Management's Discussion and Analysis

This Management's Discussion and Analysis ("MD&A") provides a review by management of the financial position and consolidated results of Pieridae Energy Limited ("Pieridae", "we", "our" or the "Company") for the years ended December 31, 2020 and 2019, as well as information about our future prospects. This MD&A has been prepared as of March 24, 2021 and should be read in conjunction with the Company's audited consolidated financial statements and the accompanying notes for the years ended December 31, 2020 and 2019 (the "consolidated financial statements"). The consolidated financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRS"), sometimes referred to in this MD&A as Generally Accepted Accounting Principles ("GAAP") as issued by the International Accounting Standards Board ("IASB"). Pieridae's reporting currency is the Canadian dollar. All amounts are presented in Canadian dollars, unless otherwise stated.

When preparing our MD&A, we consider the materiality of information. Information is considered material if (i) such information results in, or would reasonably be expected to result in, a significant change in the market price or value of our shares; (ii) there is a substantial likelihood that a reasonable investor would consider it important in making an investment decision; or (iii) it would significantly alter the total mix of information available to investors. We evaluate materiality with reference to all relevant circumstances, including potential market sensitivity.

Reference is made to crude oil and natural gas in common units called barrel of oil equivalent ("boe"). A boe is derived by converting six thousand cubic feet ("mcf") of natural gas to one barrel ("bbl") of crude oil (6 mcf:1 bbl). This conversion may be misleading, particularly if used in isolation, since the 6 mcf:1 bbl ratio is based on an energy equivalency conversion method primarily applicable at the burner tip and does not represent a value equivalency at the wellhead. In comparing the value ratio using current crude oil prices relative to natural gas prices, the 6 mcf:1 bbl conversion ratio may be misleading as an indication of value.

We are publicly traded on the TSX Exchange ("TSX") under the symbol PEA.TO. Continuous disclosure materials are available on the Company's website, www.pieridaeenergy.com, or on SEDAR, www.sedar.com.

SPECIAL NOTE REGARDING NON-GAAP FINANCIAL MEASURES

This MD&A includes references to financial measures such as net operating income ("NOI"), operating netback or net back, adjusted funds flow from operations ("AFFO") and project investment. The Company feels that these financial measures are important to the understanding of its business activities. These financial measures are not defined by IFRS and therefore are referred to as non-GAAP measures. The non-GAAP measures used by the Company may not be comparable to similar measures presented by other companies. The Company uses these non-GAAP measures to evaluate its performance. The non-GAAP measures should not be considered an alternative to, or more meaningful than, measures determined in accordance with IFRS, as an indication of the Company's performance. The non-GAAP measures are reconciled to their closest GAAP measure on pages 24 and 25 of this MD&A.

CAUTIONARY NOTE REGARDING 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 expected 2021 capital 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 Company 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, and 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 (as defined herein) (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", "target", "goal" 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.

The forward-looking statements are based on current expectations, estimates and projections about the Company and the industry in which the Company operates, which speak only as of the earlier of the date such statements were made or as of the date of the report or document in which they are contained, and are subject to known and unknown risks and uncertainties that could cause the actual results, performance or achievements of the Company to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Such risks and uncertainties include, among others: general economic and business conditions (including as a result of demand and supply effects resulting from the COVID-19 virus pandemic and the actions of OPEC and non-OPEC countries) which will, among other things, impact demand for and market prices of the Company's products; volatility of and assumptions regarding crude oil, natural gas and natural gas liquids ("NGL") prices.

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, risks associated with oil and gas exploration, development, exploitation, production, 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 and ability to access sufficient capital from internal and external sources and the risk factors outlined under "Risk Factors" and elsewhere herein. The recovery and resource estimates 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 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, 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), and at Pieridae's website (www.pieridaeenergy.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.

DEFINITIONS AND ABBREVIATIONS

Bcf	Billion cubic feet	**Mmcf**	Million cubic feet
Bcm	Billion cubic metres	**MMBtu**	Million British thermal units
GJ	Gigajoules	**USD**	United States Dollars

PIERIDAE'S OBJECTIVES AND STRATEGY

Pieridae is focused on becoming the first Canadian owned liquefied natural gas ("LNG") producer that integrates (a) upstream activities consisting primarily of the acquisition and development of natural gas resource properties situated primarily in Alberta, the extraction of natural gas and other commodities from those properties and the initial processing of the natural gas in or near the field (the "Upstream Segment") and (b) midstream activities consisting primarily on the delivery of natural gas by pipeline to the site of the proposed Goldboro LNG Facility (as described below) where it is further processed and liquefied to produce LNG for sale to customers for export to international markets and to specific markets in North America (the "LNG Segment" and together with the Upstream Segment, the "Goldboro LNG Project").

The Company's fundamental strategy is to acquire under-valued natural gas reserves (primarily in Alberta) which can be developed for the purpose of supplying natural gas to the proposed Goldboro LNG Facility (the "Goldboro LNG Facility" or the "Facility"), to construct the Facility and develop the natural gas reserves with low cost project financing (which is supported to a substantial degree by government guarantees) and to operate the Facility to produce high-valued LNG for sale in international markets. This strategy encompasses a "reuse, revitalize, repurpose" mandate aligned to the Company's environmental, social and governance ("ESG") values and goals to make the best use of existing local and national infrastructure and industrial footprints.

The Company intends to construct its Goldboro LNG Facility near the community of Goldboro situated in the municipality of the district of Guysborough on the North Eastern coast of Nova Scotia. The Facility will be constructed in phases and will include (a) two trains ("Train One" and "Train Two", respectively), each with the capacity to produce approximately 4.8 million tonnes of LNG annually, (b) a power plant which will generate the electricity required to operate the Facility, (c) two LNG storage tanks and (d) marine structures and a jetty which will be equipped to accommodate concurrently two LNG vessels, each with a cargo capacity of up to 250,000 m^3 of LNG.

The Company takes a long-term approach to growth and investments in order to mirror the long-term nature of the infrastructure, and to focus on creating long-term shareholder value. Operational discipline, safe, effective and efficient operations, community outreach, and cost control are fundamental to the Company. By consistently managing costs and continuing to integrate ESG considerations into our business plan, the Company believes it will achieve its long-term objectives. Opportunities to further integrate ESG considerations into our corporate strategy are being sought, and a plan is in place to ensure ESG risks and opportunities are addressed throughout the project lifecycle. Strategic, accretive acquisitions are a key component of the Company's strategy. The Company has selectively acquired properties generating future cash flows and aligning with its long-term objective. The Company may also selectively purchase other resource owners' gas or provide LNG processing services to the extent there is spare capacity at the Facility.

ANNUAL HIGHLIGHTS

($ 000s unless otherwise noted)	2020	2019	2018
Production			
Natural gas (mcf/day)	201,040	121,263	102,952
Condensate (bbl/day)	3,020	807	211
NGLs (bbl/day)	5,473	1,379	139
Sulphur (ton/day)	1,985	410	362
Total production (boe/d)	42,000	22,397	17,509
Financial			
Net loss	(100,693)	(71,573)	(34,870)
Net loss per share basic and diluted	(0.64)	(0.73)	(0.68)
Net operating income (1)	50,723	25,001	(530)
Cashflow provided by (used in) operating activities	909	(51,772)	(8,407)
Adjusted funds flow from operations (1)	26,866	608	(8,530)
Total assets	612,651	602,474	370,670
Working capital deficit	(19,615)	19,105	(76,010)
Capital expenditures	17,243	169,167	981
Development expenses	18,742	9,150	8,801

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

QUARTERLY HIGHLIGHTS

Pieridae reports business results in two segments: Upstream and LNG. The tables below provide a summary of the consolidated financial results for the quarter of 2019 and 2020:

