instrument 52-110 *Audit Committees* ("**NI 52-110**"). According to NI 52-110, an individual is financially literate if he or she has the ability to read and understand a set of financial statements that present a breadth and level of complexity of accounting issues that are generally comparable to the breadth and complexity of the issues that can reasonably be expected to be raised by the issuer's financial statements.

### **Relevant Training and Experience**

The training and experience of each member of the Audit and Risk Committee relevant to his or her responsibilities as members of the Audit & Risk Committee are as follows:

#### **Charles Boulanger**

Mr. Boulanger acquired a foundational level of knowledge of accounting and audit principles by completing the Executive Program from CIREM (Centre for International Research and Studies in Management). That knowledge was further enhanced by his thirty-five years of experience in corporate leadership which included the management and implementation of several complex corporate structures (such as international joint ventures) and financings (totalling over \$650 million) as well as initial public offerings and a leveraged buy-out. As a consequence, Mr. Boulanger has gained first-hand knowledge of the accounting treatment, financial statement presentation and audit implications, of these structures, financings and transactions. His knowledge base has been further supplemented through his prior service (since 2012) ~~on~~ as chair of the audit committee of Pétrolia Inc. and more recently of the Company.

#### **Gail Harding**

Ms. Harding acquired knowledge of accounting and audit principles through 14 years of management participation with the Audit Committee of a publicly traded company which operated numerous financial companies. She has also served on numerous Audit Committees in the for-profit and not-for-profit sectors. These experiences have provided her with a strong understanding of accounting principles and policies, financial statement presentation and internal controls over financial reporting. She holds the ICD.D designation and has completed the ICD Program on Audit Committee Effectiveness.

#### **Andrew Judson**

Mr. Judson holds an M.B.A. and has been employed in the investment industry on both the buy and sell sides for over twenty-five years. His business experience includes the critical review of financial statements and information of companies engaged in the oil and gas industries. Mr. Judson has served on the audit committee of both for-profit and not-for-profit organizations.

#### **Kiren Singh**

Ms. Singh is a financial executive and corporate director. Ms. Singh held executive roles including Chief Financial Officer, Vice President Risk Management and Treasurer during her 30-year international career in the energy sector where she led corporate s and project financings and risk management programs representing privately held and publicly traded Canadian (Toronto Stock Exchange) and USA (New York Stock Exchange) corporations including Gibson Energy Inc., OPTI Canada Inc., Value Creation Inc., Exxon Mobil Corporation and Mobil Corporation in Calgary, AB, Fairfax, VA and Houston, TX. Ms. Singh also serves on the board of Travel Alberta (Chair, Audit, Finance and Risk Committee), and served on the boards of Dynamic Risk Assessment Systems (Chair, Audit and Risk Committee), Agriculture Financial Services Corp. (Chair, Audit, Finance and Risk Committee).

## Pre-Approval Policies and Procedures for the Engagement of Non-Audit Services

The Audit & Risk Committee must pre-approve all non-audit services to be provided to the Company by its external auditors, EY. The Audit Committee may delegate such pre-approval authority, if and to the extent permitted by law.

### External Auditor Fees

The following table summarizes the fees paid by the Company to its external auditors, EY, for external audit and other services during the years ended December 31, 2022, and December 31, 2021. The amounts disclosed exclude administrative charges.

**Table 23: External Auditor Fees**

	2022	2021
Audit fees <sup>(1)</sup>	358,000	364,000
Audit-related fees <sup>(2)</sup>	-	-
Tax fees <sup>(3)</sup>	-	-
All other fees	4,555	71,182
<b>Total</b>	<b>362,555</b>	<b>435,182</b>

<sup>(1)</sup> Represents the aggregate fees billed for services related to the audit of the Company's annual financial statement and review of quarterly financial statements.

<sup>(2)</sup> Represents aggregate fees billed for services rendered in connection with providing assurance over accounting policy matters and complex transactions.

<sup>(3)</sup> Represents the aggregate fees billed for tax compliance and planning.

## LEGAL PROCEEDINGS AND REGULATORY ACTION

The Company was not a party to any material legal proceedings, and its assets were not the subject of material legal proceedings, during the year ended December 31, 2022. The Company is not aware that any such material legal proceeding is threatened. As described in the "Developments in 2020" and "Recent Developments" sections of this AIF, on January 4, 2021, Shell resubmitted the applications to transfer the licenses for the Shell Foothills Assets to Alberta Production. On January 31, 2022, Shell withdrew these applications.

There are no: (a) penalties or sanctions imposed against the Company by a court relating to securities legislation or by a securities regulatory authority; (b) other penalties or sanctions imposed by a court or regulatory body against the Company that would likely be considered important to a reasonable investor in making an investment decision; or (c) settlement agreements the Company entered into before a court relating to securities legislation or with a securities regulatory authority since the Company's inception.

## INDUSTRY CONDITIONS

Companies operating in the Canadian oil and natural gas industry are subject to extensive regulation and control of operations (including with respect to land tenure, exploration, development, production, processing, and marketing) as a result of legislation enacted by various levels of government, as well as with respect to the pricing and taxation of oil and natural gas through legislation enacted by, and agreements among, the federal and provincial governments of Canada, all of which should be carefully considered by investors in the Canadian oil and natural gas industry. All current legislation is a matter of public record, and we are unable to predict what additional legislation or amendments governments may enact in the future.

Pieridae currently holds interests in natural gas properties, along with related assets primarily in the Canadian provinces of Alberta and British Columbia. Pieridae formerly held interests in oil and natural gas assets in the province of Quebec. Pieridae also owns assets associated with its suspended Goldboro LNG project in the province of Nova Scotia. Pieridae's assets and operations are regulated by administrative agencies that derive their authority from legislation enacted by the applicable level of government. Regulated aspects of Pieridae's natural gas business include all manner of activities associated with the exploration for and production of natural gas and associated liquids, including, among other matters: (i) permits for the drilling of wells and construction of related infrastructure; (ii) technical drilling and well requirements; (iii) permitted locations and access to operation sites; (iv) operating standards regarding conservation of produced substances and avoidance of waste, such as restricting flaring and venting; (v) minimizing environmental impacts, including by reducing emissions; (vi) storage, injection, and disposal of substances associated with production operations; and (vii) the abandonment and reclamation of impacted sites. In order to conduct natural gas operations and remain in good standing with the applicable federal or provincial regulatory scheme, producers must comply with applicable legislation, regulations, orders, directives, and other directions (all of which are subject

to governmental oversight, review and revision, from time to time). Compliance in this regard can be costly and a breach of the same may result in fines or other sanctions.

The discussion below outlines some of the principal aspects of the legislation, regulations, agreements, orders, directives, and a summary of other pertinent conditions that impact the crude oil and natural gas industry in western Canada. While these matters do not affect Pieridae's operations in any manner that is materially different than the manner in which they affect other similarly-sized industry participants with similar assets and operations, investors should consider such matters carefully.

## Land Tenure

Provincial and federal governments grant rights to explore for and produce oil and natural gas over government owned mineral rights pursuant to leases, licenses, and permits for varying terms, and on conditions set in provincial legislation including requirements to perform specific work or make payments. In Alberta and British Columbia, the provincial governments own most of the mineral rights to the crude oil and natural gas located within their respective provincial borders. Provincial governments grant rights to explore for and produce crude oil and natural gas pursuant to leases, licences, and permits (collectively, "leases") for varying terms, and on conditions set forth in provincial legislation, including requirements to perform specific work or make payments in lieu thereof. The provincial governments in western Canada conduct regular land sales where energy companies bid for the leases necessary to explore for and produce crude oil and natural gas owned by the respective provincial governments. These leases generally have fixed terms, but they can be continued beyond their initial terms if the necessary conditions are satisfied.

Continuing interests in petroleum and natural gas leases are earned by drilling wells. A lease can be extended indefinitely at the end of its initial term by drilling and producing a successful well, being part of a unit agreement or paying offset compensation. The tenure comes to an end when the holder can no longer prove its well is capable of producing oil or gas.

Many jurisdictions in Canada have legislation in place for mineral rights reversion to the Crown of stratigraphic formations that cannot be shown to be productive at the end of their initial term. In some provinces, energy companies are able to continue lease terms for non-productive lands if certain criteria are met under the relevant legislation.

Certain oil and natural gas mineral interests are privately-owned and rights to explore and produce on such lands are granted by leases on the terms and conditions negotiated between the landowner and the lessee.

Pieridae is a leaseholder on a number of properties governed by the Indian Oil and Gas Commission ("IOGC"). Canada has been working in partnership with oil and gas producing First Nations to modernize the legislative and regulatory regime for oil and gas activity on First Nations lands. With the formal proclamation of the *Indian Oil and Gas Regulations, 2019* ("2019 Regulations"), the *Indian Oil and Gas Act, 2009* and its 2019 Regulations both became law August 1, 2019. The IOGA and the 2019 Regulations govern both surface and subsurface and leases establish the terms and conditions with which an IOGC leaseholder must comply.

## Québec

On August 23, 2022, Bill 21: *Act ending exploration for petroleum and underground reservoirs and production of petroleum and brine* (CQLR, C. R-1.01) was enacted by the National Assembly of Quebec. This law has cancelled and terminated all existing permits in Quebec. Pieridae maintains custody over and abandonment obligation for the existing non-producing wells and is evaluating applying under the compensation program created by Bill 21.

## Environmental Regulations

The oil and natural gas industry is currently subject to environmental regulations pursuant to a variety of provincial and federal legislation, all of which is subject to governmental review and revision from time to time. Such legislation provides for, among other things, restrictions and prohibitions on the spill, release or emission of various substances produced or used in association with certain oil and gas industry operations, such as sulphur dioxide and nitrous oxide. In addition, such legislation sets out the requirements with respect to oilfield waste handling and disposal, habitat protection and the satisfactory operation, maintenance, abandonment and reclamation of well, facility, and pipeline sites. Compliance with such legislation can require significant expenditures and a breach of such requirements may result in the suspension or revocation of necessary licenses and authorizations, civil liability for pollution damage, and the imposition of material fines and penalties. In addition to these specific, known requirements, future changes to environmental legislation may impose further requirements on operators and other companies in the oil and natural gas industry.

Pieridae conducts business in the following jurisdictions, each with its own environmental regulatory framework:

### Federal

Canadian environmental regulation is the responsibility of both the federal and provincial governments. While provincial governments and their delegates are responsible for most environmental regulation, the federal government can regulate

environmental matters where they impact matters of federal jurisdiction or when they arise from projects that are subject to federal jurisdiction, such as interprovincial transportation undertakings, including pipelines and railways, and activities carried out on federal lands. Where there is a direct conflict between federal and provincial environmental legislation in relation to the same matter, the federal law prevails.

The Canadian Energy Regulator Act ("CERA") and the Impact Assessment Act (the "IAA") provide a number of important elements to the regulation of federally regulated major projects and their associated environmental assessments. The CERA separates the Canadian Energy Regulator's ("CER") administrative and adjudicative functions. The CER has jurisdiction over matters such as the environmental and economic regulation of pipelines, transmission infrastructure, and certain offshore renewable energy projects. In its adjudicative role, the CERA tasks the CER with reviewing applications for the development, construction, and operation of many of these projects, culminating in their eventual abandonment.

The IAA relies on a designated project list as a trigger for a federal assessment. Designated projects that may have effects on matters within federal jurisdiction will generally require an impact assessment administered by the Impact Assessment Agency (the "IA Agency") or, in the case of certain pipelines, a joint review panel comprised of members from the CER and the IA Agency. The impact assessment requires consideration of the project's potential adverse effects and the overall societal impact that a project may have, both of which may include a consideration of, among other items, environmental, biophysical and socio-economic factors, climate change, and impacts to Indigenous rights. It also requires an expanded public interest assessment. Designated projects specific to the crude oil and natural gas industry include pipelines that require more than 75 kilometres of new rights of way and pipelines located in national parks, large scale in situ oil sands projects not regulated by provincial greenhouse gas ("GHG") emissions caps, and certain refining, processing, and storage facilities.

The federal government has stated that an objective of the legislative changes was to improve decision certainty and turnaround times. Once a review or assessment is commenced under either the CERA or IAA, there are limits on the amount of time the relevant regulatory authority will have to issue its report and recommendation. Designated projects will go through a planning phase to determine the scope of the impact assessment, which the federal government has stated should provide more certainty as to the length of the full review process.

In May 2022, the Alberta Court of Appeal released its decision in response to the Government of Alberta's submission of a reference question regarding the constitutionality of the IAA. The Court found the IAA to be unconstitutional in its entirety, stating that the legislation effectively granted the federal government a veto over projects that were wholly within provincial jurisdiction. Shortly after the decision was released, the Government of Canada announced its intention to appeal the decision to the Supreme Court of Canada.

### **Alberta**

The AER is the principal regulator responsible for all energy resource development in Alberta. It derives its authority from the Responsible Energy Development Act (the "REDA"), and a number of related statutes including the Oil Sands Conservation Act, the Pipeline Act, and the Oil and Gas Environmental Protection and Enhancement Act. The AER is responsible for ensuring the safe, efficient, orderly, and environmentally responsible development of hydrocarbon resources, including allocating and conserving water resources, managing public lands, and protecting the environment. The AER's responsibilities exclude the functions of the Alberta Utilities Commission and the Land and Property Rights Tribunal, as well as the Alberta Ministry of Energy's responsibility for mineral tenure.

The Government of Alberta relies on regional planning to accomplish its resource development goals. Its approach to natural resource management provides for engagement and consultation with stakeholders and the public and examines the cumulative impacts of development on the environment and communities. While the AER is the primary regulator for energy development, several other governmental departments and agencies may be involved in land use issues, including the Alberta Ministry of Environment and Parks, the Alberta Ministry of Energy, the Aboriginal Consultation Office, and the Land Use Secretariat.

The Government of Alberta's land-use policy sets out an approach to manage public and private land use and natural resource development in a manner that is consistent with the long-term economic, environmental, and social goals of the province. It calls for the development of seven region-specific land-use plans in order to manage the combined impacts of existing and future land use within a specific region and the incorporation of a cumulative effects management approach into such plans.

### **British Columbia**

In British Columbia, the Oil and Gas Activities Act (the "OGAA") regulates conventional crude oil and natural gas producers, shale gas producers and other operators of crude oil and natural gas facilities in the province. Under the OGAA, the British Columbia Energy Regulator ("BCER") has broad powers, particularly with respect to compliance, enforcement and the setting of technical safety and operational standards for crude oil and natural gas activities. The Environmental Protection and Management Regulation establishes the government's environmental objectives and requires the BCER to consider these environmental objectives in deciding whether or not to authorize a particular activity. In addition, the Petroleum and Natural Gas Act, in conjunction with the OGAA, requires proponents to obtain various approvals before undertaking exploration or production work.

Such approvals are given subject to environmental considerations and permits, licences and project approvals can be suspended or cancelled for failure to comply with this legislation or its regulations.

In November 2022, the Government of British Columbia passed the Energy Statutes Amendment Act, 2022 (the "**ESA Act**"), changing the name of the British Columbia Oil and Gas Commission to the British Columbia Energy Regulator and expanding its mandate to include oversight of hydrogen, ammonia, and methanol. In support of the government's stated desire to transition away from fossil fuels and grow the province's hydrogen industry, the OGAA will also be renamed the Energy Resources Activities Act (the "**ERAA**"). In addition to expanding the BCER's jurisdiction to include hydrogen, ammonia, and methanol, the updated ERAA will also expand director and officer responsibility for costs associated with orphan sites.

An updated Environmental Assessment Act came into force in December 2019. The new assessment regime subjects proposed projects to an enhanced environmental review process that, among other things, emphasises early engagement and aims to enhance Indigenous engagement in the project approval process with an emphasis on consensus-building. Simultaneously with the enactment of the Environmental Assessment Act, the Government of British Columbia enacted the accompanying Reviewable Projects Regulation, which sets out the projects subject to the new regime. The "project list" captures industrial, mining, energy, water management, waste disposal, transportation, and other GHG intensive projects. In conducting an environmental assessment, the British Columbia Environmental Assessment Office will consider the environmental, health, cultural, social, and economic effects of a proposed project.

### **Nova Scotia**

Environmental laws in Nova Scotia are largely set out in the *Environment Act* and it applies to LNG activities. Other provincial departments such as Lands and Forestry and the Department of Energy and Mines also administer legislation which applies to LNG projects and concerns environmental protection. In addition, federal departments and agencies administer legislation associated with LNG, such as Transport Canada and the Department of Fisheries and Oceans. Many large projects are subject to the Nova Scotia environmental assessment approval process.

### **Royalties**

In addition to federal regulations, each province has legislation which governs royalties, production rates and other matters. The royalty regimes in Alberta and BC are a significant factor in the profitability of oil, NGLs, sulphur and natural gas production in Alberta and B.C. Royalties payable on production from private lands are determined by negotiation between the mineral owner and the lessee, although production from such lands is subject to certain provincial taxes and royalties. Royalties from production on Crown lands are determined by governmental regulation and are generally calculated as a percentage of the value of gross production. Royalty rates generally depend in part on prescribed reference prices, well productivity and depth, geographical location, field discovery date, method of recovery, and the type or quality of the petroleum produced. Other royalties and royalty-like interests are, from time to time, carved out of the working interest owner's interest through non-public transactions. These are often referred to as overriding royalties, gross overriding royalties, net profits interests, or net carried interests.