	2020				2019			
($ 000s unless otherwise noted)	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
Production								
Natural gas (mcf/day)	212,220	184,080	208,689	199,234	204,262	86,884	90,942	102,221
Condensate (bbl/day)	3,259	2,807	3,166	2,850	2,840	121	131	114
NGLs (bbl/day)	6,171	4,722	5,843	5,156	5,253	55	80	85
Sulphur (ton/day)	1,829	2,232	1,970	1,906	938	269	204	224
Total production (boe/d)	44,800	38,209	43,791	41,211	42,137	14,657	15,368	17,236
Financial								
Net loss	(45,968)	(29,845)	(13,396)	(11,484)	(25,873)	(13,178)	(19,530)	(12,996)
Net loss per share, basic and diluted	(0.29)	(0.19)	(0.09)	(0.07)	(0.18)	(0.15)	(0.23)	(0.17)
Net operating income (loss) (1)	12,829	(646)	19,301	19,239	24,470	(2,699)	(1,928)	5,158
Cashflow provided by (used in) operating activities	1,037	(4,541)	(2,013)	6,426	(17,748)	(238)	(16,702)	(17,084)
Adjusted funds flow from operations (1)	8,535	(6,779)	12,466	12,644	14,448	(7,665)	(6,517)	342
Total assets	612,651	583,942	588,415	609,437	602,474	364,095	366,067	369,049
Working capital (deficit) surplus	(19,615)	(9,164)	15,109	15,596	19,105	(88,430)	(77,892)	(66,192)
Capital expenditures	8,926	6,033	264	2,020	165,764	1,914	917	572
Development expenses	8,682	2,472	4,129	3,459	805	504	7,841	-

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

2020 OPERATIONAL AND FINANCIAL HIGHLIGHTS

Continued Safe Operations of Pieridae's Assets and Completion of Planned Maintenance

Pieridae continues to proactively respond to the challenges associated with the global COVID-19 pandemic and remains committed to ensuring the health and safety of all its employees and contractors in the field and in our corporate office, as well as to the safe and reliable operation of our assets.

The first half of 2020 was characterized by extremely negative movements in liquids pricing coupled with unprecedented uncertainty, during which time Pieridae responded strongly by monetizing certain hedge positions, limiting non-essential capital and operating expenditures, and taking active steps to reduce general and administrative expenses ("G&A"), while continuing to support safe and reliable asset operations. During this challenging first half, Pieridae is proud to have avoided any pandemic-related layoffs.

In the third quarter, the impact from the COVID-19 pandemic began to diminish slightly due to the easing of restrictions imposed by governments in order to limit the spread of the pandemic. Pieridae responded by successfully completing a number of deferred sustaining capital and maintenance projects. The Company's continued focus on safety was evidenced by no lost time incidents ("LTIs") recorded during the year, and total reportable injury frequency ("TRIF") of 0.34 during the year, on a target of less than 1.0.

Pieridae's assets returned to strong production in the fourth quarter, averaging production of 44,800 boe/day, a 17% increase from the prior quarter, and a 6% increase from the comparative quarter in 2019. However a robust natural gas hedging program, put in place earlier in 2020 to protect revenues, prevented Pieridae from fully participating in strengthening natural gas prices until below-market fixed price sales contracts rolled off late in the year. Realized natural gas price was $2.16/mcf in the fourth quarter vs an AECO benchmark of $2.67/mcf. While below benchmark, realized prices in the fourth quarter were 27% higher than the third quarter and 13% higher than the comparative quarter in 2019.

In the fourth quarter of 2020, Pieridae generated cashflow from operating activities of $1.0 million, and adjusted funds flow from operations ("AFFO") of $8.5 million a decrease of $5.9 million or 41% compared to the same period in 2019. While the Company achieved higher production through better asset performance and realized higher commodity prices, these benefits were offset by increased operating costs and royalties, and continued investment in the Goldboro LNG Project. For the year ended December 31, 2020, the Company generated cashflow from operations of $0.9 million, and AFFO of $26.9 million, an increase of $26.3 million from 2019, due to a full year's worth of production and revenue from Pieridae's acquisition of Shell Canada's southern foothills assets on October 16, 2019 (the "South

Foothills Asset” acquisition). Cashflow from operations was offset by the continued progress on the Goldboro LNG project, activities from which must be expensed until the Company reaches a successful final investment decision (“FID”).

Throughout the challenges COVID-19 has posed during a year of operational and cultural integration stemming from the significant recent acquisitions, Pieridae remains committed to and impressed by the operational resilience of our assets and our team. The Company took definitive action during the year to defend its financial position, including ensuring operational flexibility in capital program execution and working to improve cost efficiencies across the business.

The Company continues to have a strong hedging program in place to insulate itself from volatile commodity prices, which has proven successful at providing a degree of price certainty and revenue stability during these uncertain and challenging times. Pieridae’s senior secured lender Third Eye Capital Corporation (“TEC”) has temporarily waived their requirement to have 60% of production hedged on an 18-month rolling average basis in order to allow the Company to take advantage of strengthening crude and natural gas markets. However, as at December 31, 2020, 119,000 GJ/d of fixed price contracts of natural gas were in place at a weighted-average price of $2.33/GJ, and 1785 bbl/day of 2021 condensate production was hedged at a weighted average price of $55.90/bbl.

Management’s Response to the COVID-19 Pandemic

Pieridae remains committed to the health and safety of all personnel and to the safety and continuity of operations. In accordance with government guidelines to limit the risk of the outbreak, the Company has implemented measures such as self-quarantine policies, travel restrictions, enhanced sanitation measures and social distancing requirements. Gradual easing of restrictions during the summer and fall of 2020 allowed most corporate staff to return to working in the office under modified health and safety protocols in July, and allowed the resumption of certain maintenance activities in the field, however restrictions were re-imposed in November 2020. Since that time office staff have successfully worked remotely while activity in our field operations has been reduced to restrict access to only essential personnel and prevent unnecessary travel. As a result of the ongoing vigilance by our staff and continued updates to work-safe protocols, Pieridae has not suffered any significant loss of productivity related to COVID-19 during the fourth quarter and year ended December 31, 2020.

Extensions of Key Deadlines

In May 2020, Pieridae announced extensions of key deadlines under its 20-year agreement with German energy company Uniper Global Commodities (“Uniper”). These include expected commercial deliveries of gas to Uniper to start between August 31, 2025 and February 28, 2026; and the extension to June 30, 2021 of the deadline to make a positive final investment decision for the Company’s proposed Goldboro LNG Facility. Our relationship with Uniper remains strong and we very much appreciate their on-going support. The 20-year agreement with Uniper is for the purchase of all gas produced by Train 1 at the Facility or 4.8 million tonnes per annum (“MMTPA”) of liquefied natural gas produced at Train One from the proposed facility.

Alberta Energy Regulator decision regarding license transfer application

In May 2020, the Alberta Energy Regulator (“AER”) made the decision to deny Shell’s application to transfer the licenses associated with the South Foothills Assets to Pieridae. This denial was as a result of the AER’s concerns regarding the application structure to split the liability associated with Jumping Pound and Waterton gas processing facilities, whereby Shell will retain the liability associated with subsurface sulfinol contamination.

Shell and Pieridae 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 the Company and the AER is processing the applications in the normal course.

Pieridae Graduates to the TSX

On June 1, 2020 Pieridae’s common shares were approved for listing on the 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. Being a member of the TSX allows Pieridae to reach a larger investor audience, including the Canadian institutional investment community, which should improve liquidity in the stock over the longer term.

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.

Guarantee Facility from Export Development Canada ("EDC")

In July 2020, Pieridae received approval from EDC for a $6 million guarantee facility as part of the EDC's Account Performance Security Guarantee ("APSG") program. This guarantee facility bears interest at 0.29% and provides a 100% guarantee to the issuing bank of certain of the Company's existing and future letters of credit ("LCs"). The APSG will allow Pieridae to release existing and future cash collateral requirements provided as security for certain existing and potential future LCs.