Occasionally some Canadian provinces create incentive programs for exploration and development. Such programs often provide for royalty rate reductions, royalty holidays or royalty tax credits and are generally introduced when commodity prices are low to encourage exploration and development activity by improving earnings and cash flow within the industry.

The federal government has signaled it will phase out certain subsidies for the oil and gas industry, which include only allowing the use of the Canadian Exploration Expenses tax deduction in cases of successful exploration. The federal government has also implemented a more stringent review for pipelines and major energy projects and established a pan-Canadian legislative framework for combating climate change. These policies can affect earnings of companies operating in the oil and natural gas industry. Pieridae conducts business in the following provinces, each with its own royalties framework:

### **Alberta**

On January 29, 2016, the Government of Alberta released and accepted the Royalty Review Advisory Panel's recommendations, which outlined the implementation of a "Modernized Royalty Framework" for Alberta (the "**MRF**"). The MRF took effect on January 1, 2017. Wells drilled prior to January 1, 2017 continue to be governed by the prior "Alberta Royalty Framework" (the "**ARF**") for a period of 10 years, until January 1, 2027. The MRF is structured in three phases: (i) Pre-Payout, (ii) Mid-Life, and (iii) Mature. During the Pre-Payout phase, a fixed five per cent royalty applies until the well reaches payout. Well payout occurs when the cumulative revenue from a well is equal to the Drilling and Completion Cost Allowance (determined by a formula that approximates drilling and completion costs for wells based on depth, length, and historical costs). The new royalty rate will be payable on gross revenue generated from all production streams (crude oil, natural gas, and NGLs), eliminating the need to label a well as "oil" or "gas". Post-payout, the Mid-Life phase will apply a higher royalty rate than the Pre-Payout phase. In the Mature phase, once a well reaches the tail end of its cycle and production falls below a Maturity Threshold, the royalty rate will move to a sliding scale (based on volume and price) with a minimum gross royalty rate of five per cent. The downward adjustment of the royalty rate in the mature phase is intended to account for the higher per-unit fixed cost involved in operating an older well.

**TABLE 24: Alberta Crown Royalty Regime**

Alberta Royalty Regimes Summary				
Royalty Regime	Product	Pre-payout	Post-payout or Mid-life (MRF)	Mature Phase (MRF)
ARF – Royalty formulas based on price and production	Crude Oil	5%	0% to 40%	
	Natural Gas		5% to 36%	
	Liquids – C3 & C4 / C5+		Flat 30% / Flat 40%	
MRF – Royalty formulas based on price with a reduction for lower production during the mature phase	Crude Oil / Condensate / C5+	Pre-payout 5%	10% to 40%	Minimum 5%
	Natural Gas		5% to 36%	
	C3 / C4		10% to 36%	

**British Columbia**

On October 7, 2021, the Government of British Columbia launched a comprehensive review of its oil and gas royalty system. The new oil and gas royalty system (the "New Framework") was announced in May 2022. The New Framework increases the minimum royalty rate from three per cent to five per cent, and eliminates the Deep Well, Marginal Well, Ultra-marginal Well, Low Productivity Well Rate Reduction, and Clean Growth Infrastructure royalty programs (the "Old Royalty Programs"). New wells drilled under the New Framework will pay the flat royalty of five per cent until capital spent on drilling and completions is recovered, at which point they will move to a price-sensitive royalty rate between five per cent and 40 per cent, depending on the specific commodity being produced.

Wells drilled on or after September 1, 2022 are not eligible to qualify for the Old Royalty Programs, and will pay a five per cent royalty rate for the equivalent of the first 12 months of production. Following this period, these wells will pay the prevailing price-sensitive royalty rates until September 1, 2024 when all wells will be transitioned to the New Framework. Wells drilled prior to September 1, 2022 will pay royalties based on the current framework until September 1, 2024, at which time those wells will be transitioned to the New Framework and will no longer be able to take advantage of the Old Royalty Programs.

The royalty payable on natural gas produced on Crown lands is determined by a sliding scale formula based on a reference price, which is the greater of the average net price obtained by the producer and a prescribed minimum price. For natural gas wells, the royalty rate depends on the date of acquisition of the tenure rights and the spud date of the well. The royalties payable on NGLs produced on Crown lands are levied at a flat rate of 20 per cent of the sales volume.

**Pricing and Marketing**

**Natural Gas**

The price of natural gas is determined by negotiations between buyers and sellers. In Canada there is a robust and liquid marketplace for natural gas. Natural gas prices depend, in part, on natural gas quality produced, the price of competing fuels such as coal or distillates, the distance to market, the ability to access pipeline transportation to markets, the length of contract term, seasonal weather conditions, the supply/demand balance for natural gas, and the economy in general.

Natural gas exported from Canada is subject to regulation by the CER. In general, exporters are free to negotiate prices and terms with counterparties, provided the export contracts meet certain other criteria prescribed by the CER and the Government of Canada. Natural gas exports for a term of two years or less require Order from the CER and the exporter must report the volumes of natural gas that have been exported. The majority of natural gas is exported from Canada under such orders. For longer terms, the proponent requires an export license from the CER. As part of considering an export license request, the CER considers if Canada will have adequate supplies domestically if the license is granted.

Alberta’s natural gas market has been deregulated since 1985. Natural gas supply and demand determine the market price of natural gas. Sales from natural gas can occur at the wellhead, the outlet of a gas processing plant, on a gas transmission system such as the NOVA system known as Alberta “NIT” (Nova Inventory Transfer), at a storage facility, at the inlet to a utility system, or at the point of receipt by the consumer. Accordingly, the price for natural gas is dependent upon such producer’s own arrangements (whether long or short-term contracts and the specific point of sale). As natural gas is also traded on electronic trading platforms such as the Natural Gas Exchange (“NGX”) which is owned by the Intercontinental Exchange, or on the New York Mercantile Exchange (“NYMEX”) in the United States, spot and future prices can also be influenced by supply and demand fundamentals on these platforms.

British Columbia's natural gas market has also been deregulated since 1985. British Columbia is a much smaller producing basin than Alberta and has less of a large industrial load than Alberta. Pricing for B.C. natural gas is similar to Alberta, with two major pricing points. The first is in Northern B.C. on the Spectra (Enbridge) pipeline system at a point known as Station 2. This point tends to trade at a discount to Alberta prices normally. The second location is at the B.C.-U.S. border where gas is exported into Washington State. This point also carries a differential relationship with Alberta gas, but not to the same extent as at Station 2. B.C. natural gas is also traded on electronic trading platforms such as the NGX.

### **Natural Gas Liquids**

In Canada, the price of NGLs such as ethane, butane, and propane sold in intra-provincial, interprovincial and international trade is determined by negotiation between buyers and sellers across many markets in North America. Such price depends, in part, on the quality of the NGL, prices of competing chemical feed stock, distance to market, access to downstream transportation, length of contract term, the supply/demand balance and other contractual terms. There are also electronic exchanges for the sale of NGLs on the NYMEX. NGLs exported from Canada are subject to regulation by the CER and require an order from the CER. Exporters are free to negotiate prices and other terms with purchasers, provided the export contracts meet the criteria prescribed by the CER. Propane and butane may be exported under an order for a term of no more than one year, and ethane may be exported under an order for no more than two years. All exports of NGLs require an order of the CER.

### **Condensate**

Condensate, also included as part of NGLs, is a low-density mixture of hydrocarbon liquids in the raw natural gas produced from many natural gas fields. It is also called condensate, gas condensate, or natural gasoline. In Alberta, condensate is commonly blended with heavy oil to create lighter oils for shipment by pipeline or rail, which is why condensate is referred to as a diluent for heavy oil. Condensate pricing in Alberta is typically priced as a differential to the NYMEX futures exchange WTI crude oil contract and can provide a very visible and liquid hedging instrument to use. Hedging is typically done with fixed priced sales, over the counter hedge contracts, or futures contracts.

### **Sulphur**

Most Alberta sulphur production comes from the production of oil and natural gas. Most sulphur produced in Alberta is exported, mainly to the U.S. or Asia. In general, the sulphur markets worldwide are a very illiquid market, with very poor price discovery. Typically, contracts are on a one-off basis between counterparties. Currently there are not any financial instruments which would allow a sulphur producer to hedge prices, however physical fixed-price or collared contracts provide price certainty during the contract period. Pieridae sells sulphur to markets in the U.S. and to Asia. It normally negotiates prices with a price floor and cap in order to manage its price risk.

## **Transportation Constraints and Market Access**

### **Natural Gas and Liquefied Natural Gas**

Natural gas prices in western Canada have been volatile in recent years due to increasing North American supply, limited access to markets, and limited storage capacity. Required repairs or upgrades to existing pipeline systems in western Canada have also led to reduced capacity and apportionment of access, the effects of which have been exacerbated by storage limitations. Companies that secure firm access to infrastructure to transport their natural gas production out of western Canada may be able to access more markets and obtain better pricing. Companies without firm access may be forced to accept spot pricing in western Canada for their natural gas, which is generally lower than the prices received in other North American regions. While a number of LNG export plants have been proposed in Canada, regulatory and legal uncertainty, social and political opposition, and changing market conditions have resulted in the cancellation or delay of many of these projects.

## **International Trade**

Canada is party to a number of international trade agreements with other countries around the world that generally provide for, among other things, preferential access to various international markets for certain Canadian export products. Examples of such trade agreements include the Comprehensive Economic and Trade Agreement ("CETA"), the Comprehensive and Progressive Agreement for Trans-Pacific Partnership and, most prominently, the United States Mexico Canada Agreement (the "USMCA"), which replaced the former North American Free Trade Agreement ("NAFTA") on July 1, 2020. Because the United States remains Canada's primary trading partner and the largest international market for the export of crude oil, natural gas, and NGLs from Canada, the implementation of the USMCA could impact western Canada's oil and natural gas industry as a whole, including Pieridae's business.

While the proportionality rules in Article 605 of NAFTA previously prevented Canada from implementing policies that limit exports to the United States and Mexico relative to the total supply produced in Canada, the USMCA does not contain the same proportionality requirements. This may allow Canadian producers to develop a more diversified export portfolio than was possible under NAFTA, subject to the construction of infrastructure allowing more Canadian production to reach eastern Canada, Asia, and Europe.

Canada is also party to the CETA, which provides for duty-free, quota-free market access for Canadian crude oil and natural gas products to the European Union. Following the United Kingdom's departure from the European Union on January 31, 2020, the United Kingdom and Canada entered into the Canada-United Kingdom Trade Continuity Agreement ("**CUKTCA**"), which replicates CETA on a bilateral basis to maintain the status quo of the Canada-United Kingdom trade relationship.

While it is uncertain what effect CETA, CUKTCA or any other trade agreements will have on the crude oil and natural gas industry in Canada, the lack of available infrastructure for the offshore export of crude oil and natural gas may limit the ability of Canadian crude oil and natural gas producers to benefit from such trade agreements.

### Liability Management Rating Programs

The provinces of Alberta and British Columbia have each implemented similar liability management programs in respect to upstream crude oil and natural gas wells, facilities, and pipelines. These programs are designed to assess a licensee's ability to address its suspension, abandonment, remediation, and reclamation liabilities. A licensee whose deemed liabilities exceed its deemed assets within the jurisdiction is required to provide a security deposit.

#### Alberta

The AER administers the Liability Management Framework (the "**AB LM Framework**") and the Liability Management Rating Program (the "**AB LMR Program**") to manage liability for most conventional upstream crude oil and natural gas wells, facilities, and pipelines in Alberta. The AER is in the process of replacing the AB LMR Program with the AB LM Framework. This change was affected under key new AER directives in 2021, and further updates released in 2022.

Broadly, the AB LM Framework is intended to provide a more holistic approach to liability management in Alberta, as the AER found that the more formulaic approach under the AB LMR Program did not necessarily indicate whether a company could meet its liability obligations. New developments under the AB LM Framework include a new Licensee Capability Assessment System (the "**AB LCA**"), a new Inventory Reduction Program (the "**AB IR Program**"), and a new Licensee Management Program ("**AB LM Program**"). Meanwhile, some programs under the AB LMR Program remain in effect, including the Oilfield Waste Liability Program (the "**AB OWL Program**"), the Large Facility Liability Management Program (the "**AB LF Program**") and elements of the Licensee Liability Rating Program (the "**AB LLR Program**"). The mix between active programs under the AB LM Framework and the AB LMR Program highlights the transitional and dynamic nature of liability management in Alberta. While the province is moving towards the AB LM Framework and a more holistic approach to liability management, the AER has noted that this will be a gradual process that will take time to complete. In the meantime, the AB LMR Program continues to play an important role in Alberta's liability management scheme.

Complementing the AB LM Framework and the AB LMR Program, Alberta's Oil and Gas Conservation Act establishes an orphan fund (the "**Orphan Fund**") to help pay the costs to suspend, abandon, remediate and reclaim a well, facility or pipeline included in the AB LLR Program and the AB OWL Program if a licensee or working interest participant becomes insolvent or is unable to meet its obligations. Licensees in the AB LLR Program and the AB OWL Program, including Pieridae, fund the Orphan Fund through a levy administered by the AER. However, given the increase in orphaned crude oil and natural gas assets, the Government of Alberta has loaned the Orphan Fund approximately \$335 million to carry out abandonment and reclamation work. A separate orphan levy applies to persons holding licences subject to the AB LF Program. Collectively, these programs are designed to minimize the risk to the Orphan Fund posed by the unfunded liabilities of licensees and to prevent the taxpayers of Alberta from incurring costs to suspend, abandon, remediate and reclaim wells, facilities or pipelines.

The Supreme Court of Canada's decision in *Orphan Well Association v Grant Thornton* (also known as the "Redwater" decision), provides the backdrop for Alberta's approach to liability management. As a result of the Redwater decision, receivers and trustees can no longer avoid the AER's legislated authority to impose abandonment orders against licensees or to require a licensee to pay a security deposit before approving a licence transfer when any such licensee is subject to formal insolvency proceedings. This means that insolvent estates can no longer disclaim assets that have reached the end of their productive lives (and therefore represent a net liability) in order to deal primarily with the remaining productive and valuable assets without first satisfying any abandonment and reclamation obligations associated with the insolvent estate's assets. In April 2020, the Government of Alberta passed the Liabilities Management Statutes Amendment Act, which places the burden of a defunct licensee's abandonment and reclamation obligations first on the defunct licensee's working interest partners, and second, the AER may order the Orphan Fund to assume care and custody and accelerate the clean-up of wells or sites which do not have a responsible owner. These changes came into force in June 2020.

One important step in the shift to the AB LM Framework has been amendments to Requirements for Acquiring and Holding Energy Licences and Approvals Directive 067: Eligibility ("**Directive 067**"), which deals with licensee eligibility to operate wells and facilities. All licence transfers and the granting of new well, facility, and pipeline licences in Alberta are subject to AER approval. Previously under the AB LMR Program, as a condition of transferring existing AER licences, approvals, and permits, all transfers required transferees to demonstrate that they had a liability management rating of 2.0 or higher immediately following the transfer. If transferees did not have the required rating, they would have to otherwise prove to the satisfaction of the AER that

they could meet their abandonment and reclamation obligations, through means such as posting security or reducing their existing obligations. However, amendments from April 2021 to Directive 067 expanded the criteria for assessing licensee eligibility. Notably, the recent amendments increase requirements for financial disclosure, detail new requirements for when a licensee poses an "unreasonable risk" of orphaning assets and adds additional general requirements for maintaining eligibility.

Alongside changes to Directive 067, the AER introduced Directive 088: Licensee Life-Cycle Management ("**Directive 088**") in December 2021 under the AB LM Framework. Directive 088 replaces, to an extent, the AB LLR Program with the AB LCA. Whereas the AB LLR Program previously assessed a licensee based on a liability rating determined by the ratio of a licensee's deemed asset value relative to the deemed liability value of its crude oil and natural gas wells and facilities, the AB LCA now considers a wider variety of factors and is intended to be a more comprehensive assessment of corporate health. Such factors are wide reaching and include: (i) a licensee's financial health; (ii) its established total magnitude of liabilities, (iii) the remaining lifespan of its mineral resources and infrastructure; (iv) the management of its operations; (v) the rate of closure activities and spending, and pace of inactive liability growth; and (vi) and its compliance with administrative and regulatory requirements. These various factors feed into a broader holistic assessment of a licensee under the AB LM Framework. In turn, that holistic assessment provides the basis for assessing risk posed by licence transfers, as well as any security deposit that the AER may require from a licensee in the event that the regulator deems a licensee at risk of not being able to meet its liability obligations. However, the liability management rating under the LLR Program is still in effect for other liability management programs such as the AB OWL Program and the AB LF Program and will remain in effect until a broadened scope of Directive 088 is phased in over time.

In addition to the AB LCA, Directive 088 also implemented other new liability management programs under the AB LM Framework. These include the AB LM Program and the AB IR Program. Under the AB LM Program the AER will continuously monitor licensees over the life-cycle of a project. If, under the AB LM Program, the AER identifies a licensee as high risk, the regulator may employ various tools to ensure that a licensee meets its regulatory and liability obligations. In addition, under the AB IR Program the AER sets industry-wide spending targets for abandonment and reclamation activities. Licensees are then assigned a mandatory licensee specific target based on the licensee's proportion of provincial inactive liabilities and the licensee's level of financial distress. Certain licensees may also elect to provide the AER with a security deposit in place of their closure spend target. The AER has also indicated that it will implement a closure nomination program (the "**CN Program**") in 2023. Under the program, those who qualify may nominate certain crude oil and natural gas sites for closure. Details regarding the CN Program and the mechanism through which nominated sites will be abandoned and reclaimed are forthcoming.

The Government of Alberta followed the announcement of the AB LM Framework with amendments to the Oil and Gas Conservation Rules and the Pipeline Rules in late 2020. The changes to these rules fall into three principal categories: (i) they introduce "closure" as a defined term, which captures both abandonment and reclamation; (ii) they expand the AER's authority to initiate and supervise closure; and (iii) they permit qualifying third parties on whose property wells or facilities are located to request that licensees prepare a closure plan.

To address abandonment and reclamation liabilities in Alberta, the AER also implements, from time to time, programs intended to encourage the decommissioning, remediation, and reclamation of inactive or marginal crude oil and natural gas infrastructure. In 2018, for example, the AER announced a voluntary area-based closure ("**ABC**") program. The ABC program is designed to reduce the cost of abandonment and reclamation operations through industry collaboration and economies of scale. Parties seeking to participate in the program must commit to an inactive liability reduction target to be met through closure work performed on inactive assets. Pieridae currently participates in the ABC program and continues to allocate funds to abandonment and reclamation operations and is in compliance with all requirements.

### **British Columbia**

Similar to Alberta, the BCER has moved away from the formulaic approach to liability management set out in the Liability Management Rating Program, towards a more holistic assessment of a permit holder's ability to meet its abandonment and reclamation obligations. The BCER implemented the Permittee Capability Assessment (the "**BC PCA**") on April 1, 2022. Under the BC PCA, the financial risk of a permit holder is assessed based on its: (i) assets to liabilities ratio; (ii) net profit margin (three-year average); (iii) interest coverage ratio; (iv) cash flow to debt ratio; and (v) debt to equity ratio. A permit holder is assessed on these factors based on the financial information it is required to submit to the BCER intermittently throughout the year. The permit holder is then evaluated on the magnitude of its liabilities, based on the deemed abandonment, assessment, remediation, and reclamation liability associated with the permit holder's dormant, inactive, and marginal sites. If the BCER deems a permit holder to be high-risk under the BC PCA based on its financial risk and the magnitude of its liabilities, the regulator may require that permit holder to engage in corrective action. Corrective action could include the submission of security deposits and/or the completion of liability reduction work. Regarding the latter, the BCER will attempt to engage with permit holders to develop corrective action plans prior to issuing corrective action requirements.

In the spring of 2019, a liability-based levy paid to the Orphan Site Reclamation Fund ("**OSRF**") replaced the orphan site reclamation fund tax paid by permit holders. Similar to Alberta's Orphan Fund, the OSRF is an industry-funded program created to address the abandonment and reclamation costs for orphan sites. Permit holders are required to pay their proportionate share of the levy. The OGAA permits the BCER to impose more than one levy in a given calendar year.

The Dormancy and Shutdown Regulation (the "**Dormancy Regulation**") establishes the first set of legally imposed timelines for the restoration of crude oil and natural gas wells in western Canada. The Dormancy Regulation classifies different sites based on activity levels associated with each site, with a goal of ensuring that 100 per cent of currently dormant sites are reclaimed by 2036 with additional regulated timelines for sites that become dormant between 2019 and 2023 or become dormant after 2024. A permit holder will have varying reporting, decommissioning, remediation, and reclamation obligations that depend on the classification of its sites. Any permit holder that has a dormant site in its portfolio must develop and submit an annual work plan to the BCER, outlining its decommissioning and restoration activities for each calendar year. The permit holder must also prepare and submit a retrospective annual report within 60 days of the end of the calendar year in which it conducted the work outlined in the corresponding annual work plan.

The Government of British Columbia passed amendments to the Statutes Amendment Act (No.2) Oil and Gas Activities Act in October 2021. These amendments allow the BCER to grant exemptions for strict compliance with the requirements of the Dormancy Regulation. In turn, this may mean that a permit holder can, with approval, depart from the regulated timelines set under the Dormancy Regulation. The relevant amendments which provide the BCER with the power to grant these exemptions came into force on October 28, 2021.

## Climate Change Regulations

Climate change regulation at each of the international, federal, and provincial levels has the potential to significantly affect the future of the oil and natural gas industry in Canada. These impacts are uncertain, and it is not possible to predict what future policies, laws, and regulations will entail. Any new laws and regulations (or additional requirements to existing laws and regulations) could have a material impact on Pieridae's operations and cash flow.

### Federal

Canada has been a signatory to the United Nations Framework Convention on Climate Change (the "**UNFCCC**") since 1992. Since its inception, the UNFCCC has instigated numerous policies with respect to climate governance. On April 22, 2016, 197 countries signed the Paris Agreement, committing to prevent global temperatures from rising more than 2° Celsius above pre-industrial levels and to pursue efforts to limit this rise to no more than 1.5° Celsius. To date, 194 of the 198 current parties to the UNFCCC have ratified the Paris Agreement. Canada ratified the Paris Agreement on October 5, 2016, and pledged to cut its emissions by 30% from 2005 levels by 2030.

Additionally, on December 9, 2016, the federal government announced the Pan-Canadian Framework on Clean Growth and Climate Change (the "**PCF**") and on April 1, 2019, implemented a Canada-wide GHG pricing scheme through the *Greenhouse Gas Pollution Pricing Act* (the "**GGPPA**"). It requires each province to adopt a GHG cap and trade system or a carbon tax regime which will result in emission reductions equivalent to the federal scheme. In 2018, the federal government imposed a price on GHG of \$20 per tonne on any province or territory which failed to implement its own system and as of April 1, 2020, the federal GHG price was increased to \$30 per tonne. This amount increased by \$10 annually until it reached \$50 per tonne in 2022. In 2023 the GHG price will increase to \$65 per tonne and by \$15 per tonne per year thereafter until it reaches \$170 per tonne in 2030.

During the course of the 2021 United Nations Climate Change Conference in Glasgow, Scotland, Canada's Prime Minister Justin Trudeau made several pledges aimed at reducing Canada's GHG emissions and environmental impact, including: (i) reducing methane emissions in the crude oil and natural gas sector to 75 per cent of 2012 levels by 2030; (ii) ceasing export of thermal coal by 2030; (iii) imposing a cap on emissions from the crude oil and natural gas sector; (iv) halting direct public funding to the global fossil fuel sector by the end of 2022; and (v) committing that all new vehicles sold in the country will be zero-emission on or before 2040.

In line with the Prime Minister's pledge to impose a cap on emissions from the crude oil and natural gas sector, the federal government published a discussion paper on July 18, 2022, that outlines two potential regulatory options for such a cap. Those proposed options are either to: (i) implement a new cap-and-trade system that would set a limit on emissions from the sector; or (ii) modify the existing pollution pricing benchmark (as discussed below) to limit emissions from the sector. These options are currently under review and interested parties had the opportunity to make submissions regarding the proposed cap, ending in September 2022. The form of emissions cap on the crude oil and natural gas sector and the overall effect of such a cap remain uncertain.

On January 1, 2020, the federal *Regulations Respecting Reduction in the Release of Methane and Certain Volatile Organic Compounds (Upstream Oil and Gas Sector)* (the "**Federal Methane Regulations**") came into force. The Federal Methane Regulations require methane emissions from the oil and natural gas industry be reduced by introducing new control measures, such as the reduction of unintentional leaks and intentional venting of methane, as well as ensuring that oil and natural gas operations use low-emission equipment and processes. The Federal Methane Regulations do not apply in Alberta as the federal government has deemed Alberta's methane emission reduction requirements as equivalent to the Federal Methane Regulations.

On June 8, 2022 the Canadian Greenhouse Gas Offset Credit System Regulations were published in the Canada Gazette. The regulations establish a regulatory framework to allow certain kinds of projects to generate and sell offset credits for use in the federal Output Based Pricing System (“OBPS”) through Canada’s Greenhouse Gas Offset Credit System. The system enables project proponents to generate federal offset credits through projects that reduce GHG emissions under a published federal GHG offset protocol. Offset credits can then be sold to those seeking to meet limits imposed under the OBPS or those seeking to meet voluntary targets.

On June 20, 2022, the Clean Fuel Regulations came into force, establishing Canada’s Clean Fuel Standard. The Clean Fuel Standard will replace the former Renewable Fuels Regulation and aims to discourage the use of fossil fuels by increasing the price of those fuels when compared to lower-carbon alternatives. Coming into force in 2023, the Clean Fuel Standard will impose obligations on primary suppliers of transportation fuels in Canada and require fuels to contain a minimum percentage of renewable fuel content and meet emissions caps calculated over the life cycle of the fuel. The Clean Fuel Regulations also establish a market for compliance credits. Compliance credits can be generated by primary suppliers, among others, through carbon capture and storage, producing or importing low emissions fuel, or through end-use fuel switching (for example, operating an electric vehicle charging network).

The Government of Canada is also in the midst of developing a carbon capture utilization and storage (“CCUS”) strategy. CCUS is a technology that captures carbon dioxide from facilities, including industrial or power applications, or directly from the atmosphere. The captured carbon dioxide is then compressed and transported for permanent storage in underground geological formations or used to make new products such as concrete. Beginning in 2022, the federal government plans to spend \$319 million over seven years to ramp up CCUS in Canada, as this will be a critical element of the plan to reach net-zero by 2050.

### **Alberta**

Alberta enacted the *Climate Change and Emissions Management Act* on December 4, 2003. The Technology Innovation and Emissions Reduction (“TIER”) Regulation came into force January 1, 2020. The TIER Regulation applies to facilities that emitted 100,000 tonnes or more of GHGs per year in 2016 or a subsequent year. Under the TIER Regulation, a facility is required to reduce the GHG emission intensity of stationary fuel combustion emissions in 2020 by 10% relative to the facility’s historical baseline. The reduction requirement increased by 1% each year to end of 2022 and will increase by 2% per year thereafter. If the facility does not do so, it must pay \$40 per tonne of excess GHG emissions into a TIER fund for 2021, increasing to \$50 per tonne in 2022 or, subject to limits, use emission performance credits generated by facilities which have exceeded their emission reduction targets or offset credits generated by facilities not required to reduce their GHG emissions by the TIER Regulation. Payment into the TIER fund for 2023 is set at \$65 per tonne and increasing by \$15 per tonne per year thereafter until it reaches \$170 per tonne in 2030. The federal government has agreed Alberta’s system will result in emission reductions equivalent to the federal scheme for large emitters.

On June 4, 2019, the *Carbon Tax Repeal Act* repealed the Alberta carbon tax, which had been in effect since January 1, 2017. The federal government subsequently imposed the federal carbon tax on Alberta on January 1, 2020, as it had done in Ontario, New Brunswick, Manitoba, and Saskatchewan. In Alberta, the federal carbon tax is applicable to all sources of emissions covered by the federal carbon tax legislation, except for those facilities where the TIER Regulation applies or where facilities have been voluntarily opted-in to the TIER Regulation.

The Government of Alberta aims to lower annual methane emissions by 45 per cent by 2025. The Government of Alberta enacted the Methane Emission Reduction Regulation on January 1, 2020, and in November 2020, the Government of Canada and the Government of Alberta announced an equivalency agreement regarding the reduction of methane emissions such that the Federal Methane Regulations will not apply in Alberta.

### **British Columbia**

British Columbia enacted a revenue-neutral carbon tax that took effect July 1, 2008. The tax is consumption-based and applied at the time of retail sale or consumption of virtually all fossil fuels purchased or used in British Columbia. The current tax level is \$40 per tonne of GHG emissions equivalent.

In May 2018, the Government of British Columbia updated its Climate Leadership Plan (the “Plan”) with a goal to reduce net annual GHG emissions by up to 40% from 2007 levels by 2030, 60% by 2040 and 80% by 2050. The Plan includes various measures across the economy that are designed to incentivize the growth of the renewable energy sector, the use of low GHG emitting technologies, and the improvement of energy efficiency. Further, the Plan sets out a strategy to reduce methane emissions in the upstream natural gas sector, beginning with a target of a 45% reduction in fugitive and vented emissions by 2025 relative to 2014 levels. On January 1, 2020, the B.C. Commission brought into force regulations that will require mandatory methane leak detection and repair and equipment performance standards.

In October 2021, the Government of British Columbia announced a more ambitious climate change plan called the CleanBC Roadmap to 2030 (the “CleanBC Roadmap”), aimed at helping British Columbia achieve its 2030 emission reduction targets

established under the CleanBC plan. The CleanBC Roadmap includes plans for, among other things, laws requiring 90 per cent of new passenger vehicles sold in the province to be zero-emission by 2030, all new buildings to be zero-carbon beginning in 2030, the electrification of public transit and ferries, and for increased support for clean hydrogen and negative emissions technology. Further, the CleanBC Roadmap plans to increase carbon taxation in the province to meet or exceed the federal GGPPA benchmark.

In January 2020, the BCER implemented a series of amendments to the British Columbia Regulation Drilling and Production that will require facility and well permit holders to, among other things, reduce natural gas leaks and curb monthly natural gas emissions from their equipment and operations. In November 2020, the Government of Canada and the Government of British Columbia announced that they had finalized an equivalency agreement regarding the reduction of methane emissions such that the Federal Methane Regulations will not apply in British Columbia.

#### **Nova Scotia**

Nova Scotia enacted the *Sustainable Development Goals Act* on October 30, 2019, but has not declared it in force. It requires that emissions to be reduced by 53% below 2005 levels by 2030, moving the province to a net-zero carbon footprint by 2050 and creating a new fund to help communities fight climate change and grow the economy.

Nova Scotia’s cap-and-trade program began in January 2018 and sets a cap on the total amount of GHG emissions allowed in covered sectors in the province for the years 2019-2022 (compliance period). The program regulates the industrial, power, heat (buildings), and transport sectors and covers approximately 80% of GHG emissions in Nova Scotia.

### **Accountability and Transparency**

The federal *Extractive Sector Transparency Measures Act* (the “**ESTMA**”) imposes mandatory reporting requirements on certain entities engaged in the commercial development of oil, gas or minerals, which includes exploration, extraction and holding permits to explore or extract. All companies subject to ESTMA are required to report payments over \$100,000 made to any level of a Canadian or foreign government, including royalty payments, taxes (other than consumption taxes and personal income taxes), fees, production entitlements, bonuses, dividends (other than ordinary dividends paid to shareholders) and infrastructure improvement payments. These categories are distinct; regardless of the aggregate payment amount, one or more individual categories must reach the \$100,000 threshold for reporting to be required.

Any persons or entities found in violation of the ESTMA (which includes making a false report, failing to make the report public or failing to maintain records for the prescribed period) can be fined up to \$250,000 for each day that the offence continues. There is a further fine of up to \$250,000 for any person or entity who has structured payments in order to avoid the obligation to report such payments under the ESTMA. Officers or directors who authorized or acquiesced in the commission of an offence can be subject to personal liability, regardless of whether the entity for which they acted has been prosecuted or convicted. The ESTMA contains a due diligence defense whereby no person will be found guilty of an offence under the ESTMA if the person can establish that he or she exercised due diligence to avoid committing the offence. Additionally, there is a five-year limitation period (from the time when the subject matter of the proceeding arises) within which proceedings must be brought for offences under the ESTMA.

### **RISK FACTORS**

The business of exploring for, developing and producing oil and natural gas reserves is inherently risky. The following information is a summary only of certain risk factors relating to the Company and should be read in conjunction with the detailed information appearing elsewhere in this AIF. Each section of the below table of risk factors is arranged in order of perceived risk. Prospective investors should carefully consider the risk factors set out below and consider all other information contained in this AIF and in the Company’s other public filings before making an investment decision. The risks set out below are not an exhaustive list, nor should they be taken as a complete summary or description of all the risks associated with the Company’s business and the oil and natural gas business generally. Refer also to Pieridae’s MD&A and consolidated financial statements for the years ending December 31, 2022, and 2021, incorporated by reference into this AIF, for additional disclosure on risks.

**TABLE 25: Risk Factors**

<b>Risks Related to Pieridae’s Business and Industry</b>
Adverse Economic Conditions
Price, Volatility and Marketing of Oil, Gas and NGLs
Access to Capital
Liquidity
Operational Matters and Hazards
Labour Relations
Development and Production

Regulatory Permits, Licenses and Approvals
Political Uncertainty and Geo-Political Risk
Skilled Workforce
Pipeline Systems, Rail, Co-ownership of Assets, and Operational Dependence
Facilities Throughput and Utilization
Information Technology Systems and Cyber-Security
Inflation and Cost Management
Hedging Activities
Climate Change
Climate Change - Physical Risks
Climate Change - Transition Risks
Climate Change Regulations and Carbon Pricing
Variations in Foreign Exchange and Interest Rates
Royalty Regimes
Project Execution
Environmental
Third Party Credit Risk
Technological Change
Competition
Conflicts of Interest
Indigenous Land and Rights Claims
Reserve Estimates
Litigation
Insurance Coverage
Breach of Confidentiality
Reputational
<b>Risks Related to Pieridae's Common Shares</b>
Volatility
Return on Investment
Dilution

## Risks Related to Pieridae's Business and Industry

### Adverse Economic Conditions

*Adverse general economic, business, and industry conditions could have a material adverse effect on Pieridae's operational results and cash flow.*

The demand for energy, including oil and liquids and natural gas, is generally linked to broad-based economic activities. If there was a slowdown in economic growth, an economic downturn or recession, or other adverse economic or political development in the US, Europe, or Asia, there could be a significant adverse effect on global financial markets and commodity prices. In addition, hostilities in the Middle East, Ukraine, and Taiwan and the occurrence or threat of terrorist attacks in the US or other countries could adversely affect the global economy. Global or national health concerns, including the outbreak of pandemic or contagious diseases may adversely affect Pieridae by (i) reducing global economic activity thereby resulting in lower demand for oil and liquids and natural gas, (ii) impairing its supply chain, for example, by limiting the manufacturing of materials or the supply of goods and services used in Pieridae's operations, and (iii) affecting the health of its workforce, rendering employees unable to work or travel. These and other factors disclosed elsewhere in this AIF that affect the supply and demand for oil, natural gas and NGLs, and Pieridae's business and industry, could ultimately have an adverse impact on Pieridae's financial condition, financial performance, and cash flows.