Pieridae Hires Experienced SVP to Lead the Goldboro LNG Project

In August 2020, Pieridae announced it had engaged veteran LNG industry professional Andy Mukherjee P.Eng. as Senior Vice-President LNG to lead the development of its multi-billion-dollar Goldboro LNG Project. Mr. Mukherjee has worldwide expertise in front-end engineering and design; detailed engineering, procurement, contracts, construction, and commissioning; including module fabrication and construction related to four mega LNG projects in addition to oil and gas in North America and overseas.

Pieridae Engages EPCC Contractor Bechtel

In September 2020, Pieridae announced that it had signed a services agreement with respected global engineering firm Bechtel related to Pieridae's Train Two Goldboro LNG Facility. Bechtel has a proven track record of delivering projects throughout the world on time and on budget.

Some of the key deliverables of the Bechtel services agreement are:

- 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
- Delivering a final lump sum, turnkey EPCC contract price proposal by May 31, 2021 and
- 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 LNG site.

Bechtel remains on schedule to deliver these items.

Nova Scotia Mi'kmaq, Black Diamond Group Given Opportunity to Build Large-Scale Workforce Lodge

On October 1, 2020, all 13 Nova Scotia Mi'kmaq communities and Black Diamond Group had received a Letter of Award from Pieridae which gives them the exclusive right to negotiate the contract to build a $720 million workforce lodge during the four-year construction phase of the Goldboro LNG Facility. The lodge will be home to 4,500 - 5,000 workers who will build the multi-billion-dollar LNG Facility. Black Diamond will be responsible for the lodge, the Mi'kmaq would provide hospitality services such as catering, housekeeping and guest services.

UPSTREAM SEGMENT

The upstream segment is primarily comprised of the activities of Pieridae's wholly owned subsidiary Pieridae Alberta Production Ltd, which owns Pieridae's petroleum and natural gas production operations and properties in Western Canada; refer to Note 6 of the consolidated financial statements. Upstream is currently the only segment generating operating revenues.

Production

	Three months ended December 31		Year ended December 31	
	2020	2019	2020	2019
Natural gas (mcf/day)	212,220	204,262	201,040	121,263
Condensate (bbl/day)	3,259	2,840	3,020	807
NGLs (bbl/day)	6,171	5,253	5,473	1,379
Sulphur (ton/day)	1,829	938	1,985	410
Total production (boe/day)	**44,800**	**42,137**	**42,000**	**22,397**

Production in the fourth quarter of 2020 was 44,800 boe/d, an increase of 2,663 boe/day or 6% compared to the same quarter in 2019. On a year-to-date basis, production was 42,000 boe/d, an increase of 19,603 boe/day or 88% compared to the same period in 2019. These respective increases are primarily due to production capabilities acquired from the South Foothills Asset acquisition, partially offset on a year-to-date basis by planned and unplanned outages, most significantly during the first quarter of 2020 as a result of unseasonably cold weather, and in the third quarter of 2020 as a result of planned maintenance in a number of production fields. The significant growth in condensate and NGL production in the three months and year ended December 31, 2020 reflects the deep cut capability of the processing facilities acquired as part of the South Foothills Asset acquisition.

RESERVES

Deloitte Touche Tohmatsu Limited ("Deloitte"), Pieridae's independent, qualified reserves evaluator, performed reserves evaluations of the Company's assets as at December 31, 2020 and December 31, 2019. The following table summarizes Pieridae's reserves based on the Deloitte reserves report:

	Year ended December 31,			
	2020		2019	
($ 000s unless otherwise noted)	MMboe	$ [1]	MMboe	$ [1]
Reserves Category				
Net proved developed producing ("PDP") reserves	108.6	505,243	133.0	592,649
Net proved ("1P") reserves	150.1	718,495	157.2	725,250
Net proved plus probable ("2P") reserves	204.0	976,147	216.5	1,062,453

[1] Estimated pre-tax net present value of discounted cash flows from reserves using a 10% discount rate.

Pieridae's net PDP reserve volumes decreased by 24.4 MMboe, or 18% year over year as production of 15.5 MMboe and technical revisions of 8.5 MMboe were offset by reserve replacement of 6.8 MMboe, a reserve replacement ratio of 44%. These reserves were added for $2.7 million in total capital expenditure. Total net 1P reserves were 150.1 MMboe, a decrease of 7.1 MMboe or 5% compared to the prior year, primarily due to the lack of exploration activity Pieridae was able to conduct in 2020 offset by future development location bookings. Pieridae's total net 2P reserves were 204 MMboe, a decrease of 12.5 MMboe or 6% compared to the prior year, also primarily offset by booking future development locations. On a net 2P basis, and calculated based on 2020 total production, Pieridae's reserve life index is 13.2 years.

The Company's 2P reserves as at December 31, 2020 were estimated to have a pre-tax net present value of approximately $976 million using a 10% discount rate, compared to $1,062 million in the prior year. The decrease in value was primarily due to lower commodity price forecasts and 2020 production depletion, partially offset by reduction in decommissioning liability, modifications to certain royalty assumptions, and future development location bookings.

Benchmark Prices

	Three months ended December 31		Year ended December 31	
	2020	2019	2020	2019
AECO benchmark price (CAD/mcf)	2.67	2.49	2.26	1.53
Condensate benchmark price USD/bbl)	42.99	57.29	37.40	44.06
NYMEX benchmark price (USD/MMBtu)	2.76	2.41	2.13	2.52
WCS heavy differential from WTI (USD/bbl)	9.64	21.96	11.49	(10.88)
Dated Brent benchmark price (USD/bbl)	45.26	61.84	43.21	64.24
NBP UK natural gas benchmark price (USD/MMBtu)	5.58	5.20	3.28	4.84
US/Canadian dollar average exchange rate (USD)	0.7675	0.7576	0.7455	0.7536
US/Canadian dollar period-end exchange rate (USD)	0.7854	0.7699	0.7854	0.7699

Realized Prices

	Three months ended December 31		Year ended December 31	
	2020	2019	2020	2019
Natural gas ($/mcf)	2.16	1.91	2.00	1.75
Condensate ($/bbl)	53.48	58.67	51.24	58.83
NGLs ($/bbl)	15.11	11.47	12.91	11.61
Sulphur ($/ton)	22.97	(1.36)	11.69	28.78

Petroleum and Natural Gas Revenue

	Three months ended December 31		Year ended December 31	
($ 000s except per boe)	2020	2019	2020	2019
Natural gas	42,242	35,857	147,300	77,425
Condensate	16,033	15,328	56,639	17,331
NGLs	8,579	5,545	25,870	5,843
Sulphur	3,866	(117)	8,270	4,311
Petroleum and natural gas revenue	**70,720**	**56,613**	**238,079**	**104,910**
Petroleum and natural gas revenue ($/boe)	17.16	14.60	15.49	12.83
Other income	488	881	3,157	2,665
Third party processing	5,801	5,389	25,538	6,831
Realized gain (loss) on risk management contracts	-	-	12,708	(657)
Total revenue	77,009	62,883	279,482	113,749

Petroleum and natural gas revenue in the fourth quarter of 2020 was $70.7 million, an increase of $14.1 million or 25% compared to the same quarter in 2019. On a year-to-date basis, petroleum and natural gas revenue was $238.1 million, an increase of $133.2 million or 127% compared to the same period in 2019. These respective increases are primarily due to additional production and new revenue streams brought on by the South Foothills Asset acquisition. A slight increase in the realized price for natural gas and other NGLs in 2020 as compared to 2019 was partially offset by a corresponding decrease in the realized price of condensate.

Third party processing revenue is derived from fees charged to third party for processing their production and sulphur volumes through Pieridae's three sour gas processing facilities acquired as part of the South Foothills Asset acquisition. This income adds significantly to the economic benefits realized from these facilities by offsetting operating costs, which are highly fixed in nature. Third party processing income was $5.8 million and $25.5 million for the three and twelve months ended December 31, 2020, an increase of 8% and 274% respectively from 2019.

For the year ended December 31, 2020, the Company recognized $12.7 million in realized gains on risk management contracts, compared to a realized loss of $0.7 million in 2019 due to the Company's hedging strategy and monetization of certain WTI-linked commodity forward contracts during 2020.