### Prices, Volatility and Marketing of Oil, Natural Gas and NGLs

*The prices of oil, natural gas and NGLs are volatile, outside of Pieridae's control and affect Pieridae's financial condition, financial performance, cash flows, and future rate of growth.*

Pieridae's operating results, financial position and prospects are highly dependent on the prices obtained for its production. There have been significant fluctuations in oil and natural gas prices in recent years and months. These prices are based on international supply and demand as well as a number of other factors which are beyond Pieridae's control such as:

- domestic and global supply of and demand for oil and natural gas, as impacted by economic factors that affect gross domestic product growth rates of countries around the world, including impacts from international trade, pandemics, and related concerns.
- market expectations with respect to future supply of oil and natural gas demand and price changes.
- global oil and natural gas inventory levels.
- volatility and trading patterns in the commodity-futures markets.
- the proximity, capacity, cost, and availability of pipelines, LNG export facilities and other transportation infrastructure.
- the capacity of refiners and other industrial customers to utilize available supplies of oil and liquids.
- weather conditions affecting supply and demand.
- overall domestic and global political and economic conditions.
- actions of the Organization of Petroleum Exporting Countries, its members and other state-controlled oil companies relating to oil price and production controls.
- fluctuations in the value of the US dollar.
- the price and quantity of oil and liquids and LNG imports to and exports from the US and other countries.
- the development of new hydrocarbon exploration, production, and transportation methods of technological advancements in existing methods, including hydraulic fracturing.
- capital investments by oil and natural gas companies relating to the exploration, development, and production of hydrocarbons.
- policies affecting energy consumption and energy supply.
- domestic and foreign governmental regulations, including environmental regulations, climate change regulations and taxation.
- shareholder activism or activities by non-governmental organizations to limit certain sources of capital for the energy sector or restrict the exploration, development, and production of oil and natural gas; and
- the effect of energy conservation efforts and the price, availability, and acceptance of alternative energies, including renewable energy.

World prices for oil and natural gas have fluctuated widely in recent months and years. Oil and natural gas prices have varied greatly over the last two years and are expected to remain volatile in the near future in response to a variety of factors beyond Pieridae's control. Pieridae makes price assumptions that are used for planning purposes, and a significant portion of its cash outflows, including operating costs and transportation commitments, are largely fixed in nature. Accordingly, if commodity prices are below the expectations on which these commitments were based, Pieridae's financial results are likely to be adversely and disproportionately affected because these cash outflows are not variable in the short term and cannot be quickly reduced to respond to unanticipated decreases in commodity prices. Pieridae's risk management arrangements will not fully mitigate the effects of price volatility. Significant or extended price declines could also materially and adversely affect the amount of oil and natural gas that Pieridae can economically produce, require Pieridae to make significant downward adjustments to its reserve estimates, or result in deferral or cancellation of potential growth projects. A reduction in production could also result in a shortfall in expected cash flows and require Pieridae to have difficulty servicing its debt obligations, borrow additional funds or access capital markets to cover any such shortfall, if possible.

Certain wells or other projects may become uneconomic as a result of a decline in world oil prices and natural gas prices, leading to a reduction in the future volume of Pieridae's oil and gas production. Pieridae might also elect not to produce from certain wells at lower prices. All these factors could result in a material decrease in Pieridae's future net production revenue, causing a reduction in its oil and gas acquisition and development activities.

In addition to establishing markets for its oil and natural gas, Pieridae must also successfully market its oil and natural gas to prospective buyers. The marketability and price of oil and natural gas which may be acquired or discovered by Pieridae will be affected by numerous factors beyond its control. Pieridae will be affected by the differential between the price paid by refiners for light quality oil and the grades of oil produced by Pieridae. The ability of Pieridae to market natural gas may depend upon its ability to acquire space on pipelines which deliver natural gas to commercial markets. Pieridae will also likely be affected by deliverability uncertainties related to the proximity of its reserves to pipelines and processing facilities and related to operational problems with such pipelines and facilities and extensive government regulation relating to price, taxes, royalties, land tenure, allowable production, the export of oil and natural gas and the management of other aspects of the oil and natural gas business. Pieridae has limited direct experience in the marketing of oil and natural gas.

#### **Access to Capital**

*Pieridae may not be able to obtain access to additional capital required to support or grow its operations.*

Pieridae may require additional financing to support and or to grow its operations. Sources of additional funds available to Pieridae through financing activities includes, among other options, the issuance of additional shares, debt, a partnership agreement or a sale of an interest in an oil or natural gas property. Debt financing may further increase Pieridae's debt levels

above industry standards and equity issuances may be dilutive to existing shareholders. Depending on future development and exploration plans, Pieridae may require additional equity and/or debt financing that may not be available or available on favourable terms. The level of Pieridae's indebtedness that may occur from time to time could impair Pieridae's ability to obtain additional financing in the future on a timely basis to take advantage of business opportunities that may arise. Financing by way of a partnership or sale of an interest may reduce the interest held by Pieridae in the properties in respect of which the financing is obtained. There can be no assurance that such financing will be available to Pieridae. Furthermore, even if such financing is successfully secured, there can be no assurance it will be obtained on terms favourable to Pieridae or provide Pieridae with sufficient funds to meet its objectives. Pieridae's existing term loan expires on October 16, 2023; the Company is actively seeking to refinance this agreement prior to that date, however there is no assurance a refinancing will be completed. This may adversely affect Pieridae's business and financial position. If financing is obtained fully or partially by issuing additional equity, control of Pieridae may be affected.

A number of factors, including the effects of the use of hydrocarbons on climate change, the impact of oil and natural gas operations on the environment, environmental damage relating to spills during production and transportation, and Indigenous rights, have affected certain investors' sentiments towards investing in the oil and natural gas industry. As a result of these concerns, some institutional, retail, and governmental investors have determined to no longer invest in oil and natural gas assets or companies or are reducing the amount thereof over time. In addition, certain institutional investors are requesting that issuers develop and implement more robust ESG policies and practices. Developing and implementing such policies and practices can involve significant costs and require a considerable time commitment from the Board, management and employees of Pieridae. Failing to implement the policies and practices, as requested by institutional investors, may result in such investors reducing their investment in Pieridae, or not investing in Pieridae at all.

To the extent that external sources of capital become limited or unavailable or available on onerous terms, Pieridae's ability to make capital investments and maintain existing assets may be impaired, and its assets, liabilities, business, financial condition, and results of operations may be materially and adversely affected as a result.

#### **Liquidity**

*Pieridae's ability to fund current and future capital projects and carry out the business plan is dependent on its ability to generate cash flow and raise capital.*

Pieridae anticipates that it will need to make substantial capital expenditures for the acquisition, exploration development and production of oil and natural gas reserves in the future. If Pieridae's future revenues or additional financing is not sufficient, Pieridae may have limited ability to expend the capital necessary to undertake or complete future drilling and construction programs, or to support Pieridae's existing operations. Management of liquidity risk requires Pieridae to maintain sufficient cash and cash equivalents, along with other sources of capital consisting of cash flow from operating activities, available credit facilities, and access to debt capital markets, to meet obligations as they become due.

#### **Operational Matters and Hazards**

*Operational incidents may occur during the normal course which could have a material adverse effect to Pieridae's financial condition.*

Pieridae's operations are subject to hazards common to the natural gas production and processing industry (sweet and sour). The operation of Pieridae's assets involves many risks, including: the breakdown or failure of equipment, information systems or processes; the performance of equipment at levels below those originally intended (whether due to declining throughput, misuse, unexpected degradation or design, construction or manufacturing defects); failure to maintain an adequate inventory of supplies or spare parts; the compromise of information and control systems; operator error; labour disputes; disputes with owners of interconnected facilities and carriers; releases of harmful substances into the environment; spills associated with the loading and unloading of harmful substances onto rail cars and trucks; delay of or restriction of operations due to climate change policies, initiatives and costs; and catastrophic events, including, but not limited to, those related to climate change and extreme weather events, such as natural disasters, fires, explosions, derailments, fractures, well blowouts, acts of terrorists and saboteurs, widespread epidemics and pandemic outbreaks, and other similar events, many of which are beyond the control of Pieridae. Many of these risks are more specifically discussed as other risks within this AIF.

The occurrence or continuance of any of these events could increase the cost of operating Pieridae's upstream fields and/or facilities and/or reduce its processing or throughput capacity, or result in damages, claims or fines, environmental damages, personal injury, or loss of life, all of which could adversely affect Pieridae's operations, reputation, and financial performance. The integration of Pieridae's business and operations may also give rise to risks, as the impact of and operational upset or business interruption in one part of its business may create implications for other parts of Pieridae's operation or business.

Pieridae carries casualty and business interruption insurance with amounts of coverage customary for similar business operations to help defray the costs associated with the foregoing risks should they materialize; however, such insurance coverages may not be sufficient to compensate for all business or casualty losses or damages and/or may not be available. See “Insurance Coverage”.

### **Labour Relations**

*Failure to negotiate collective bargaining arrangements or breakdown in Pieridae’s union relationships could result in labour disruptions.*

Pieridae currently has unionized employees at its three sour gas processing facilities. Unionized labour disruptions at these facilities could restrict the ability of these facilities to operate and therefore adversely affect Pieridae’s financial results. Although Pieridae strives to maintain a good relationship with its unions and unionized employees and to date has never experienced a strike or work stoppage at its unionized facilities, such an event could occur in the future and any such occurrence could adversely affect Pieridae’s business operations or financial results. During 2023 Pieridae expects to enter into contract negotiations with unions at its Waterton and Jumping Pound gas processing facilities.

### **Development and Production**

*Pieridae’s future performance may be affected by the financial, operational, environmental, and safety risks associated with the exploration, development, and production of oil natural gas and NGLs.*

Producing oil, NGLs and natural gas reserves are generally characterized by declining production rates that vary depending upon reservoir characteristics and other factors. Pieridae intends to dedicate capital investment in the future to further develop its core producing properties. The future success of the exploration work will depend on Pieridae’s ability to discover or acquire natural gas reserves that are economically recoverable. Pieridae has identified prospective drilling locations which are expected to contribute to Pieridae’s future production. Pieridae’s ability to drill and develop these locations depends on a number of uncertainties, including, but not limited to, the availability of capital, delays or inability to obtain governmental approvals or consents, equipment and personnel, oil, NGLs and natural gas prices, inclement weather, capital and operating costs, drilling results and production rate recovery, gathering system and transportation constraints, the net price received for commodities produced and regulatory changes. As a result of these uncertainties, there can be no assurance that the numerous potential drilling locations Pieridae has identified will ever be drilled or that Pieridae will be able to produce oil, NGLs or natural gas from these or any other potential drilling locations.

Pieridae will find or acquire reserves only if it conducts successful exploration or development activities, concludes joint ventures and/or acquires properties containing proven reserves. There can be no assurance that the development projects and exploration activities that may be implemented in the future will result in reserves or that Pieridae will succeed in drilling productive wells at low exploration costs. If prevailing oil and natural gas prices were to increase significantly, Pieridae’s exploration costs to find or acquire reserves would be expected to increase. Drilling conventional wells within the Canadian foothills involves a high degree of risk of a dry hole or of a well that is not sufficiently productive to provide a return on the capital expended to drill the well.

Oil and natural gas production operations are also subject to all the risks typically associated with such operations, including encountering unexpected formations or pressures, premature decline of reservoirs and the invasion of water into producing formations. Losses resulting from the occurrence of any of these risks may have a material adverse effect on Pieridae’s business, financial condition, results of operations and prospects.

As is standard industry practice, Pieridae is not fully insured against all risks, nor are all risks insurable. Although Pieridae maintains liability insurance in an amount that it considers consistent with industry practice, liabilities associated with certain risks could exceed policy limits or not be covered. In either event Pieridae could incur significant costs. See “Insurance Coverage” below.

### **Regulatory Permits, Licenses and Approvals**

*Failure to obtain applicable regulatory approvals or satisfy regulatory conditions on a timely basis could result in delays, abandonment, or restructuring of projects and increased costs.*

Pieridae’s business requires permits and licenses from government authorities. There can be no assurance that Pieridae will obtain all the permits and licenses required to continue operations or that it will obtain them on acceptable terms or conditions. In addition, if Pieridae commences commercial operation of property, it must obtain and comply with all the necessary permits and licenses. There can be no assurance that Pieridae will be able to obtain or comply with the requirements of such permits and licenses.

Liability management programs enacted by regulators in the western provinces may prevent or interfere with Pieridae’s ability to acquire properties or require a substantial cash deposit with the regulator. Alberta and British Columbia have developed

liability management programs designed to prevent taxpayers from incurring costs associated with suspension, abandonment, remediation and reclamation of wells, facilities, and pipelines in the event that a licensee or permit holder is unable to satisfy its regulatory obligations. Changes to liability management programs in Alberta and BC, may result in significant increases to Pieridae's compliance obligations, including the requirement for Pieridae to post or increase cash security and the The Alberta or BC Liability Management programs may prevent or interfere with Pieridae's ability to acquire or dispose of assets, as both the vendor and the purchaser of oil and natural gas assets must be in compliance with the liability management programs (both before and after the transfer of the assets) for the applicable regulatory agency to allow for the transfer of such assets. See "Industry Conditions – Liability Management Rating Programs".

The process to obtain approval from the AER for the transfer of licenses associated with the Southern Foothills Assets acquired in 2019 from Shell to Alberta Production remains ongoing, refer to the *Developments in 2020* and *Developments in 2022* sections of this AIF. This process and the ultimate AER decision remain uncertain. There remains a risk that the AER will deny the license transfer, however the probability of this event and the ultimate impact on Pieridae are unknown.

### **Political Uncertainty and Geo-Political Risk**

*Pieridae's business may be adversely affected by political and legal developments in Canada and elsewhere.*

Alberta oil and natural gas and oilsands development and transportation, hydraulic fracturing and fossil fuels in general have figured prominently in recent political, media, investor and activist commentary on the subject of climate change, GHG emissions, water usage and environmental damage. Concerns over heightened GHG emissions, water and land use practices in oil and gas developments may directly or indirectly reduce the profitability of Pieridae's current projects and/or the viability of existing and future projects in Canada and reduce the demand and pricing of Pieridae's products.

In February 2022, Russian military forces invaded Ukraine. In response, Ukrainian military personnel and civilians are actively resisting the invasion. The North Atlantic Treaty Organization ("**NATO**") has also mobilized forces to NATO member countries that are close to the conflict as deterrence to further Russian aggression in the region. The outcome of the conflict is uncertain currently but is likely to have wide-ranging consequences on the peace and stability of the region and the world economy. In addition, certain countries including Canada, the United States, and a number of European countries, have imposed strict financial and trade sanctions against Russia, which sanctions may have far reaching effects on the global economy, including in regions and markets in which Pieridae operates. To date these events have not impacted Pieridae's ability to carry on business and there have been no significant delays or security issues affecting Pieridae's operations, offices or personnel.

The marketability and price of oil and natural gas that may be acquired or discovered by Pieridae is and will continue to be affected by political events throughout the world that cause disruptions in the supply of natural gas and oil. Conflicts, or conversely peaceful developments, arising in the Middle East, and other areas of the world, have a significant impact on the price of natural gas and oil. Any particular event could result in a material decline in prices and therefore result in a reduction of Pieridae's net production revenue.

In addition, Pieridae's expected oil and natural gas properties, wells and facilities could be subject to a terrorist attack. As the oil and gas industry in Canada is a key supplier of energy to the United States, certain terrorist groups may target Canadian oil and gas properties, wells and facilities in an effort to adversely impact the United States' economy. There can be no assurance that such activities will not target projects in which Pieridae holds an interest. Similarly, there can be no assurance as to any attitude or behaviour of a political party or a political group (whether municipal, provincial or federal) that could have an impact on Pieridae's business. If any of Pieridae's properties, wells or facilities are the subject of terrorist attack it could have a material adverse effect on Pieridae. Pieridae does not have insurance to protect against the risk from terrorism.

Other government and political factors that could adversely affect Pieridae's financial results include increases in taxes or government royalty rates (including retroactive claims) and changes in trade policies and agreements. Further, the adoption of regulations mandating efficiency standards, and the use of alternative fuels or uncompetitive fuel components could affect Pieridae's operations. Many governments are providing tax advantages and other subsidies to support alternative energy sources or are mandating the use of specific fuels or technologies. Governments and others are also promoting research into new technologies to reduce the cost and increase the scalability of alternative energy sources, and the success of these initiatives may decrease demand for Pieridae's products.

### **Skilled Workforce**

*An inability to recruit and retain a skilled workforce and key personnel may negatively impact Pieridae.*

The operations and management of Pieridae require the recruitment and retention of a skilled workforce, including engineers, technical personnel, and other professionals. The loss of key members of such workforce, or a substantial portion of the workforce as a whole, could result in the failure to implement Pieridae's business plans which could have a material adverse effect on

Pieridae's business, financial condition, results of operations, and prospects. Competition for qualified personnel in the oil and natural gas industry is intense and there can be no assurance that Pieridae will be able to continue to attract and retain all personnel necessary for the development and operation of its business.