Royalties

	Three months ended December 31		Year ended December 31	
($ 000s except per boe)	2020	2019	2020	2019
Royalties	4,402	2,387	9,609	3,755
Royalties ($/boe)	1.07	0.62	0.63	0.46

Royalties in the fourth quarter of 2020 were $4.4 million ($1.07/boe), an increase of $2.0 million or 84% compared to the same quarter in 2019. On a year-to-date basis, royalties were $9.6 million ($0.63/boe), an increase of $5.9 million or 156% compared to the same period in 2019. These respective increases are due to a combination of an overall increase in production level as a result of the South Foothills Asset acquisition, higher realized prices, and the increase in condensate and liquids as a percentage of total production as a result of the South Foothills Asset acquisition, which on average attract higher royalty rates than natural gas.

Operating Expense

	Three months ended December 31		Year ended December 31	
($ 000s except per boe)	2020	2019	2020	2019
Operating expense	55,485	32,949	203,432	77,036
Operating expense ($/boe)	13.46	8.50	13.23	9.42
Adjusted operating expense (1)	45,818	27,677	169,624	65,894
Adjusted operating expense ($/boe) (1)	11.12	7.14	11.03	8.06

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

Operating expense in the fourth quarter of 2020 was $55.5 million ($13.46/boe), an increase of $21.8 million or 68% increase compared to the same quarter in 2019. On a year-to-date basis, operating expense was $203.4 million ($13.23/boe), an increase of $126.4 million or 164% compared to the same period in 2019. These respective increases reflect changes to the Company's operating cost structure as a result of the acquired gas processing facilities, which operated in 2020 at approximately 66% of current capacity while attracting a high percentage of fixed operating costs. While operating at less than 100% capacity impacts operating cost per boe, it also presents a significant opportunity to Pieridae should the Company be able to attract additional owned or third-party volumes to these facilities.

On an adjusted operating expenses per boe basis, operating costs were $11.12/boe in the fourth quarter of 2020, and $11.03/boe on a year-to-date basis compared to $7.14/boe and $8.06/boe for the comparative period in 2019 respectively, reflecting the higher cost base of the South Foothills Assets acquired in late 2019. This adjusted basis is a non-GAAP measure, refer to "Non-GAAP Measures" in this MD&A, and is intended to reflect normalized operating expense by deducting third-party revenue and sulphur production revenue from operating costs, as both offset incurred additional costs to generate those additional revenue which is not reflected in per-boe comparatives.

As a result of third-party processing fees earned from these facilities, revenues generated on a per boe basis increased together with operating expenses per boe. These concurrent increases contributed to the increase in operating netback to $3.31/boe for the twelve months ended December 31, 2020.

Transportation Expense

	Three months ended December 31		Year ended December 31	
($ 000s except per boe)	2020	2019	2020	2019
Transportation expense	4,293	3,077	15,718	7,957
Transportation expense ($/boe)	1.04	0.79	1.02	0.97

Transportation expense in the fourth quarter of 2020 was $4.3 million ($1.04/boe), an increase of $1.2 million or 40% compared to the same quarter in 2019. On a year-to-date basis, transportation expense was $15.7 million ($1.02/boe), an increase of $7.8 million or 98% compared to the same period in 2019. These respective increases are mainly driven by higher production volumes and the increase in Pieridae's securement of firm service capacity on the Nova Gas Transmission Ltd. ("NGTL") System.

General and Administrative Expense

	Three months ended December 31		Year ended December 31	
($ 000s except per boe)	2020	2019	2020	2019
G&A expense - Upstream	6,142	2,038	13,122	6,452
G&A expense - Corporate and LNG	(2,195)	6,440	9,367	13,472
G&A expense ($/boe) - Upstream	1.49	0.53	0.85	0.79
G&A expense ($/boe) - Corporate and LNG	(0.53)	1.66	0.61	1.65

Upstream G&A expense in the fourth quarter of 2020 was $6.1 million ($1.49/boe), an increase of $4.1 million or 201% compared to the same quarter in 2019. On a year-to-date basis, Upstream G&A expense was $13.1 million ($0.85/boe), an increase of $6.7 million or 103% compared to the same period in 2019 due to the expanded geological and engineering capabilities acquired as part of the South Foothills Asset acquisition in 2019 as well as the need for additional staff and incremental insurance expense required to support the growing size and complexity of the Company's operations. Additionally, an amendment during the fourth quarter of 2020 to the Company's operations overhead allocation methodology resulting in a reclassification of $5.7 million of overhead expenses from operating expense to G&A.

Corporate and LNG G&A expense in the fourth quarter of 2020 was ($2.2) million , a decrease of $8.6 million or 134% compared to the same quarter in 2019. On a year-to-date basis, Corporate and LNG G&A was $9.4 million, a decrease of $4.1 million or 30% compared to the same period in 2019. During the fourth quarter $5.1 million in year-to-date G&A expense associated with the Goldboro project was reclassified to development expense, which drove the majority of the year over year and quarter over quarter decreases.

Finance Expense

	Three months ended December 31		Year ended December 31	
($ 000s)	**2020**	**2019**	**2020**	**2019**
Interest expense	7,623	11,250	31,008	12,210
Accretion of financing costs	5,825	-	16,842	2,913
Interest income	-	(1,600)	(76)	(1,753)
Accretion of decommissioning obligations	208	817	840	2,959
Interest on lease liabilities	45	95	155	95
Total finance expense	**13,701**	**10,562**	**48,768**	16,424

Finance expense in the fourth quarter of 2020 was $13.7million, an increase of $3.1 million or 30% compared to the same quarter in 2019. On a year-to-date basis, finance expense was $48.8 million, an increase of $32.3 million or 197% compared to the same period in 2019. These respective increases are due to the $206 million Credit Agreement entered into on October 16, 2019 with TEC (the "Credit Agreement"). The Credit Agreement bears interest at a fixed rate of 12.0% per annum from the date of issue, accrued daily and payable quarterly in cash. Additional interest of 3.0% per annum is payable quarterly in cash or, at the option of the Company and subject to the lender's approval, payable in kind by way of accruing to the principal outstanding. Refer to Note 12 of the consolidated financial statements for additional information on the Credit Agreement. In the first quarter of 2019, a term loan of $50 million was outstanding with the Alberta Investment Management Corporation ("AIMCo"), bearing interest at a fixed rate of 9.5%. Effective October 16, 2019, this term loan was repaid by the simultaneous establishment of the Credit Agreement.

Accretion of financing costs increased for the fourth quarter and year-to-date basis of 2020 compared to the same period in 2019 due to the additional amortization on the closing and deferred fee.

Accretion on decommissioning liabilities decreased due to a decrease in the real risk-free rate of interest as at December 31, 2020 compared to prior year. Refer to Note 13 of the consolidated financial statements for additional information on this change in estimate.

Depletion and Depreciation

	Three months ended December 31		Year ended December 31	
($ 000s)	**2020**	**2019**	**2020**	**2019**
Depletion and depreciation	15,452	10,044	44,013	21,986

Depletion and depreciation in the fourth quarter of 2020 was $15.5 million, an increase of $5.4 million or 54% compared to the same quarter in 2019. On a year-to-date basis, depletion and depreciation was $44.0 million in 2020, an increase of $22.0 million or 100% compared to the same period in 2019. These respective increases are due to an increase in the depletable base from higher decommissioning costs and future development costs and increases in production resulting from the acquisition of the South Foothills Assets.

Impairment

($ 000s)	Three months ended December 31 2020	2019	Year ended December 31 2020	2019
Impairment of property, plant and equipment	16,876	-	16,876	-
Impairment of exploration and evaluation assets	-	19,731	-	27,590

As at December 31, 2020 the Company determined that impairment indicators were present for the Company's upstream Northern and Central CGU assets. Impairment tests were performed and an impairment of $16.9 million was recognized on the Company's Northern CGU as the estimated recoverable amount exceeded its carrying value. No impairment was recognized on the Company's Central CGU. At December 31, 2019, no indicators of impairment were identified. Refer to Note 8 of the consolidated financial statements for additional information on impairment.