Contributions of the existing management team to the immediate and near-term operations of Pieridae are likely to be of crucial importance. In addition, certain of Pieridae's current employees have significant institutional knowledge that must be transferred to other employees prior to their departure. If Pieridae is unable to: (i) retain current employees; (ii) successfully complete effective knowledge transfers; and/or (iii) recruit new employees with the requisite knowledge and experience, Pieridae could be negatively impacted. In addition, Pieridae could experience significantly increased costs to retain and recruit these professionals.

### **Pipeline Systems, Rail, Co-ownership of Assets, and Operational Dependence**

*Lack of capacity on, and/or regulatory constraints and uncertainty regarding, gathering, and processing facilities, pipeline systems, and railway lines may have a negative impact on Pieridae's ability to produce and sell its oil and liquids and natural gas.*

The marketability of Pieridae's oil, NGLs and natural gas production depends in part upon the availability, proximity and capacity of pipeline, trucking and rail systems, as well as processing and storage facilities, some of which are owned by third parties. As a result, Pieridae will have limited ability to exercise influence over the operation of those assets or their associated costs, which could adversely affect Pieridae's financial performance. Pieridae's return on assets operated by others depends upon a number of factors that may be outside of Pieridae's control, including the timing and amount of capital expenditures, the operator's expertise and financial resources, the approval of other participants, the selection of technology and risk management practices.

Pieridae delivers its products through gathering, processing, pipeline and storage systems, some of which it does not own. The amount of oil, natural gas and NGLs that Pieridae can produce, and sell is subject to the accessibility, availability, proximity, and capacity of these gathering, processing, pipeline, and storage systems. The lack of availability of capacity in any of the gathering, processing, pipeline and storage systems, and in particular the processing facilities, could result in Pieridae's inability to realize the full economic potential of its production or in a reduction of the price offered for Pieridae's production. Although pipeline expansions are ongoing, the lack of firm pipeline capacity continues to affect the oil and natural gas industry in Western Canada and limit the ability to produce and to market NGL, oil and natural gas production. In addition, the pro-rationing of capacity on inter-provincial pipeline systems may affect the ability to export oil and natural gas. Unexpected shutdowns or curtailment of capacity of pipelines for maintenance or integrity work and actions taken by regulators could also affect Pieridae's production, operations and financial results. Any significant change in market factors or other conditions affecting these infrastructure systems and facilities, as well as any delays in constructing new infrastructure systems and facilities could harm Pieridae's business and, in turn, Pieridae's financial condition, results of operations and cash flows.

A portion of Pieridae's production is processed through facilities owned by third parties and over which Pieridae does not have control. From time to time these facilities may discontinue or decrease operations either as a result of normal servicing requirements or as a result of unexpected events. A discontinuation or decrease of operations could materially adversely affect Pieridae's ability to process its production and to deliver the same for sale.

In addition, companies, including companies that may operate some of the assets in which Pieridae has an interest, may be in financial difficulty, which could impact their ability to fund and pursue capital expenditures, carry out their operations in a safe and effective manner and satisfy regulatory requirements, including abandonment and reclamation obligations. If companies that operate some of the assets in which Pieridae has an interest fail to satisfy regulatory requirements with respect to operational and abandonment and reclamation obligations, Pieridae may be required to satisfy such obligations and to seek recourse from such companies. To the extent that any of such companies go bankrupt, become insolvent or make a proposal or institute any proceedings relating to bankruptcy or insolvency, it could result in such assets being shut-in, Pieridae potentially becoming subject to additional liabilities relating to such assets and Pieridae having difficulty collecting revenue due from such operators. Any of these factors could materially adversely affect Pieridae's financial and operational results.

### **Facilities Throughput and Utilization**

*Pieridae's sour gas processing facilities are not processing gas volumes at or near their processing capacity. Further reduction in throughput volumes may result in plant performance issues or the need to expend capital to reduce throughput capacity.*

Pieridae's three sour gas processing facilities operate at lower throughputs compared to their respective licensed or operating capacities. This may be due to a multitude of factors, including: declines in Pieridae's production; decisions by producers to delay or shut in production; actual production delivered by customers to Pieridae's facilities not aligning with production profiles; operational issues or constraints in certain functional units within the facilities; operating conditions; changes in gas or NGL composition; low commodity prices; use of competitors' facilities; infrastructure or service bottlenecks and logistical issues; inventory or market constraints for particular commodities; and other reasons.

When gas processing facilities operate near or below technical turndown capacity, the risk of operational efficiency reductions increases, such as utilization of more fuel gas, electricity or chemicals than would otherwise be required on a per-unit of throughput basis. If Pieridae cannot increase throughput of its facilities by either development of reserves or attraction of third-party gas volumes, capital expenditures may be required to reduce the designed throughput capacity, or to shut in a facility.

### **Information Technology Systems and Cyber-Security**

*A breach of Pieridae's cyber-security and loss of, or unauthorized access to, electronic data may adversely impact Pieridae's operations and financial position.*

Pieridae relies heavily on information technology, such as computer hardware and software systems, in order to properly operate its business. In the event Pieridae is unable to regularly deploy software and hardware, effectively upgrade systems and network infrastructure, and take other steps to maintain or improve the efficiency and efficacy of systems, the operation of such systems could be interrupted or result in the loss, corruption, or release of data, compromise confidential customer or employee information, result in the disruption of business, theft or extortion of funds, regulatory infractions, loss of competitive advantage and reputational damage.

In addition, information systems could be damaged or interrupted by natural disasters, force majeure events, telecommunications failures, power loss, acts of war or terrorism, computer viruses, malicious code, physical or electronic security breaches, intentional or inadvertent user misuse or error, or similar events or disruptions. Any of these or other events could cause interruptions, delays, loss of critical and/or sensitive data or similar effects, which could have a material adverse impact on the protection of intellectual property, and confidential and proprietary information, and on Pieridae's business, financial condition, results of operations and cash flows.

In the ordinary course of business, Pieridae collects, uses and stores sensitive data, including intellectual property, proprietary business information and personal information of Pieridae's employees and third parties. Despite Pieridae's security measures, its information systems, technology and infrastructure may be vulnerable to attacks by hackers and/or cyberterrorists or breaches due to employee error, malfeasance or other disruptions. Any such breach could compromise information used or stored on Pieridae's systems and/or networks and, as a result, the information could be accessed, publicly disclosed, lost or stolen.

To date Pieridae has not experienced any material losses relating to cyber-attacks or other information security breaches. However, there can be no assurance that Pieridae will not incur such losses in the future. Any such access, disclosure or other loss of information could result in legal claims or proceedings, liability under laws that protect the privacy of personal information, regulatory penalties or other negative consequences, including disruption to Pieridae's operations and damage to its reputation, which could have a material adverse effect on Pieridae's business, financial condition, results of operations and cash flows. Although Pieridae maintains a risk management program, which includes an insurance component that may provide coverage for the operational impacts from an attack to, or breach of, Pieridae's information technology and infrastructure, including process control systems, Pieridae does not maintain stand-alone cyber insurance. Furthermore, not all cyber risks are insurable. As a result, Pieridae's existing insurance may not provide adequate coverage for losses stemming from a cyber-attack to, or breach of, its information technology and infrastructure.

Pieridae also relies on many third-party service providers with respect to its information technology security and storage of information and data. While Pieridae attempts to conduct appropriate due diligence on these third-party service providers, there is no guarantee that there will not be a breach of security impacting such third parties, or inadequate service levels from such third parties, which could result in risks to Pieridae's systems and data integrity.

### **Inflation and Cost Management**

*A failure to secure the services and equipment necessary to Pieridae's operations for the expected price, on the expected timeline, or at all, may have an adverse effect on Pieridae's financial performance and cash flows.*

Restrictions on the availability or escalations in and the cost of materials and equipment due to supply chain disruptions, inflationary pressures, equipment limitations, escalating supply/delivery costs, commodity prices and or government interventions may impede Pieridae's exploration, development and operating activities. Oil and natural gas exploration, development and operating activities are dependent on the availability and cost of specialized materials and equipment (typically leased from third parties) in the areas where such activities are conducted. The availability of such material and equipment is limited. Pieridae's inability to manage costs may impact operational results, project returns and future development decisions, which could have a material adverse effect on its financial performance and cash flows.

### **Hedging Activities**

*Risk management activities expose Pieridae to the risk of financial loss and counterparty risk.*

In order to mitigate the effects of commodity price fluctuations, Pieridae is or may become party to agreements to receive fixed prices on its NGL, condensate, sulphur and conventional natural gas production to offset risk of revenue losses if commodity prices decline. However, if commodity prices increase beyond the levels set in such agreements, Pieridae will not benefit from such increases. On the other hand, failure to protect against a decline in commodity prices exposes Pieridae to reduced liquidity when prices decline. A sustained lower commodity price environment would result in lower realized prices for unprotected volumes and reduce the prices at which Pieridae would enter into derivative contracts on future volumes.

Similarly, from time-to-time Pieridae may enter into agreements to fix the exchange rate of Canadian to United States dollars in order to offset the risk of revenue losses if the Canadian dollar increases in value compared to the United States dollar, however, if the Canadian dollar declines in value compared to the United States dollar, Pieridae will not benefit from its fluctuating exchange rate. Pieridae may also enter into agreements to fix interest rates. Currently the Company's term debt bears interest at a fixed rate, however this might not always be the case, and rising and falling interest rates may create a monetary exposure for Pieridae.

## Climate Change

*Climate change concerns could result in increased operating costs and reduced demand for Pieridae's products while the potential physical effects of climate change could disrupt Pieridae's production and cause it to incur significant costs in preparing for or responding to those effects.*

Climate change may pose varied and far-ranging risks to the business and operations of Pieridae, both known and unknown, that may adversely affect Pieridae's business, financial condition, results of operations, prospects, reputation and share price. Pieridae's exploration and production facilities and other operations and activities emit GHGs which requires Pieridae to comply with GHG emissions legislation at the provincial or federal level. Climate change policy is evolving at regional, national and international levels, and political and economic events may significantly affect the scope and timing of climate change measures that are ultimately put in place. As a signatory to the UNFCCC and a signatory to the Paris Agreement, which was ratified in Canada on October 3, 2016, Canada pledged to cut its GHG emissions by 30 per cent from 2005 levels by 2030. Several of Pieridae's large facilities in Alberta are subject to GHG emission reduction requirements and some of Pieridae's other operations may ultimately be subject to future regional, provincial and/or federal climate change regulations to manage GHG emissions. In addition, concerns about climate change have resulted in a number of environmental activists and members of the public opposing the continued exploitation and development of fossil fuels.

In addition, there has been public discussion that climate change may be associated with extreme weather conditions and increased volatility in seasonal temperatures. Extreme weather could interfere with Pieridae's production and increase Pieridae's costs. At this time, Pieridae is unable to determine the extent to which climate change may lead to increased storm or weather hazards affecting its operations.

### Physical risks

#### Chronic Climate Change Risks

Climate change has been linked to long-term shifts in climate patterns, including sustained higher temperatures. As the level of activity in the Canadian oil and natural gas industry is influenced by seasonal weather patterns, long-term shifts in climate patterns pose the risk of exacerbating operational delays and other risks posed by seasonal weather patterns. In addition, long-term shifts in weather patterns such as water scarcity, increased frequency of storm and fire and prolonged heat waves may, among other things, require Pieridae to incur greater expenditures (time and capital) to deal with the challenges posed by such changes to its premises, operations, supply chain, transport needs, and employee safety. Specifically, in the event of water shortages or sourcing issues, Pieridae may not be able to, or will incur greater costs to, carry out hydraulic fracturing operations.

#### Acute Climate Change Risk

Climate change has been linked to extreme weather conditions. Extreme hot and cold weather, heavy snowfall, heavy rainfall, drought, and wildfires may restrict Pieridae's ability to access its properties, cause operational difficulties including damage to machinery and facilities. Extreme weather also increases the risk of personnel injury as a result of dangerous working conditions. Certain of Pieridae's assets are located in locations that are proximate to forests and rivers and a wildfire and flood may lead to significant downtime and/or damage to such assets. Moreover, extreme weather conditions may lead to disruptions in Pieridae's ability to transport produced oil and natural gas as well as goods and services in its supply chain. Extreme weather could increase Pieridae's costs to mitigate the effects of climate change on Pieridae's operations or impact the availability of equipment or raw materials. However, at this time, Pieridae is unable to determine the extent to which climate change may lead to increased storm or weather hazards or other impacts affecting its operations.

## Transition risks

Foreign and domestic governments continue to evaluate and implement policy, legislation, and regulations focused on restricting emissions commonly referred to as GHG emissions and promoting adaptation to climate change and the transition to a low-carbon economy. It is not possible to predict what measures foreign and domestic governments may implement in this regard, nor is it possible to predict the requirements that such measures may impose or when such measures may be implemented. However, international multilateral agreements, the obligations adopted thereunder and legal challenges concerning the adequacy of climate-related policy brought against foreign and domestic governments may accelerate the implementation of these measures. Given the evolving nature of climate change policy and the control of GHG emissions and resulting requirements, it is expected that current and future climate change regulations will have the effect of increasing Pieridae's operating expense, and, in the long-term, potentially reducing the demand for oil and natural gas, resulting in a decrease in Pieridae's cash flows and a reduction in the value of its assets.

Claims have been made against certain energy companies alleging that GHG emissions from oil and natural gas operations constitute a public nuisance under certain laws or that such energy companies provided misleading disclosure to the public and investors of current or future risks associated with climate change. As a result, individuals, government authorities, or other organizations may make claims against oil and natural gas companies, including Pieridae, for alleged personal injury, property damage, or other potential liabilities. While Pieridae is not a party to any such litigation or proceedings, it could be named in actions making similar allegations. An unfavorable ruling in any such case could adversely affect the demand for and price of securities issued by Pieridae, impact its operations and have an adverse impact on its financial condition.

Given the perceived elevated long-term risks associated with policy development, regulatory changes, public and private legal challenges, or other market developments related to climate change, there have also been efforts in recent years affecting the investment community, including investment advisors, sovereign wealth funds, public pension funds, universities and other institutional investors, promoting direct engagement and dialogue with companies in their portfolios on climate change action (including exercising their voting rights on matters relating to climate change) and increased capital allocation to investments in low-carbon assets and businesses while decreasing the carbon intensity of their portfolios through, among other measures, divestments of companies with high exposure to GHG-intensive operations and products. Certain stakeholders have also pressured commercial and investment banks and insurance providers to reduce or stop financing and providing insurance coverage to oil and natural gas and related infrastructure businesses and projects. The impact of such efforts requires Pieridae's management to dedicate considerable time and resources to these climate change-related concerns, may adversely affect Pieridae's operations, the demand for and price of Pieridae's shares and may negatively impact Pieridae's cost of capital and access to the capital markets.

Pieridae is committed to transparent and comprehensive reporting of its sustainability performance and considers existing standards such as the Global Reporting Initiative Sustainability Reporting Standards, the Sustainability Accounting Standards Board's documentation, and recommendations issued by the Task Force for Climate Related Financial Disclosures. On October 18, 2021, the Canadian Securities Administrators ("CSA") published for comment Proposed National Instrument 51-107 – Disclosure of Climate Related Matters, intended to introduce climate-related disclosure requirements for reporting issuers in Canada with limited exceptions. If Pieridae is not able to meet future sustainability reporting requirements of regulators or current and future expectations of investors, insurance providers, or other stakeholders, its business and ability to attract and retain skilled employees, obtain regulatory permits, licenses, registrations, approvals, and authorizations from various governmental authorities, and raise capital may be adversely affected.

### **Climate Change Regulations and Carbon Pricing**

*Changing regulations governing carbon pricing and climate change, or uncertainty regarding potential future changes, could negatively impact Pieridae's operations or financial condition.*

Climate change policies and laws are evolving at regional, national, and international levels, and political and economic events may significantly affect the scope and timing of climate change measures that are ultimately put in place.

As a signatory to the UNFCCC and to the Paris Agreement (which set broad goals to, among other things, limit global climate change to not more than two degrees Celsius, preparing, maintaining and publishing national GHG reduction targets and creating a "carbon-neutral" world by 2050), the Government of Canada announced in May 2015, that it will seek a 30% reduction in GHG emissions from 2005 levels by 2030. These GHG emission reduction targets are not binding. The UNFCCC adopted the Paris Agreement on December 12, 2015, and it came into force on November 4, 2016.

In June 2018, the Government of Canada implemented a Canada wide carbon pricing scheme pursuant to the *Greenhouse Gas Pollution Pricing Act*, which is composed of two elements: (a) a carbon levy applied to fossil fuels, originally set at \$30 per tonne of carbon emitted, increasing \$10 annually on April 1st of each year, until reaching \$50 per tonne in 2022, and thereafter increasing by \$15 per tonne each year until it reaches \$170 per tonne in 2030, with the 2023 carbon levy at \$65 per tonne; and

(b) an output based pricing system for industrial facilities that emit 50,000 tonnes of carbon dioxide equivalent per year or more, with an opt-in capability for smaller facilities with emissions below the threshold. Provinces or territories that did not implement a sufficient carbon pricing scheme, are subject to the federal price on carbon on certain types of fuel (including natural gas, gasoline, and gas liquids) and certain large industrial GHG emitters in Canada are subject to another carbon pricing mechanism. Alberta repealed its provincial carbon levy pricing system effective May 30, 2019. Consequently, the federal backstop for the carbon levy under the *Greenhouse Gas Pollution Pricing Act* was applied in Alberta effective January 1, 2020. As a result, the ultimate users of Pieridae's products in Canada are likely subject to a price on carbon due to a federal, provincial, or territorial scheme.

The Government of Alberta set a target of reducing methane emissions from oil and gas operations by 45% relative to 2014 levels by 2025, which is intended to be achieved through the implementation of the *Methane Emission Reduction Regulation* which came into force on January 1, 2020, and changes to certain AER directives establishing new emission design standards for new facilities and requiring mandatory reporting and reductions. On January 1, 2020, the Government of Alberta also enacted the TIER Regulation which replaced the Carbon Competitiveness Incentive Regulation for large industrial emitters (100,000 tonnes or more of GHGs per year). The TIER Regulation applies to facilities emitting 100,000 tonnes or more of GHGs per year. Facilities below this threshold are permitted to opt-in to TIER if competing against a facility regulated by TIER or emitting 10,000 tonnes of GHGs or more per year and belonging to a sector with high emissions intensity and trade exposure. Subject to scope adjustments for inputs (such as electricity), output-based emissions allocations are calculated by multiplying the actual quantity of end products produced by a regulated facility by each product's specified carbon intensity benchmark, or, at the regulator's discretion, facilities may be measured against such facility's past emissions intensity from 2013 to 2015, with its target set at ten percent below that level for 2020 and decreasing by an additional 1% each year thereafter. In certain cases, two or more conventional oil and gas facilities designated by the AER may have their GHG emissions treated as an aggregate facility under TIER. In addition, regulated facilities that have already made major reductions in their emissions can elect to compare themselves against a high-performance target comprised of the average emissions intensity of the most emissions-efficient facilities.

Under TIER, where a regulated facility exceeds target emissions, compliance may be achieved through a combination of the following, subject to certain limitations for offsets and emissions performance credits: (1) reducing facility emissions; (2) purchasing and retiring emissions offset credits from non-regulated emitters (generated through activities that result in emissions reductions in accordance with established protocols); (3) retiring emissions performance credits resulting from previous operations or purchased from other regulated emitters; or (4) contributing to the Technology Innovation and Emissions Reduction Fund (set at \$50 per tonne in 2022 and \$65 per tonne in 2023). As a result of the TIER program being granted equivalency by the Government of Canada, any facilities that are subject to TIER are not subject to the federal carbon tax for industrial emitters. Pieridae's Waterton, Jumping Pound and Caroline facilities are subject to the TIER Regulation, and as a result Pieridae was required to apply emission performance credits, emission offsets or fund credits in 2022. Pieridae also successfully applied to combine all of its remaining natural gas gathering and processing infrastructure into an aggregate facility for the purposes of TIER. Pieridae anticipates that its costs to comply with TIER will exceed \$12 million in 2022. See "Industry Conditions – Climate Change Regulation" in this AIF.

Although it is not possible at this time to predict how new laws or regulations in Canada would impact Pieridae's business, any such future laws and regulations imposing reporting or permitting obligations on, or limiting emissions of GHGs from, Pieridae's equipment and operations could require Pieridae to incur costs to reduce emissions of GHGs associated with its operations or to purchase emission credits or offset credits as well as delays or restrictions in its ability to permit GHG emissions from new or modified sources. The direct or indirect costs of compliance with these regulations may have a material adverse effect on the business, financial condition, results of operations and prospects of Pieridae. Any such regulations could also increase the cost of consumption, and thereby reduce demand for the oil, NGLs and natural gas Pieridae produces. Given the evolving nature of the discourse related to climate change and the control of GHGs and resulting regulatory requirements, it is not possible to predict with certainty the impact on Pieridae and its operations and financial condition.

#### **Variations in Foreign Exchange and Interest Rates**

*Variations in foreign exchange rates and interest rates could adversely affect Pieridae's financial condition.*

World oil and gas prices are quoted in United States dollars and the price received by Canadian producers is therefore affected by the Canadian/U.S. dollar exchange rate, which will fluctuate over time. In recent years, the Canadian dollar has seen material fluctuations in value against the United States dollar. Any material increases in the value of the Canadian dollar may negatively impacted Pieridae's operating entities production revenues. Any increase in the future Canadian/U.S. exchange rates could accordingly impact the future value of Pieridae's reserves as determined by independent evaluators.

The value of currencies, among other items, will also have an impact on the respective currency's underlying risk-free rate an entity would have to pay for borrowings that have an interest component. This would then have a credit spread component added to it that would then constitute the all-in borrowing rate a company would have to pay. Volatility in the market could impact the interest rate and correspondingly, the profitability of Pieridae.

To the extent that Pieridae engages in risk management activities related to foreign exchange and interest rates, there is a credit risk associated with counterparties with which Pieridae may contract.

### **Royalty Regimes**

*Changes to royalty regimes may negatively impact Pieridae's cash flows.*

The royalty program implemented by each province is a significant factor in the profitability of oil and natural gas production. Royalties payable on output are determined by government regulation; they are typically calculated as a percentage of the gross value of output and, depend in part on prescribed benchmark prices, well productivity, geographical location, field discovery date and the type or quality of the resource produced.

There can be no assurance that the federal or provincial governments will not adopt new or modify the royalty regimes which could have an impact on the economics of Pieridae's projects. An increase in royalties would reduce Pieridae's earnings and could make future capital investments, or Pieridae's operations, less economic. See "Industry Conditions" in this AIF.

### **Project Execution**

*The success of Pieridae's maintenance or capital projects may be negatively impacted by factors outside of its control resulting in operational delays and cost overruns.*

Pieridae manages a variety of small and large projects in the conduct of its business. Project delays may impact expected revenues from operations. Significant project cost over-runs and/or schedule delays could make a project uneconomic. Pieridae's ability to execute projects and market oil and natural gas will depend upon numerous factors beyond Pieridae's control, including:

- the availability of processing capacity.
- the availability and proximity of pipeline capacity.
- the availability of storage capacity.
- the supply of and demand for oil and natural gas.
- the availability of alternative fuel sources.
- the availability of the required project financing.
- currency and interest rate fluctuations.
- the effects of inclement weather.
- the availability of drilling and related equipment.
- unexpected cost increases.
- accidental events.
- changes in regulations.
- the availability and productivity of skilled labour; and
- the regulation of the oil and natural gas industry by various levels of government and governmental agencies.

Because of these factors, Pieridae could be unable to execute projects on time, on budget, or at all, and may not be able to effectively market the oil and natural gas that it produces.

### **Environmental**

*Compliance with environmental regulations requires the dedication of a portion of Pieridae's financial and operational resources, which may impact Pieridae's financial condition.*

Oil and natural gas operations inherently involve risks that could cause damage to the environment or to the properties of Pieridae or owned by third parties which could lead to potential liability toward third parties and regulators. The industry is subject to extensive local, provincial, and federal environmental laws providing restrictions and prohibitions on the emissions or release of certain substances produced in various activities within this industry. In addition, the legislation requires that well, pipeline and facility sites and roads and other infrastructure be abandoned and reclaimed to the satisfaction of government authorities at the end of the license validity period.

Compliance with environmental legislation can require significant expenditures and failure to comply with these laws and regulations may result in the assessment of fines and penalties, orders to remediate property contamination, the suspension or revocation of permits and the issuance of injunctions that could limit or prohibit our operations, all of which could have a material impact on Pieridae. The discharge of oil, natural gas or other pollutants into the air, soil or water may give rise to liabilities to governments and third parties and may require Pieridae to incur costs to remedy such discharge. Changes in environmental laws and regulations may be enacted which could impose higher environmental standards which may increase the cost of Pieridae's

operations and have a material adverse effect on our business, financial condition, results of operations and cash flows. No assurance can be given that future environmental laws and regulations will not adversely impact Pieridae's ability to develop or operate its properties.

Pieridae believes that it is reasonably likely the trend towards stricter standards in environmental legislation will continue and Pieridae anticipates making increased expenditures of both a capital and an expense nature as a result of increasingly stringent environmental laws, and such legislation may have a material adverse effect on its business, financial condition, results of operations and cash flows. See "Industry Conditions – Environmental Regulation" in this AIF.

### **Third Party Credit Risk**

*Pieridae is exposed to credit risk of third-party customers, counterparties to derivative risk management contracts, joint venture partners and purchasers of assets.*

Pieridae is, or may be exposed to, third party credit risk through its contractual arrangements with its current or future joint venture partners, marketers of its petroleum and natural gas production and other parties. If these entities fail to meet their contractual obligations to Pieridae, these failures could have a material adverse effect on Pieridae and its cash flow from operations. In addition, poor credit conditions in the industry and of joint venture partners may impact a joint venture partner's ability to obtain regulating licenses and their willingness to participate in Pieridae's ongoing capital program, potentially delaying the program and the results of such program until Pieridae finds a suitable alternative partner.

### **Technological Change**

*Pieridae could fail to adapt to technological change or could expend significant amounts on technology which fail to generate an adequate return on investment, both of which may negatively impact Pieridae's financial condition.*

The oil and natural gas industry is characterized by rapid and significant technological advancements and introductions of new products and services utilizing new technologies that may increase the viability of reserves or reduce development or operational costs. Other companies may have greater financial, technical, and personnel resources that allow them to implement and benefit from such technological advantages. There can be no assurance that Pieridae will be able to respond to such competitive pressures and implement such technologies on a timely basis, or at an acceptable cost. If Pieridae does implement such technologies, there is no assurance that Pieridae will do so successfully. One or more of the technologies currently utilized by Pieridae or implemented in the future may become obsolete. If Pieridae is unable to utilize the most advanced commercially available technology, or is unsuccessful in implementing certain technologies, its business, financial condition, and results of operations could also be adversely affected in a material way.

### **Competition**

*Pieridae competes with other natural gas companies, some of which have greater financial and operational resources or other competitive advantages.*

The oil and natural gas industry is competitive in all of its phases. Pieridae competes with numerous other entities in the exploration, development, production, processing, and marketing of oil natural gas and NGL's. Pieridae's competitors include oil and natural gas companies that have substantially greater financial resources, staff, and facilities than those of Pieridae and as such, Pieridae may be at a competitive disadvantage in the identification, acquisition and development of assets that complement Pieridae's operations. Some of these companies not only explore for, develop and produce oil, natural gas and NGLs, but also carry on more integrated gas processing operations and significant marketing of third-party oil, natural gas and NGLs, which are not a significant component of Pieridae's business. As a result of these complementary activities, some of these competitors may have greater and more diverse competitive resources to draw on than Pieridae and less volatility in their earnings. Pieridae's ability to increase its reserves in the future will depend not only on its ability to explore and develop its present properties, but also on its ability to select and acquire other suitable producing properties or prospects for exploratory drilling. Competitive factors in the distribution and marketing of oil, natural gas and NGLs include price, process, and reliability of delivery and storage. To a lesser extent, Pieridae also faces competition from companies that supply alternative sources of energy, such as wind or solar power. Other factors that could affect competition in the marketplace include additional discoveries of hydrocarbon reserves by Pieridae's competitors, the cost of production, and political and economic factors and other factors outside of Pieridae's control.

### **Conflicts of Interest**

*A director or officer of Pieridae may become subject to conflicts of interest.*

Certain directors of Pieridae serve on the boards of other corporations engaged in natural resource exploration and development operations. Such ties could give rise to conflicts of interest. In making any decisions involving Pieridae, these directors will satisfy their duties and obligations to deal fairly and in good faith with Pieridae and the other entities. In addition, these directors will disclose their interest and refrain from voting on any matter that could give rise to a conflict of interest.

### **Indigenous Land and Rights Claims**

*Opposition by Indigenous groups to the conduct of Pieridae's operations, development, or exploratory activities may negatively impact Pieridae.*

Opposition by Indigenous groups to the conduct of our operations, development, or exploratory activities in any of the jurisdictions in which Pieridae conducts business may negatively impact it in terms of public perception, diversion of management's time and resources, legal and other advisory expenses, and could adversely impact Pieridae's progress and ability to explore and develop properties. Some Indigenous groups have established or asserted Indigenous treaty, title, and rights to portions of Canada. No certainty exists that any lands currently unaffected by claims brought by Indigenous groups will remain unaffected by future claims.

The Canadian federal and provincial governments have a duty to consult with Indigenous people when contemplating actions that may adversely affect the asserted or proven Indigenous or treaty rights and, in certain circumstances, accommodate their concerns. The scope of the duty to consult by federal and provincial governments varies with the circumstances and is often the subject of ongoing litigation. The fulfillment of the duty to consult Indigenous people and any associated accommodations may adversely affect Pieridae's ability to, or increase the timeline to, obtain or renew, permits, leases, licenses, and other approvals, or to meet the terms and conditions of those approvals.

In addition, the federal government has introduced legislation to implement the United Nations Declaration on the Rights of Indigenous Peoples ("UNDRIP"). Other Canadian jurisdictions, including British Columbia, have also introduced or passed similar legislation, or begun considering the principles and objectives of UNDRIP, or may do so in the future. The means and timelines associated with UNDRIP's implementation by government is uncertain; additional processes may be created or legislation amended or introduced associated with project development and operations, further increasing uncertainty with respect to project regulatory approval timelines and requirements.

### **Reserve Estimates**

*Pieridae's estimated reserves are based on numerous factors and assumptions which may prove incorrect.*

There are numerous uncertainties inherent in estimating quantities of oil, natural gas and NGL reserves and cash flows to be derived therefrom, including many factors beyond Pieridae's control. The information concerning reserves and associated cash flow set forth in this AIF represents estimates only. In general, estimates of economically recoverable oil and natural gas reserves and the future net cash flows therefrom are based upon a number of variable factors and assumptions, such as historical production from the properties, production rates, ultimate reserve recovery, timing and amount of capital expenditures, marketability of oil and natural gas, royalty rates, the assumed effects of regulation by governmental agencies and future operating costs, all of which may vary from actual results. For those reasons, estimates of the economically recoverable oil and natural gas reserves attributable to any particular group of properties, classification of such reserves based on risk of recovery and estimates of future net revenues expected therefrom prepared by different engineers, or by the same engineers at different times, may vary. Pieridae's actual production, revenues, taxes and development and operating expenditures with respect to its reserves will vary from estimates thereof and such variations could be material. Further, the evaluations are based, in part, on the assumed success of the exploitation activities intended to be undertaken in future years. The reserves and estimated cash flows to be derived therefrom contained in such evaluations will be reduced to the extent that such exploitation activities do not achieve the level of success assumed in the evaluation.

In accordance with applicable securities laws, Deloitte has used forecast price and cost estimates in calculating reserve quantities. Actual future net cash flows will be affected by other factors such as actual production levels, supply and demand for oil and natural gas, curtailments or increases in consumption by oil and natural gas purchasers, changes in governmental regulation, royalties and taxation and the impact of inflation on costs. Actual production and cash flows derived therefrom will vary from the estimates contained in the Deloitte Reserves Report, and such variations could be material. The Deloitte Reserves Report is based in part on the assumed success of activities Pieridae intends to undertake in future years. The reserves and estimated cash flows to be derived therefrom contained in the Deloitte Reserves Report will be reduced to the extent that such activities do not achieve the level of success assumed in the Deloitte Reserves Report.

The Deloitte Reserves Report is effective as of a specific effective date and has not been updated and thus does not reflect changes in Pieridae's reserves since that date.

## **Litigation**

*Pieridae may be involved in litigation in the course of its normal operations and the outcome of the litigation may adversely affect Pieridae and its reputation.*

In the normal course of Pieridae's operations, it may become involved in, named as a party to, or be the subject of, various legal proceedings, including regulatory proceedings, tax proceedings, and legal actions. Potential litigation may develop in relation to personal injuries (including resulting from exposure to hazardous substances, property damage, property taxes, land and access rights, environmental issues, including claims relating to contamination or natural resource damages, and contract disputes). The outcome with respect to outstanding, pending, or future proceedings cannot be predicted with certainty and may be determined adversely to Pieridae and could have a material adverse effect on Pieridae's assets, liabilities, business, financial condition, and results of operations. Even if Pieridae prevails in any such legal proceedings, the proceedings could be costly and time-consuming and may divert the attention of Management and key personnel from business operations, which could have an adverse effect on Pieridae's financial condition.

## **Insurance Coverage**

*Not all risks of conducting oil and natural gas activities are insurable and insurance may become unavailable or only available on reduced amounts of coverage, the occurrence of which would increase Pieridae's overall risk exposure.*

Pieridae maintains insurance coverage as part of its risk management program. However, such insurance may not provide comprehensive coverage in all circumstances, nor are all such risks insurable. Pieridae's operations are subject to all of the hazards and operating risks associated with drilling for, production and transportation of oil, NGLs and natural gas, including the risk of fire, explosions, blowouts, surface cratering, uncontrollable flows of natural gas, oil and formation water, facility, pipe or pipeline corrosion, damage or failures, abnormally pressured formations, natural disasters, casing collapses and environmental hazards such as oil spills, produced water spills, gas leaks, ruptures, discharges of toxic gases or accidents while Pieridae's products are being processed, stored or transported by pipeline or trucked. In addition, Pieridae's operations are subject to risks associated with the production, transportation, and processing of sour gas. Special equipment and operating procedures are deployed by the industry for the production, transportation, and processing of sour gas in accordance with applicable regulatory requirements. The occurrence of any of these events could result in substantial losses to Pieridae due to injury or loss of life, severe damage to or destruction of property, natural resources and equipment, pollution or other environmental damage, clean-up responsibilities, regulatory investigation and penalties, suspension of operations, repairs to resume operations and adverse reputational consequences and loss of goodwill.