No indicators of impairment were noted on the Company's exploration and evaluation assets or right of use assets at December 31, 2020. During the year ended December 31, 2019, the Company recognized an impairment charge of $27.6 million on its exploration and evaluation assets located in the province of Quebec.

Share-based Compensation

($ 000s)	Three months ended December 31 2020	2019	Year ended December 31 2020	2019
Share-based compensation - Upstream	221	309	389	456
Share-based compensation - Corporate and LNG	334	345	594	1,042

Upstream share-based compensation in the fourth quarter of 2020 was $0.2 million which was relatively consistent to $0.3 million for the same quarter in 2019. On a year-to-date basis, share-based compensation was $0.4 million, a decrease of $0.1 million or 15% compared to the same period in 2019. These respective decreases are a result of lower value of options granted in 2020.

Corporate and LNG share-based compensation in the fourth quarter of 2020 was $0.3 million which was relatively consistent to $0.3 million for the same quarter in 2019. On a year-to-date basis, share-based compensation was $0.6 million, a decrease of $0.4 million or 43% compared to the same period in 2019. These respective decreases are also a result of lower value of options granted in 2020 partially offset by incremental expense recognized.

LNG SEGMENT

Project Background

The LNG segment contains all activities associated with the development of the Company's proposed Facility in Goldboro, Nova Scotia in addition to the majority of Pieridae's corporate overhead activities.

The Goldboro LNG site is near the community of Goldboro, Nova Scotia. The site was selected to make use of existing infrastructure and is aligned with the Company's goal to minimize capital exposure by reusing existing, underutilized midstream infrastructure. The site is close to a decommissioned sour gas processing facility which gathered gas from numerous offshore reservoirs. This plant processed gas from the offshore Scotia shelf at the Sable Island project and tied into an existing sales pipeline (Maritimes and Northeast Pipeline ("M&NP")) which is conveniently located next to the site, and which will be modified to deliver gas to the Goldboro LNG Facility.

The Goldboro LNG Facility has progressed to the open book estimate ("OBE") stage and KBR was previously engaged to review the previously completed Front-End Engineering Design ("FEED") study and provide a fixed price contract to construct the gas liquefaction facility. In July 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. As a result, On September 29, 2020 Pieridae announced that it had signed a services agreement with respected global engineering firm Bechtel related to Pieridae's Two-Train Goldboro LNG Facility. Some of the key deliverables of the Bechtel services agreement are:

- 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
- Delivering a final lump sum, turnkey EPCC contract price proposal by May 31, 2021 and
- 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 LNG site

Pieridae has retained sole responsibility to contract the site preparation, marine civil works, and worker camp. These projects will be financed concurrently with a positive FID decision, and project execution will commence thereafter.

Under the FEED study, Air Products and Chemicals, Inc. developed a plan to design and deliver a two-train (each 4.8 MMTPA) facility. A two-train construction project is contemplated to span approximately 56 months. Much of the construction contemplates assembling modules built in offshore yards while employing approximately 4,500 to 5,000 local workers during the peak construction phase. These employees will be housed at a temporary camp, which will be built on or nearby the existing decommissioned Sable Island sour gas plant site. Site preparation, site drainage, highway reconstruction, marine facilities, are amongst some of the major projects that must be assembled in tandem with, or prior to, the LNG liquefaction facility construction.

Integrated LNG Business Model

The acquisition of the South Foothills Assets further solidifies Pieridae's position as a fully integrated LNG enterprise holding key permits and approvals. It also greatly expands its portfolio of natural gas reserves, and its ability to generate sufficient natural gas to supply the Facility. With the completion of the South Foothills Asset acquisition, the Company estimates that it has enough resource capacity, to fill Train One of the proposed Facility at Goldboro. The Company plans to continue to add to these resources and reserves as markets and finances permit. A 20-year, take-or-pay contract with Uniper, together with the additional sales contract with Axpo, ensures that there will be a long-term, stable offtake for more than half of the planned capacity of the Facility.

Financing (UFK)

On April 25, 2013, Pieridae received written confirmation of eligibility in principle for up to US $3.0 billion of untied loan guarantee by the German Federal Government, provided that, among other things, at least 1.5 MMTPA of the 4.8 MMTPA LNG produced from Train One will be delivered to the German domestic gas market. The eligibility in principal for the loan guarantee is expected to result in a lower cost of capital for Pieridae and enhance the leverage which can be achieved. This should represent a significant advantage over its competitors and translate into a cost of capital lower than an integrated LNG company without such guarantees.

On October 29, 2018, the proposed financing of upstream activities within the Goldboro LNG received a written confirmation of eligibility in principle for up to US $1.5 billion of untied loan guarantees by the German Federal Government. This confirmation marked an important milestone in advancing the integrated Goldboro LNG Project towards FID. This eligibility in principal for up to US $1.5 billion German government loan guarantee in relation to the proposed financing of conventional upstream natural gas development is in addition to the eligibility in principle for up to US $3.0 billion by the German government loan guarantees for the proposed financing of the construction of Train One of the Goldboro LNG Facility and all associated facilities.

Stranded Supply

Part of Pieridae's value chain strategy is to acquire stranded and economically constrained natural gas reserves and move them to world markets, capitalizing on higher global market prices. The Company has executed on this strategy in each of the past two years. In December 2018, the Company acquired Ikkuma and in October 2019, acquired the South Foothills Assets. The advancement of the Goldboro LNG Project is one advantage unique to Pieridae, and it could help facilitate additional acquisitions for the Company.

Transport Capacity

The gas supply for the Goldboro LNG Facility will be delivered via existing pipelines to the M&NP, located directly alongside the project site. Western Canadian production would move through TC Energy's Canadian Mainline ("Canadian Mainline"). This represents an opportunity for TC Energy, as their Canadian Mainline is currently substantially underutilized. There are some sections of the subsidiary lines which will require upgrading to meet Pieridae's capacity requirements, and engineering work is ongoing to refine the adjustments required.

Key Milestones

The following is a discussion of the key milestones for the Goldboro LNG Project:

Milestone	Status
Secure sales contracts for 9.6 MMTPA (the design capacity of the two trains).	• Pieridae has an agreement with Uniper which contemplates the sale, on a "take or pay" basis, of 4.8 MMTPA of LNG for a term of 20 years commencing at the start of commercial deliveries of LNG. • Pieridae has a term sheet to negotiate a binding LNG sale and purchase agreement to supply up to 1.0 MMTPA of LNG to Axpo, a Swiss utility. • Negotiations are under way for additional sales agreements.
Secure supply of approximately 1.4 billion cubic feet of natural gas, and the related infrastructure improvements required to supply the 9.6 MMTPA of LNG to the proposed Goldboro LNG Facility.	• In 2019, Pieridae added 1,077 million cubic feet of total proved plus probable natural gas reserves through its acquisition of the South Foothills Assets. • The upstream reserves, including approximately 500 potential drilling locations identified to date, in various stages of de-risking/technical due diligence, will provide sufficient productive capacity to fill Train One at Goldboro. • In December 2018 Pieridae added 671 million cubic feet of total proved plus probable natural gas reserves through the Ikkuma acquisition. • Confirmation of eligibility in principle for up to US $1.5 billion of untied loan guarantees by the German Federal Government under its UFK program to support upstream development. • Pieridae is acquiring and reprocessing a significant amount of 3D seismic information on its growing reserve base. This will be used to formulate a comprehensive drilling plan that will ultimately grow production to the levels required to fill Train One. • Pieridae continues to seek additional gas properties through acquisitions or processing agreements, for which negotiations are ongoing.
Complete engineering and design required for Facility construction.	• Project site acquired. • Beginning of the land preparation was completed in early 2018. • Preliminary FEED has been completed. • As a result of a depressed market environment in early 2020 and COVID-19 impacts, Pieridae negotiated an extension with Uniper and TEC to June 30, 2021 for the deadline to make a positive FID. • Bechtel is progressing on the OBE and associated work for the primary EPCC contract. Work continues, and a cost estimate and associated EPCC contract is pending. • Work is also continuing on site preparation and planning. Detailed engineering work is being finalized on water intake, the wharf and jetty, and stormwater drainage and treatment options in addition to detailed planning of the road relocation, work camp and site terracing
Secure transportation agreements to deliver natural gas to the Goldboro LNG Facility.	• Memorandums of understanding have been completed with owners of the respective pipelines for long-term capacity. • The Company is eligible to request, at any time, an open season process to finalize these agreements.