The occurrence of a significant uninsured claim, a claim in excess of the insurance coverage limits maintained by Pieridae or a claim at a time when Pieridae is not able to obtain liability insurance could have a material adverse effect on Pieridae's financial condition, results of operations or cash flow. Pieridae may not be able to secure additional insurance or bonding that might be required by governmental regulations. This may cause Pieridae to restrict its operations, which might severely impact its financial position. Pieridae may also be liable for environmental damage caused by previous owners of properties purchased by Pieridae or by working interest partners in jointly owned properties, which liabilities may not be covered by insurance.

## **Breach of Confidentiality**

*An unintended release of confidential information about Pieridae may harm Pieridae's business prospects or financial condition.*

While discussing potential business relationships or other transactions with third parties, Pieridae may disclose confidential information relating to the business, operations, or affairs of Pieridae. Although confidentiality agreements are signed by third parties prior to the disclosure of any confidential information, a breach could put Pieridae at competitive risk and may cause considerable damage to its business. The harm to Pieridae's business from a breach of confidentiality cannot presently be quantified but may be material and may not be compensable in damages. There is no assurance that, in the event of a breach of confidentiality, Pieridae will be able to obtain equitable remedies, such as injunctive relief, from a court of competent jurisdiction in a timely manner, if at all, to prevent or mitigate any damage to its business that such a breach of confidentiality may cause.

## **Reputational**

*Pieridae relies on its reputation to continue its operations and to attract and retain employees and capital.*

Pieridae's business, operations or financial condition may be negatively impacted as a result of any negative public opinion towards Pieridae or as a result of any negative sentiment toward, or in respect of Pieridae's reputation with stakeholders, special interest groups, political leadership, the media, First Nations, or other entities. Public opinion may be influenced by certain media and special interest groups' negative portrayal of the industry in which Pieridae operates as well as their opposition to certain oil and natural gas projects. Potential impacts of negative public opinion or reputational issues may include delays or interruptions

in operations, legal or regulatory actions or challenges, blockades, increased regulatory oversight, reduced support for, delays in, challenges to, or the revocation of regulatory approvals, permits and/or licenses and increased costs and/or cost overruns. Pieridae's reputation and public opinion could also be impacted by the actions and activities of other companies operating in the oil and natural gas industry, particularly other producers, over which Pieridae has no control. In particular, Pieridae's reputation could be impacted by negative publicity related to environmental damage, loss of life, injury or damage to property caused by Pieridae's operations, or due to opposition from special interest groups opposed to oil and natural gas development. In addition, if Pieridae develops a reputation of having an unsafe work site it may impact the ability of Pieridae to attract and retain the necessary skilled employees and consultants to operate its business. Opposition from special interest groups opposed to oil and natural gas development and the possibility of climate related litigation against governments and fossil fuel companies may impact Pieridae's reputation.

Reputational risk cannot be managed in isolation from other forms of risk: Credit, market, operational, insurance, regulatory and legal risks, among others, must all be managed effectively to safeguard Pieridae's reputation. Damage to Pieridae's reputation could result in negative investor sentiment towards Pieridae, which may result in limiting Pieridae's access to capital, increasing the cost of capital, and decreasing the price and liquidity of Pieridae's securities.

## Risks Related to Pieridae's Common Shares

### Volatility

A number of factors could influence the volatility in the trading price of the Common Shares, including changes in the economy or in the financial markets, industry related developments, increased public pressure for institutional investors to divest from fossil fuel companies, the impact of changes in Pieridae's daily operations, and the impacts of climate change on Pieridae's operations and demand for its products. Each of these factors could lead to increased volatility in the market price of the Common Shares. In addition, variations in Pieridae's earnings estimates, production estimates or other financial or operating metrics by securities analysts and the market prices of the securities of Pieridae's competitors may also lead to fluctuations in the trading price of the Common Shares.

### Return on Investment

There is no assurance that the business of Pieridae will be operated successfully, or that the business will generate sufficient income to allow investors to recoup all or any portion of their investment. There is no assurance that an investment in the Common Shares will earn a specified rate of return or any return over the life of the investment.

### Dilution

Pieridae may make future acquisitions or enter into financings or other transactions involving the issuance of securities of Pieridae which may be dilutive. Common Shares, including rights, warrants, special warrants, subscription receipts and other securities to purchase, to convert into or to exchange into Common Shares, may be created, issued, sold and delivered on such terms and conditions and at such times as the Board of Directors may determine. In addition, Pieridae may issue additional Common Shares from time to time pursuant to Pieridae's stock option plan. The issuance of these Common Shares would result in dilution for holders of Common Shares.

## AUDITORS, TRANSFER AGENT AND REGISTRAR

Ernst & Young LLP, Calgary, Alberta, are the auditors of the Company.

The transfer agent and registrar for the common shares of the Company is Odyssey Trust Company, having offices at Suite 702 – 67 Yonge St, Toronto, Ontario M5E 1J8.

## MATERIAL CONTRACTS

As of the date hereof, the following material contracts entered into by the Company are in effect:

### Goldboro LNG Agreement

The FOB LNG Sale and Purchase Agreement made as of May 31, 2013, between Uniper, formerly E.ON Global Commodities S.E. (the "Buyer") and Pieridae Energy (Canada) Ltd. in its capacity as general partner of Goldboro LNG Limited Partnership (the "Seller"), as amended on February 3, 2016; June 2, 2017; November 1, 2018; July 9, 2019, and May 5, 2020 (the "LNG Purchase and Sale Agreement"). This firm contract is subject to early termination rights of the Buyer and Seller and certain basic term extension rights of Buyer, the basic term of the LNG Purchase and Sale Agreement commences on May 31, 2013 and terminates

on the twentieth anniversary of the Start of Commercial Deliveries. All capitalized terms used below have the meanings given in such agreement.

The LNG Purchase and Sale Agreement contemplates that commencing on the Start of Commercial Deliveries and throughout the balance of the term thereof, Seller will sell to Buyer, and Buyer will purchase from the Seller, LNG having an energy content of 245,000,000 MMBtu per annum (the “**Annual Contract Quantity**”), such Annual Contract Quantity being subject to adjustment in accordance with Clause 5.2 thereof, (the “**Adjusted Annual Contract Quantity**”).

Buyer is obliged under the LNG Purchase and Sale Agreement to take and pay, or compensate Seller if not taken, for the applicable Adjusted Annual Contract Quantity, subject to adjustment in accordance with Clause 5.3(a) thereof.

Buyer shall pay to Seller a price for each LNG cargo equal to the amount by which the product obtained when the energy content of the LNG cargo, expressed in MMBtu, is multiplied by a reference price, expressed in MMBtu. The reference price is confidential.

Conditions:

- a) the FEED Launch Date must occur not later than April 30th, 2014.
- b) Seller must enter into a sufficient number of binding Gas Supply Agreements with Gas Suppliers as specified in Clause 2.2(a)(i) of the LNG Purchase and Sale Agreement not later than March 31, 2021.
- c) Seller must enter into a sufficient number of binding Pipeline Capacity Agreements with Pipeline Capacity Suppliers as specified in Clause 2.2(b)(i) the LNG Purchase and Sale Agreement not later than March 31, 2021.
- d) Seller must obtain the relevant Canada Export License not later than December 31, 2016.
- e) the conditions precedent, if any, in each and every of the Gas Supply Agreements specified in Clause 2.2(a)(i) the LNG Purchase and Sale Agreement must be satisfied in full or waived not later than the FID Date.
- f) the conditions precedent, if any, in each and every of the Pipeline Capacity Agreements specified in Clause 2.2(b)(i) the LNG Purchase and Sale Agreement must be satisfied in full or waived not later than the FID Date.
- g) the completion of Project Finance Secured must occur not later than the FID Date.
- h) the Site Acquisition must occur not later than December 31, 2016.
- i) the FID Date must occur not later than June 30, 2021.
- j) the acquisition of Permits Issued must occur not later than June 30, 2019.
- k) the EPC Launch Date must occur not later than July 31, 2021; and
- l) the ordering of Major Components must commence not later than November 30, 2021.

As of the date hereof, conditions a, d, h and j have been satisfied. Many of the other conditions have not occurred within the condition dates described above. Following suspension of the Goldboro LNG project during 2021 each party has the right to terminate this agreement on written notice to the other party. As of the date of this AIF, neither party has terminated the agreement.

## ADDITIONAL INFORMATION

Additional financial information is provided in the consolidated financial statements and MD&A for the financial year end 2022 and is available on SEDAR at [www.sedar.com](http://www.sedar.com) or on our website at <https://pieridaenergy.com/>. Additional information including directors' and officers' remuneration and indebtedness, principal holders of the Company's securities and securities authorized for issuance under equity compensation plans, if applicable, is contained in our Information Circular in respect of the annual meeting of Shareholders to be held on May 11, 2023, which will be available on SEDAR in due course.

# Appendices

## APPENDIX A: NI 51-101 FORM F2 REPORT ON RESERVES DATA BY INDEPENDENT QUALIFIED RESERVES EVALUATOR

To the Board of Directors of Pieridae Energy Ltd. (the “Company”):

1. We have evaluated the Company’s reserves data as at December 31, 2022. The reserves data are estimates of proved reserves and probable reserves and related future net revenue as at December 31, 2022, estimated using forecast prices and costs.
2. The reserves data are the responsibility of the Company’s management. Our responsibility is to express an opinion on the reserves data based on our evaluation.
3. We carried out our evaluation in accordance with standards set out in the Canadian Oil and Gas Evaluation Handbook as amended from time to time (the “COGE Handbook”) maintained by the Society of Petroleum Evaluation Engineers (Calgary Chapter).
4. Those standards require that we plan and perform an evaluation to obtain reasonable assurance as to whether the reserves data are free of material misstatement. An evaluation also includes assessing whether the reserves data are in accordance with principles and definitions presented in the COGE Handbook.
5. The following table shows the net present value of future net revenue (before deduction of income taxes) attributed to prove plus probable reserves, estimated using forecast prices and costs and calculated using a discount rate of 10 percent, included in the reserves data of the Company evaluated for the year ended December 31, 2022, and identifies the respective portions thereof that we have evaluated and reported on to the Company’s management/Board of Directors:

Independent qualified reserves evaluator or auditor	Effective date of evaluation report	Location of reserves (country or foreign geographic area)	Net present value of future net revenue (before income taxes; 10% discount rate)			
			Audited \$MM	Evaluated \$MM	Reviewed \$MM	Total \$MM
Deloitte LLP	Pieridae Alberta Production Ltd. Reserve estimation and economic evaluation December 31, 2022	Canada	-	1,525.9	-	1,525.9

6. In our opinion, the reserves data respectively evaluated by us have, in all material respects, been determined and are in accordance with the COGE Handbook, consistently applied. We express no opinion on the reserves data that we reviewed but did not audit or evaluate.
7. We have no responsibility to update our reports referred to in paragraph 5 for events and circumstances occurring after the effective date of our reports.
8. Because the reserves data are based on judgments regarding future events, actual results will vary and the variations may be material.

Executed as to our report referred to above:

Deloitte LLP  
700, 850 – 2<sup>nd</sup> Street S.W.

Original signed by: “Andrew Botterill”

Calgary, Alberta

Andrew Botterill, P. Eng.  
T2P 0R8

Execution date: March 2, 2023

## APPENDIX B: FORM 51-101F3 REPORT OF MANAGEMENT AND DIRECTORS ON OIL AND GAS DISCLOSURE

Management of Pieridae Energy Limited (the "**Company**") is responsible for the preparation and disclosure of information with respect to the Company's oil and gas activities in accordance with the securities regulatory requirements. This information includes reserves data as at December 31, 2022.

An independent qualified reserve evaluator has evaluated and reviewed the Company's reserves data. The report of the independent qualified reserves evaluator will be filed with securities regulatory authorities concurrently with this report.

The Reserves and Health, Safety and Environment Committee of the board of directors of the Company has:

- a) reviewed the Company's procedures for providing information to the independent qualified reserves evaluator;
- b) met with the independent qualified reserves evaluator to determine whether any restrictions affected the ability of the independent qualified reserves evaluator to report without reservation; and
- c) reviewed the reserves data with management and the independent qualified reserves evaluator.

The Reserves and Health, Safety and Environment Committee of the board of directors has reviewed the Company's procedures for assembling and reporting other information associated with oil and gas activities and has reviewed that information with management. The board of directors has, on the recommendation of the Reserves and Health, Safety and Environment Committee, approved:

- a) the content and filing with securities regulatory authorities of Form 51-101F1 containing reserves data and other oil and gas information;
- b) the filing of the Form 51-101F2 which is the report of the independent qualified reserves evaluator on the reserves data; and
- c) the content and filing of this report.

Because the reserves data are based on judgments regarding future events, actual results will vary, and the variations may be material.

March 21, 2023

(signed) "Alfred Sorensen"

Alfred Sorensen,  
Chief Executive Officer

(signed) "Darcy Reding"

Darcy Reding  
President & Chief Operating Officer

(signed) "Richard Couillard"

Richard Couillard  
Director

(signed) "Charles Boulanger"

Charles Boulanger  
Director

## APPENDIX C: DEFINITIONS USED FOR RESERVE CATEGORIES

The following definitions form the basis of the classification of reserves and values presented in the Deloitte Reserves Report. They have been prepared by the Standing Committee on Reserves Definitions of the Petroleum Society of the CIM incorporated in the COGE Handbook and specified by NI 51-101.

Reserves are estimated remaining quantities of oil and natural gas and related substances anticipated to be recovered from known accumulations, from a given date forward, based on:

- analysis of drilling, geological, geophysical, and engineering data.
- the use of established technology.
- specified economic conditions, which are generally accepted as being reasonable, and shall be disclosed; and
- a remaining reserve life of 50 years.

### **Reserve Classifications**

Reserves are classified according to the degree of certainty associated with the estimates.

#### ***Proved Reserves***

Proved reserves are those reserves that can be estimated with a high degree of certainty to be recoverable. It is likely that the actual remaining quantities recovered will exceed the estimated proved reserves.

#### ***Probable Reserves***

Probable reserves are those additional reserves that are less certain to be recovered than proved reserves. It is equally likely that the actual remaining quantities recovered will be greater or less than the sum of the estimated proved plus probable reserves.

#### ***Possible Reserves***

Possible reserves are those additional reserves that are less certain to be recovered than probable reserves. It is unlikely that the actual remaining quantities recovered will exceed the sum of the estimated proved plus probable plus possible reserves. Possible reserves have not been considered in this AIF.

### **Reserve Categories**

Other criteria that must also be met for categorization of reserves are provided in Section 1.3 of the COGE Handbook. Each of the reserve categories (proved, probable, and possible) may be divided into developed or undeveloped categories.

#### ***Developed Reserves***

Developed reserves are those reserves that are expected to be recovered from existing wells and installed facilities or, if facilities have not been installed, that would involve a low expenditure (e.g., when compared to the cost of drilling a well) to put the reserves on production. The developed category may be subdivided into producing and non-producing.

#### ***Developed Producing Reserves***

Developed producing reserves are those reserves that are expected to be recovered from completion intervals open at the time of the estimate. These reserves may be currently producing or, if shut in, they must have previously been on production, and the date of resumption of production must be known with reasonable certainty.

#### ***Developed Non-Producing Reserves***

Developed non-producing reserves are those reserves that either have not been on production, or have previously been on production, but are shut in, and the date of resumption of production is unknown.

### ***Undeveloped Reserves***

Undeveloped reserves are those reserves expected to be recovered from known accumulations where a significant expenditure (e.g., when compared to the cost of drilling a well) is required to render them capable of production. They must fully meet the requirements of the reserve classification (proved, probable, possible) to which they are assigned.

In multi-well pools, it may be appropriate to allocate total pool reserves between the developed and undeveloped categories or to subdivide the developed reserves for the pool between developed producing and developed non-producing. This allocation should be based on the estimator's assessment as to the reserves that will be recovered from specific wells, facilities, and completion intervals in the pool and their respective development and production status.

### **Levels of Certainty for Reported Reserves**

The qualitative certainty levels contained in these definitions are applicable to individual reserves entities, which refers to the lowest level at which reserves estimates are made, and to reported reserves, which refers to the highest-level sum of individual entity estimates for which reserve estimates are made.

Reported total reserves estimated by deterministic or probabilistic methods, whether comprised of a single reserves entity or an aggregate estimate for multiple entities, should target the following levels of certainty under a specific set of economic conditions:

There is a 90% probability that at least the estimated proved reserves will be recovered.

There is a 50% probability that at least the sum of the estimated proved reserves plus probable reserves will be recovered.

There is a 10% probability that at least the sum of the estimated proved reserves plus probable reserves plus possible reserves will be recovered.

A quantitative measure of the probability associated with a reserves estimate is generated only when a probabilistic estimate is conducted. The majority of reserves estimates will be performed using deterministic methods that do not provide a quantitative measure of probability. In principle, there should be no difference between estimates prepared using probabilistic or deterministic methods.

Additional clarification of certainty levels associated with reserves estimates and the effect of aggregation is provided in Section 1.3.8.3 of the COGE Handbook. Whether deterministic or probabilistic methods are used, evaluators are expressing their professional judgement as to what are reasonable estimates.

### **Other Definitions**

#### ***Gross Reserves***

The Company's working interest share of the remaining reserves or resources before deduction of any royalties.