Obtain all permits and authorizations required to proceed with construction.	• The Company has received all the major permits for the Project, including:
	    ○ Environmental Assessment Approval
	    ○ National Energy Board LNG Export License
	    ○ National Energy Board Import License
	    ○ US DOE LNG FTA Export Permit
	    ○ US DOE NFTA Export Permit
	    ○ Goldboro Construction Permit

Obtain agreement from organized labour and local indigenous groups to mitigate the risk of disruption during construction.	• Project special needs collective agreements (the "Collective Agreement") have been negotiated with 15 of the relevant trade unions in Nova Scotia, of which 13 have signed and ratified the Collective Agreement. • The Labour Board (Nova Scotia) issued order LB-1322 and order LB-1323 declaring that the Collective Agreement is a project agreement and that it is effective commencing July 27, 2017. • On February 4, 2019, Pieridae signed a Benefits Agreement with The Assembly of Nova Scotia Mi'kmaq Chiefs. The agreement means the Mi'kmaq will benefit economically as the Goldboro LNG Facility is developed, built and begins operating. • On September 30, 2020 Pieridae signed a Letter of Award selecting Black Diamond and the 13 Nova Scotia Mi'kmaq communities to exclusively negotiate the contract to build the $720 million workforce lodge and amenities during the four-year construction phase of the Facility
Secure the required funding.	• The confirmation of eligibility in principle on April 25, 2013, that the project financing to be secured for constructing the first train of Goldboro will qualify for a US $3.0 billion loan guarantee from the German Federal Government. • On October 29, 2018, the proposed financing of upstream activities within the Goldboro LNG Project received a written confirmation of eligibility in principle for up to US $1.5 billion of untied loan guarantee by the German Federal Government.

More information on the above noted contracts and regulatory efforts can be found in the Company's 2020 Annual Information Form ("AIF") which can be found on www.sedar.com.

Extensions of Key Deadlines

Targeted FID date for the Goldboro LNG Project has been moved to June 30, 2021. To that end, on May 5, 2020, Pieridae announced extensions of the key deadlines under its 20-year agreement with German energy company Uniper. These include expected commercial deliveries of gas to Uniper to start between August 31, 2025 and February 28, 2026, and the extension to June 30, 2021 of the deadline to make a positive FID for the Company's proposed Goldboro LNG Project. The 20-year agreement with Uniper is for the liquefied natural gas produced at Train One or 4.8 MMTPA.

The completion of the FEED study and comprehensive EPCC execution plan will allow us to complete our final due diligence and proceed with project financing. Concurrently, we are working with several firms on the planning and pre-construction work for six priority areas outside of Bechtel's EPCC scope:

- Site roadwork
- Water pipeline construction
- Water Treatment plant construction
- Terracing of the site
- Building the work camp
- Building the wharf and jetty

Once financing is in place, the Company anticipates some of this work would begin immediately.

Development Expense

	Three months ended December 31		Year ended December 31	
($ 000s)	**2020**	**2019**	**2020**	**2019**
Development expense	8,862	805	18,742	9,150

Development expense in the fourth quarter of 2020 was $8.9 million, an increase of $8.1 million compared to the same quarter in 2019. On a year-to-date basis, development expenses were $18.7 million, an increase of $9.6 million or 105%. The expenditure in 2020 is a result of continued development of the Goldboro project, including the onboarding of Bechtel and continued progress towards a fixed price, lump sum turn-key EPCC contract estimate. Additionally, during the fourth quarter $5.1 million of G&A associated with the Goldboro project was reclassified to development expense.

LIQUIDITY AND CAPITAL RESOURCES

Cash and Cash Equivalents

Pieridae held $11.1 million in cash and cash equivalents and restricted cash of $2.0 million as at December 31, 2020. Restricted cash is comprised of security pledged for various letters of credit which are required to be posted with provincial agencies and other companies in order to facilitate the Company's ongoing operations. The amount of $14.2 million previously self-restricted by Pieridae in anticipation of potential LCs that could be required as a result of the South Foothills Asset acquisition was released to cash and cash equivalents until the Company has more certainty regarding as the timing and amount.

Guarantee Facility from Export Development Canada ("EDC")

In July 2020, the Company received a $6 million guarantee facility from Export Development Canada which provides for 100% guarantee to the issuing banks of the Company's existing and future letters of credit, of which $4.9 million was drawn at December 31, 2020.

Loans and Term Debt

On October 16, 2019, the Company entered into a fully drawn senior secured non-revolving term Credit Facility for $206.0 million. This Credit Facility bears interest at a fixed rate of 12.0% per annum from the date of issue, accrued daily and payable quarterly in cash, plus an additional 3.0% per annum, which is payable quarterly either in cash or, at the option of the Company and subject to the lender's approval, in kind by way of accruing to the principal outstanding. The Credit Facility is repayable in full on October 16, 2023; however, the Company has discretion to repay the principal in whole or in part any time prior to this date upon 90 days written notice to the lender, without penalty. The Company used the proceeds of the Credit Facility to partially fund the acquisition of the South Foothills Assets, repay the existing $50.0 million term debt facility with AIMCo in full, fund letters of credit required for existing and purchased assets, and to satisfy all fees and expenses associated with the Credit Facility and Acquisition. Refer to Note 12 of the consolidated financial statements for additional information on the Credit Facility. As at December 31, 2020 the Company was in compliance with, or had obtained the required waivers for, all covenants of the Credit Facility.

Working Capital and Capital Structure

Pieridae's working capital decreased from $19.1 million at December 31, 2019 to a deficit of $19.6 million at December 31, 2020 primarily as a result of increases in accounts payable and accrued liabilities and an increase in the current portion of decommissioning obligations, reflecting Pieridae's 2021 planned reclamation and remediation activities. Working capital was pressured as a result of net losses experienced during the period, which arose from a combination of: weakness in condensate and liquids pricing as a result of macroeconomic conditions, fixed price natural gas sales contracts which were under-market during the third and fourth quarters of 2020, higher than planned operating costs, Goldboro development expenses, and a reduction in third-party processing fees as a result of counterparties shutting in volumes. This working capital deficiency is expected to be temporary, and working capital is anticipated to trend higher over the next 12 months. Refer to the "Outlook and Guidance" section of this MDA.

The Company is actively working to source additional funding to support and grow its upstream asset base, fund the deferred fee payable, and proceed with the construction of the proposed Goldboro LNG Facility. Although there is no guarantee that it will be successful, management believes the Company presents a compelling opportunity to potential lenders and investors due to the status of approvals for the Facility, the eligibility for untied loan guarantees from the German Federal Government, and the strong potential returns on investment from the Goldboro LNG Facility. The 2019 acquisition of the upstream and midstream assets from Shell further strengthens the investment thesis for Pieridae.

Pieridae's capital strategy is aligned with its business strategy and is focused on ensuring the Company has sufficient liquidity to fund operations and project development. Externally, Pieridae's principal sources of liquidity are the Credit Agreement, EDC LC backstop facility, and additional debt and/or equity offerings.