#### ***Net Reserves***

The gross remaining reserves or resources of the properties in which the Company has an interest, less all Crown, freehold, and overriding royalties and interests owned by others.

#### ***Net Production Revenue***

Income derived from the sale of net reserves of oil, pipeline gas, and gas by-products, less all capital and operating costs.

#### ***Fair Market Value***

The price at which a purchaser seeking an economic and commercial return on investment would be willing to buy, and a vendor would be willing to sell, where neither is under compulsion to buy or sell and both are competent and have reasonable knowledge of the facts.

### **Barrels of Oil Equivalent (BOE) Reserves**

The sum of the oil reserves, plus the gas reserves divided by a factor of 6, plus the natural gas liquid reserves, all expressed in barrels or thousands of barrels. Equivalent reserves can also be expressed in thousands of cubic feet of gas equivalent (McfGE) using a conversion ratio of 1 bbl:6 Mcf.

### **Oil (or Crude Oil)**

A mixture consisting mainly of pentanes and heavier hydrocarbons that exists in the liquid phase in reservoirs and remains liquid at atmospheric pressure and temperature. Crude oil may contain small amounts of sulphur and other non-hydrocarbons but does not include liquids obtained from the processing of natural gas.

### **Gas (or Natural Gas)**

A mixture of lighter hydrocarbons that exist either in the gaseous phase or in solution in crude oil in reservoirs but are gaseous at atmospheric conditions. Natural gas may contain sulphur or other non-hydrocarbon compounds.

### **Non-Associated Gas**

An accumulation of natural gas in a reservoir where there is no crude oil.

### **Associated Gas**

The gas cap overlying a crude oil accumulation in a reservoir.

### **Natural Gas By-Products**

Those components that can be removed from natural gas including, but not limited to, ethane, propane, butanes, pentanes plus, condensate, and small quantities of non-hydrocarbons.

### **Products Types**

A sub-classification of the principal product types of petroleum, crude oil, gas and by products, into specific groupings based on the properties of the hydrocarbon and the properties of the accumulation and reservoir rock from which it is found. Regulatory agencies may define in legislation the production types they require to be used for reporting purposes in their jurisdiction. The Canadian Securities Association (CSA) defines the Product Types for reporting purposes in NI 51-101, with the following Product Types referenced in this AIF.

### **Crude Oil**

#### Light Crude Oil

Crude oil with a relative density greater than 31.1 degrees API gravity.

#### Medium Crude Oil

Crude oil with a relative density greater than 22.3 degrees API gravity and less than or equal to 31.1 degrees API gravity.

### **Natural Gas**

#### Conventional Natural Gas

Natural gas that has been generated elsewhere and has migrated as a result of hydrodynamic forces and is trapped in discrete accumulations by seals that may be formed by localized structural, depositional or erosional geological features.

## ***By-Products***

### Natural Gas Liquids

Those hydrocarbon components that can be recovered from natural gas as a liquid including, but not, limited to, ethane, propane, butanes, pentanes plus and condensates.

## APPENDIX D: AUDIT AND RISK COMMITTEE MANDATE

Adopted by the Board of Directors on October 6, 2022

### PURPOSE

The Audit and Risk Committee (the “**Committee**”) assists the board of directors (the “**Board**”) of Pieridae Energy Limited (the “**Corporation**”) in fulfilling its legal and fiduciary obligations with respect to matters involving the accounting, budgetary, auditing, risk, financial reporting, internal control and legal compliance functions, including the specific duties and responsibilities described below and shall comply with all applicable laws, regulations, rules and listing standards (the “**Applicable Laws**”).

### COMPOSITION, QUALIFICATION AND APPOINTMENT

- 2.1 The Committee consists of such number of directors as the Board may, from time to time, by resolution determine, in no event to be less than three (3). Every Committee member must be a director of the Corporation.<sup>1</sup>
- 2.2 Every Committee member must meet the independence test and other membership requirements (including, subject to the exemptions provided therein, the financial literacy requirements pursuant to National Instrument 52-110 – *Audit Committees*) under Applicable Laws, as determined by the Board.<sup>2</sup>
- 2.3 Committee members are appointed by the Board promptly after each annual shareholders’ meeting.
- 2.4 Any member of the Committee may be removed and replaced at any time by the Board and also automatically cease to be a member of the Committee as soon as such member ceases to be a director. If and whenever a vacancy exists, the remaining members may exercise all the powers of the Committee as long as a quorum remains in office.
- 2.5 Where a vacancy occurs at any time in the membership of the Committee, it may be filled by the Board on the recommendation of the Committee and will be filled by the Board if the membership of the Committee falls below three (3) directors.
- 2.6 The Chair of the Board (the “**Board Chair**”) shall sit as an *ex-officio*, non-voting member of the Committee.

### 3 DUTIES AND RESPONSIBILITIES

The Committee shall perform the functions customarily performed by audit committees and any other functions assigned by the Board. In furtherance of its purpose and in addition to such responsibilities as may be required by Applicable Laws, the Committee assumes the following duties and responsibilities:

#### 3.1 Accounting Policies, Financial Reporting and Control

- (a) Review changes proposed by management to the Corporation’s accounting policies to ensure completeness and acceptability with the accounting standards adopted by the Corporation as part of the approval of the financial statements.
- (b) Discuss with management and the external auditor the acceptability, appropriateness (within the range of acceptable options and alternatives), degree of aggressiveness/conservatism and quality of underlying accounting policies, disclosures and key estimates and judgments.
- (c) Review and assess the Corporation’s internal controls over financial reporting, including attestations by the external auditors of the Corporation’s internal controls over financial reporting.

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1 Section 3.1(1) and (2) of NI 52-110.

2 Section 3.1(3) and (4) of NI 52-110.

- (d) Discuss with management and the external auditor the clarity and completeness of the Corporation's financial and non-financial disclosures.

### **3.2 External Auditor**

- (a) Recommend to the Board the external auditor to be appointed by the shareholders of the Corporation for the purpose of preparing the external auditor's report, as well as the external auditor's compensation for doing so.<sup>3</sup>
- (b) Review and approve in advance the proposed audit scope, focus areas, timing and key decisions (including materiality and reliance on internal audit) underlying the audit plan and the appropriateness and reasonableness of the proposed audit fees.
- (c) Establish effective communication processes with management, the Board and the external auditor so that it can objectively monitor the quality and effectiveness of the external auditor's relationship with management and the Committee.
- (d) Receive and review regular reports from the external auditor on the progress against the approved audit plan, important findings, audit issues, recommendations for improvements and the auditors' final report.
- (e) Periodically meet with the external auditor without management present.
- (f) Review and approve the Corporation's hiring policies regarding partners, employees and former partners and employees of the Corporation's present and former external auditors.<sup>4</sup>
- (g) Pre-approve all audit and non-audit services (or delegate such pre-approval if and to the extent permitted by Applicable Laws) to be provided to the Corporation or its subsidiaries by the Corporation's external auditor where such pre-approval is required by Applicable Laws.<sup>4</sup> Consider whether the auditor's provision of permissible non-audit services is compatible with the auditor's independence.

### **3.3 Oversight of the Corporation's Risk Management**

- (a) Review, monitor, and, where appropriate, provide recommendations to the Board on the governance of the Corporation's major strategic, business, operational, and financial risk exposures and the guidelines, policies and practices regarding risk assessment and risk management including the following:
  - (i) review the Corporation's Enterprise Risk Management Program, including processes for identifying, assessing and managing risks.
  - (ii) understand the Corporation's major strategic business, financial and operational risk exposures and the steps the Corporation has taken to monitor and control such exposures.
  - (iii) review the Corporation's major security risks and security trends, including cybersecurity risks that may impact the Corporation's operations and business.
  - (iv) review the Corporation's insurance coverage.
  - (v) understand the Corporation's business continuity plans, including work stoppage and disaster recovery plans.
- (b) Review, monitor, report and, where appropriate, provide recommendations to the Board on the Corporation's compliance with internal policies and practices regarding risk assessment and risk management and the Corporation's progress in remedying any material deficiencies thereto.
- (c) Review and recommend to the Board for financial approval all individual contracts for the supply of property or services that contemplate payment by the Corporation exceeding \$5,000,000 in aggregate over the term of the contract.

### **3.4 Environmental, Social and Governance**

- (a) Review and recommend to the Governance and Human Resources Committee the financial data included in the Corporation's annual ESG report. Ensure the processes and procedures are in place to verify the accuracy and completeness of the Corporation's quantitative reporting of this financial data.
- (b) At least annually ensure the Committee and its members remain educated on the latest rules, regulations, industry trends and best practices regarding ESG and climate-related issues specific to the scope of the Committee.

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<sup>3</sup> Section 2.3(2) of NI 52-110. <sup>4</sup>

Section 2.3(8) of NI 52-110.

<sup>4</sup> Section 2.3(4) of NI 52-110.

### 3.5 Ethical and Legal Compliance

- (a) Review, on a quarterly basis the Corporation's compliance with respect to (i) the legal and regulatory matters which may have a material effect on the Corporation and/or its financial statements, including with respect to pending or threatened material litigations, and (ii) compliance with certain Corporate Policies listed in 3.6(a) of this mandate, as well as the Corporation's progress in remedying any material deficiencies that could have a significant impact on the Corporation.

### 3.6 Corporate Policies

- (a) At least annually review and if appropriate recommend to the Board changes to the Corporation's principal Audit and Risk corporate policies, which include but may not be limited to:
  - (i) Delegation of Authority
  - (ii) Hedging
  - (iii) Investment
  - (iv) Credit
- (b) As appropriate, investigate situations brought to the attention of the Committee through the Whistleblower Policy regarding accounting, internal controls, or auditing matters, including allegations with respect to fraud or accounting misconduct.<sup>5</sup>

### 3.7 Public Disclosure

- (a) Review and discuss with management and the external auditor and, where appropriate, provide recommendations to the Board on the following, prior to their public disclosure:
  - (i) the Corporation's annual and interim financial statements and associated MD&A (including the discussion of critical accounting estimates included therein), annual information form, prospectus-type documents, earnings press releases (including financial outlook, future-oriented financial information and other forward-looking information, and any pro-forma or non-IFRS information included therein); and
  - (ii) to the extent not previously reviewed by the Committee, all financial statements included in any prospectus, business acquisition report or offering memoranda and/or other financial reporting requiring approval by the Board.<sup>6</sup>
- (b) To the extent deemed appropriate, review:
  - (i) any financial information of the Corporation required to be filed by the Corporation with applicable securities regulators or stock exchanges and
  - (ii) press releases of the Corporation containing material financial information, earnings guidance, forward-looking statements, material change reports, information about operations or any other material information.
- (c) Take steps to satisfy itself that adequate procedures are in place for the review of the Corporation's public disclosure of financial information extracted or derived from the Corporation's financial statements and periodically assess the adequacy of those procedures.<sup>7</sup>

### 3.8 Other Responsibilities

- (a) Review and monitor the Corporation's quarterly performance against the annual budget.
- (b) Perform such other functions as may, from time to time, be assigned to the Committee by the Board.

## 4 PROCEDURAL MATTERS

### 4.1 Committee Chair

The Board appoints one (1) Committee member to act as its chair (the "**Committee Chair**"), provided that if the Board does not so designate a Committee Chair, the Committee, by a majority vote, may designate a Committee Chair. The Committee Chair may be removed at any time at the discretion of the Board. The incumbent Committee Chair continues in office until (i) a

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<sup>5</sup> Section 2.3 of NI 52-110.

<sup>6</sup> Section 2.3(5).

<sup>7</sup> Section 2.3(6).

successor is appointed, (ii) he or she is removed by the Board, or (iii) he or she ceases to be a director of the Corporation. If the Committee Chair is absent from a meeting, the Committee will, by majority vote, select another Committee member to preside at that meeting.

The Committee Chair has the following responsibilities and duties:

- (a) Effectively lead the Committee in discharging all duties set out in this Mandate.
- (b) Chair meetings of the Committee.
- (c) Review and provide comments on the agenda for each meeting of the Committee prepared by management and instructs management to ensure that the properly prepared agenda and other meeting materials are circulated to the Committee with sufficient time for review prior to each Committee meeting.
- (d) Ensure that all matters requiring the Committee's review or approval are properly tabled and presented for consideration at Committee meetings and that Committee members are free to express their viewpoints.
- (e) Ensure the Committee meets as frequently as necessary to carry out its duties effectively and ensures that there is sufficient time during Committee meetings to fully discuss all business properly put before the Committee.
- (f) In consultation with management, review the Committee's annual work plan.
- (g) Report to the Board on the matters reviewed by, and on any decisions or recommendations of, the Committee at the next meeting of the Board following any meeting of the Committee.
- (h) Ensure that the Committee works as a cohesive group, including by maintaining effective communication and working relationships between members of the Committee, the Board, management, auditors and advisors.
- (i) Ensure that the resources available to the Committee (in particular, timely and relevant information) are adequate to support its work.
- (j) If requested by the Governance and Human Resources Committee, meet with all Committee members and seeks their feedback on Committee performance and other matters.
- (k) Carry out any other or special assignments or any functions as may be requested by the Board.

#### 4.2 Meetings

- (a) Meetings of the Committee may be called at the request of any member of the Committee, the CFO or the external auditor or otherwise as required by law. Any such request will set out in reasonable detail the business proposed to be conducted at the meeting so requested. The Committee shall fix its own procedure at meetings and for the calling of meetings. The Committee meets at least each quarter and otherwise as necessary.
- (b) The CFO shall have direct access to the Committee and receive notice of and attend and be heard at all meetings of the Committee.
- (c) The CEO and the Board Chair shall receive notice of and have the right to attend and be heard at all meetings of the Committee, except in each case such part of the meeting, if any, which is a private session not involving all or some of these officers as determined by the Committee.
- (d) The external auditor of the Corporation is given notice of every Committee meeting and, at the expense of the Corporation, is entitled to attend and be heard thereat, except such part of the meeting, if any, which is a private session not involving the external auditor. If requested by a Committee member, the external auditor attends every Committee meeting held during such external auditor's term of office.
- (e) Unless otherwise determined, from time to time, by resolution of the Board, a majority of the Committee constitutes a quorum. No business may be transacted by the Committee except by resolution in writing signed by all the Committee members (whether in writing or electronically) or at a Committee meeting at which a quorum of the Committee is present in person or by means of such telephonic, electronic or other communication facilities that permits all participants to communicate adequately with each other during the meeting. At Committee meetings, Committee actions shall require approval of a majority of the votes cast by Committee members, except where only two (2) members are present, in which case any question shall be decided unanimously.
- (f) The Committee meets *in-camera*, in the absence of management with the external auditor, at each regularly scheduled meeting.
- (g) The Committee meets *in-camera*, in the absence of management and the external auditor, at each regularly scheduled meeting.
- (h) The Corporation Secretary will be the secretary of all meetings. If the Corporation Secretary is not in attendance at any meeting, the Committee appoints a secretary to the Committee who need not be a director or officer of the Corporation.

Minutes of Committee meetings will be recorded and maintained by the Committee's secretary and will be presented to the Committee Chair for review and approval.

- (i) The Committee may invite such officers, directors and employees of the Corporation as it sees fit from time to time to attend at meetings of the Committee and assist in the discussion and consideration of the matters being considered by the Committee. It is expected that responsible management shall be reporting on particulars at each Committee meeting.

#### **4.3 Reporting to the Board**

- (a) The Committee will report to the Board in a timely manner with respect to each of its meetings held. This report may take the form of circulating copies of the minutes of each meeting held.

### **5 DELEGATION**

The Committee has the authority to delegate to subcommittees, provided however that the Committee shall not delegate any power or authority required by Applicable Laws to be exercised by the Committee as a whole.

### **6 INDEPENDENT ADVISORS AND RESOURCES**

- (a) The Committee may communicate directly with the Corporation's external auditors and the Corporation's officers, employees or external parties and request Corporation information and documentation from these persons.<sup>8</sup>
- (b) The Committee may, in its sole discretion, engage independent outside counsel and such other advisors as it deems necessary to fulfil its duties and responsibilities under this Mandate. The Committee may set the compensation and oversee the work of any outside counsel and other advisors to be paid by the Corporation.<sup>9</sup>

### **7 LIMITATION ON THE DUTIES OF THE MEMBERS OF THE COMMITTEE**

Nothing in this Mandate is intended, or may be construed, to impose on any member of the Committee a standard of care or diligence that is in any way more onerous or extensive than the standard required by law.

### **8 EVALUATION OF COMMITTEE AND MANDATE REVIEW**

On an annual basis, the Committee shall review and evaluate its performance. In conducting this review, the Committee shall address such matters that the Committee considers relevant to its performance and evaluate whether this Mandate appropriately addresses the matters that are or should be within its scope. The review and evaluation shall be conducted in such a manner as the Committee deems appropriate. Among other things, the Committee shall evaluate and assess the financial literacy of its members. The Committee Chair shall deliver to the Governance and Human Resources Committee Chair a report, which may be oral, setting forth the results of its review and evaluation, including any recommended changes to this Mandate and any recommended changes to the Corporation's or the Board's policies or procedures, as it deems necessary or appropriate.<sup>10</sup>

This Mandate is not intended to give rise to civil liability on the part of the Corporation or its directors or officers to shareholders, other security holders, customers, suppliers, competitors, employees or other persons or to any other liability whatsoever on their part.

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8 Section 4.1 of NI 52-110.

9 Section 4.1 of NI 52-110.

10 Section 3.18 of NP 58-201