Capital Resources

As at December 31, 2020, Pieridae's capital structure was comprised of share capital, working capital and term debt, less cash and cash equivalents. The following table summarizes our capital structure on December 31, 2020 and December 31, 2019:

($ 000s)	**December 31, 2020**	**December 31, 2019**
Cash and cash equivalents	11,069	9,567
Less: term debt	(219,555)	(202,913)
Net debt	(208,486)	(193,346)
Shareholders' equity	4,384	104,315

Sources and Uses of Cash Flows

($ 000s)	Three months ended December 31 2020	Three months ended December 31 2019	Year ended December 31 2020	Year ended December 31 2019
Cash flows related to operating activities	1,037	(17,748)	909	(51,772)
Cash flows related to investing activities	(9,990)	(165,764)	(13,669)	(169,167)
Cash flows related to financing activities	(743)	184,814	14,251	220,425

Operating cash flows in the fourth quarter of 2020 increased by $16.7 million or 94% compared to the same quarter in 2019. On a year-to-date basis, operating cash flows increased by $52.7 million or 102% compared to the same period in 2019. Both the quarter and year-to-date increases were due to accretive cash flows generated from the South Foothills Assets acquired partially offset by lower realized prices for condensate due to pressure from the current global pandemic.

Investing cash outflows in the fourth quarter of 2020 decreased by $155.8 million or 94% compared to the same quarter in 2019. On a year-to-date basis, investing cash outflows decreased by $155.5 million or 92% when compared to the same period in 2019 due to the acquisition of the South Foothills Assets that occurred in the fourth quarter of 2019.

Financing cash flows in the fourth quarter of 2020 decreased by $185.6 million or 100% compared to the same quarter in 2019. On a year-to-date basis, financing cash flows decreased by $206.2 million or 94% compared to the same period in 2019 as there were no new financing transactions during the current periods other than the payment of lease obligations and restricted cash movements; in the year ended December 31, 2019, the Company raised funds through issuances of debt, convertible debt and issuances of share capital for the South Foothills Asset acquisition that occurred in the fourth quarter of 2019.

SHARE CAPITAL, WARRANTS AND STOCK OPTIONS OUTSTANDING

As at December 31, 2020 and March 24, 2021 the Company had 157,641,871 (December 31, 2019 - 157,561,174) common shares outstanding. As at December 31, 2020 8,322,072 (December 31, 2019 - 6,392,072) stock options were outstanding with a weighted average exercise price of $1.99/share.

As at December 31, 2020 there were no warrants outstanding (December 31, 2019 - 1,889,755) as the remaining warrants expired in December 2020.

COMMITMENTS, PROVISIONS AND CONTINGENCIES

The Company has entered into several financial obligations during the normal course of business. As at December 31, 2020 these obligations, and the expected timing of their settlement, are detailed below:

($ 000s)	2021	2022	2023	2024	Thereafter	Total
Interest on term debt	81,133	31,134	24,651	-	-	136,918
Firm transportation	8,827	5,282	1,598	928	1,115	17,750
Total	**89,960**	**36,416**	**26,249**	**928**	**1,115**	**154,668**

Provisions and Contingencies

In April 2020, the Company entered into an arbitration agreement with a third party to resolve an on-going commercial dispute. The matter was settled in November 2020 and resulted in the recognition of a total liability of $14.4 million, of which $7.2 million was recognized as long term and $4.2 million was classified as current in accounts payable and accrued liabilities at December 31, 2020. Refer to Note 21 of the consolidated financial statements for additional information.

The Company is also involved in various claims and litigation arising in the normal course of business. While the outcome of these matters is uncertain and there can be no assurance that such matters will be resolved in the Company's favor, the Company does not currently believe that the outcome of adverse decisions in any of these pending or threatened proceeding related to these and other matters or any amount which it may be required to pay by reason thereof would have a material adverse impact on its financial position or results of operations.

Off Balance Sheet Transactions

The Company does not have any financial arrangements that are excluded from the consolidated financial statements nor are any such arrangements outstanding as of the date at this MD&A.

RISK FACTORS

The Company monitors and complies with current government regulations that affect its activities, although operations may be adversely affected by changes in government policy, regulations, or taxation. In addition, Pieridae maintains a level of liability, property and business interruption insurance which is believed to be adequate for the Company's size and activities but is unable to obtain insurance to cover all risks within the business or in amounts to cover all possible claims. Risk to Pieridae's business and operations include, but are not limited to:

Risks Related to the Oil and Gas Industry
Weakness in the Oil and Gas Industry
Prices, Markets and Marketing of Crude Oil and Natural Gas
Reserve Decline, Exploration, Development and Production Risk
Reserve Estimates
Liability Management
Royalty Regimes
Alternatives to and Changing Demand for Petroleum Products
Hydraulic Fracturing
Other Risks Inherent to Pieridae's Business
Additional Financing
Liquidity
Access to Capital
Epidemics or Pandemics
Environmental Incidents
Climate Change
Chronic Climate Change Risks
Acute Climate Change Risks
Climate Change Regulations
Permits, Licenses and Approvals
Insurable Risk
Co-ownership of Assets and Operational Dependence
Growth Management
Third Party Credit Risk
Political, Geo-Political and Public Perception Risk
Impact of Future Financings on Market Price
Competition
Availability and Cost of Material and Equipment
Title to Production Assets and Reserves
Estimation of Abandonment and Reclamation Costs
Possible Failure to Realize Anticipated Benefits of Acquisitions
Project Risk
Conflicts of Interest
Litigation
Regulatory
Variations in Foreign Exchange and Interest Rates
Hedging
Tax Horizon
Changes in Risk Profile
Reliance on Key Personnel
Cost of New Technologies
Internal Controls

Breach of Confidentiality
Information Technology Systems and Cyber-Security
Reputation Risk
Estimates and Assumptions
Forward-Looking Statements and Information May Prove Inaccurate
Risks Related to Pieridae's Common Shares
Volatility
Dilution
Return on Investment
Dividends

Refer to the Company's Annual Information Form for the year ended December 31, 2020 for fulsome discussion of these risks. See also "Forward Looking Statements" in this MDA.
The current challenging economic climate due to the COVID-19 pandemic appears to be normalizing gradually, and significant recovery in commodity prices has been experienced during late 2020 and into the first quarter of 2021. However, the COVID-19 pandemic may still have significant adverse impacts to the Company, including but not limited to:

- Material declines in revenue and cash flows due to future reducing commodity prices
- Material decline in future revenues may result in potential impairment on non-financial assets
- Increase in the risk of non-performance by our customers and partners, resulting in a higher risk of default

While Pieridae believes the COVID-19 pandemic to be temporary, the situation is dynamic and the future economic impact of COVID-19 on the results of operations and financial condition cannot be reasonably estimated at this time. Pieridae will continue to monitor the impact of COVID-19 on an ongoing basis and make revisions as determined necessary by management. Such revisions are recognized in the period in which the estimates are revised and may impact future periods as well.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE COMMITMENT

Pieridae embraces the notion of ethical responsibility and the value that belief brings to what we strive to accomplish each and every day. The latest lexicon companies use to bring this notion to life is ESG: Environmental, Social and Governance. ESG is colouring almost every business decision a company now makes.

In parallel, ESG practices such as understanding risks, reducing waste, using resources effectively and ensuring compliance will help Pieridae uncover cost and operational efficiencies. Understanding ESG factors that are material to our business and to key stakeholders is a core ESG practice which is key to identifying and integrating ESG into the business and strategy. In this sense, embracing sustainability is twofold: supporting the resilience of the business, while enabling positive social and environmental impacts. Additionally, ESG is fundamental to Pieridae's ability to create long term shareholder value. It starts with the tone at the top; creating a business environment where our Board, senior leadership, and employees are empowered and aligned toward the Company's targets. Pieridae recognizes the importance of building and maintaining our relationships with the communities in which we operate and have aligned our ESG goals and framework toward fostering those relationships.

ESG is weaved into the pillars of our business: communication, connection, leadership, shared value and a focus on results. These are supported on a foundation we call "One Pieridae". Together, this foundation and five pillars hold up our integrated business and environment, social, and governance strategy.

Our overriding goal is to protect people's health and the environment.

In 2020, Pieridae undertook to formalize and centralize all its various ESG activities and is working to establish an umbrella ESG policy. To that end, in late 2020 the Corporation partnered with a global leader in ESG strategy development within the energy sector to facilitate and guide the Corporation towards formulating and implementing our ESG strategy. Their strong knowledge of key stakeholders including Indigenous Peoples, investors, government and others is important in developing our ESG program as we pursue FID and financing of our Goldboro LNG Facility. Pieridae targets an inaugural Pieridae ESG Report issuance in the second quarter of 2021.

Specifically, our 2021 goals, against which a portion of management compensation is measured, contain specific and measurable ESG targets. The table below reflects a number of areas that Pieridae is focused on as part of its ESG program:

Key Sustainability Topic/Risk	Management Goal, Process, Controls and Measurement	Progress
Environmental		
Climate and air emissions Pieridae manages climate change and air emissions by focusing on lowering risk and complying with all environmental regulatory standards to align with our Energy Management Plan ("EMP"). Our EMP focuses on ensuring carbon-related risks and opportunities are evaluated as we set our goals and refine our business plan. This is achieved, in part, by including the cost of carbon in the early stages of planning for new capital projects and educating the business on the long-term impacts of carbon taxation on Pieridae's business. Methane (CH4) is a primary GHG which has particular focus as it is considered "fugitive". Additionally, Pieridae operates sour gas wells, infrastructure and processing facilities. Pieridae monitors and reports ambient air objectives for H2S and SO2 in compliance with regulations	• Management is committed to establishing a baseline and targeting reduction in the emission of methane ("CH4") from its facilities through increased monitoring, process improvements, and equipment upgrades. • In 2020, Pieridae formalized its corporate Fugitive Emissions Management Plan ("FEMP") and Methane Reduction Retrofit Compliance Plan ("MRRCP"). • Management is also committed to: o Maintaining a focus on achieving asset level targets o Implementing projects to lower our GHG emissions o Secure Government grants and funding to help achieve our goals o Supporting fair carbon taxation • Pieridae is committed to ensuring its operations have minimal impact to the air quality near its facilities and operates continuous air monitoring stations at its large gas plants. Pieridae manages air quality objectives at its gas processing facilities by means of continuous and passive monitoring stations in compliance with regulations.	**Neutral** • Since 2018, a total of 58 pneumatic pumps have been replaced, and the program has produced approximately 18,418 carbon offset credits (tonnes of C02 equivalent). • Pieridae will continue this program and we anticipate tripling this reduction over several years. • Pieridae undertakes a comprehensive air monitoring program as per EPEA and other regulatory requirements.
Key Sustainability Topic/Risk	**Management Goal, Process, Controls and Measurement**	**Progress**
Water usage reduction Pieridae needs fresh water to operate our gas complexes, other assets, and for future development. However we strive to use this resource sparingly and effectively; Pieridae follows all water management regulations and focuses on innovative solutions to responsibly reuse, reduce and recycle as much water as is economically feasible. And where possible, we reduce the amount of fresh water we use beyond what is required by regulations to ensure this important resource is use responsibly and sustainably. The company evaluates risk, including reliability of supply, technical feasibility, net potential environmental effects, economics, and regulatory and stakeholder concerns. Plans are developed to manage and lower any risk.	• Reduction in future water use through conventional (non-hydraulic stimulation) drilling in the Foothills. • The production of non-hydraulic fractured gas may allow us to certify our sales under a number of "green-gas" programs which may allow us to obtain a price premium over market prices. • Water usage at our gas processing facilities is licenced and approved under the *Water Act*. Pieridae will continue to monitor and report all water use in compliance with regulations and reduce where possible. To this end, the Company is committed to establishing a baseline in 2021 and targeting reduction in water use in future years.	**Neutral to Positive** • Developing a conventional drilling plan which vastly reduces the water required when compared to our peers who often conduct hydraulic fracturing. • Pieridae signed an evergreen contract with Shell to address site-specific ground pollution at the two largest and oldest plants in the current asset portfolio. Shell and Pieridae are committed to ensuring that the site is free of contaminants.

Key Sustainability Topic/Risk	Management Goal, Process, Controls and Measurement	Progress
Social		
Indigenous Peoples Engagement Pieridae has a philosophy of respectful engagement with Indigenous Peoples across Canada, including the Nova Scotia Mi'kmaq First Nation and Treaty 7 Nations in Alberta. There is risk that Indigenous Peoples impacted by our activities do not feel they are benefitting from the Goldboro LNG Project nor Alberta gas reserves development & partnerships.	• Pieridae maintains ongoing, direct Treaty 7 engagement to discuss potential partnerships. • Coordination with the Mi'kmaq First Nations on long-term Goldboro site management plans. • Developing an Indigenous People Principles document which will be adhered to. • We will look at holding annual meetings to discuss this forward-looking approach and also listen to concerns and ideas as we work to grow our business. The Chiefs and First Nations businesses want a chance to participate on a level playing field	**Positive** • Positive, initial partnership discussions with Stoney Nakoda Nation. • Signing of an MOU to explore developing sustainable energy projects in collaboration with the 4 Nations • Building on the ratified Mi'kmaq Benefits Agreement, on September 30, 2020 signed a Letter of Award selecting Black Diamond and the 13 Nova Scotia Mi'kmaq communities to exclusively negotiate the contract to build a $720 million workforce lodge and amenities construction of the Facility
Stakeholder Engagement Pieridae is working with landowners' concerns through asset transfer process/post AER decision. We are continuing to strengthen positive and trusting relationships with landowners through ongoing engagement.	• Ongoing, annual development of Pieridae Engagement Plan (matrix & SWOT). • Commitment to following AER asset transfer approval conditions, develop tracking mechanism as part of the consultation record. • Pieridae has a clear legacy policy that highlights how to achieve financial support. • Community liaison officers ("CLO") live & work in local communities, constantly building relationships & Pieridae brand.	**Neutral** • Answered asset transfer SOCs thoroughly. • Direct, timely landowner & stakeholder engagement. • Formal Engagement Plan to be completed in 2020. • Legacy financial policy continues to build community goodwill. • Local CLO community presence has demonstrated value mitigating current & future issues.
Workforce Health and Safety Risk of injuries, fatalities and other safety concerns due to inadequate controls, processes and training, including currently heightened risk to workers due to the ongoing pandemic.	• We strengthen our commitment through our rigorous Operations Management System and demonstrate it by achieving safe, reliable operations and an injury free workplace. • Pieridae tracks and reports total recordable injury frequency (TRIF) and lost-time injury frequency (LTIF). Focus is to improve proactive behaviors and reporting to maintain a low injury frequency. • LTI = 0 in 2020. TRIF target for 2020 <1.0 (TRIF of 0.72 in 2019, 2020 0.34). • HS&E targets are tied to bonus structure. • HS&E statistics are communicated company-wide on a monthly basis to preserve a good safety culture and transparency. • Dedicated HS&E team in the field working directly with front-line workers and supervisors.	**Positive** • Integration of safety systems; process framework, and controls is well underway. • Integration activity will result in an effective Safety Management & Loss framework for employees and contractors. • Continued learning from incidents shared with entire company through safety hub and safety alerts. • Training & competency management will remain a focus.

Key Sustainability Topic/Risk	Management Goal, Process, Controls and Measurement	Progress
Governance		
Board and Executive Diversity Pieridae recognizes diversity begins at the top. Risk of non-optimal management and Board decision making from lack of diversity of opinions, experiences and perspectives.	• Pieridae's Board of Directors is committed to increasing the diversity of the Board and Executives of Pieridae. • Pieridae conducted it's first-ever diversity and equity survey in order to understand it's workforce and their concerns. We will use the results of this survey to establish a baseline and set meaningful targets for growth and improvement in 2021.	**Neutral to Positive** • Nominations to the Board of Directors suggest increasing diversity. • Increasing disclosure of diversity in the Company's 2019 and 2020 Management Information Circular. • Evolving Human Resources and recruitment policies and procedures. • On May 26, 2020, Pieridae elected Ms. Kiren Singh as its newest Board member. Ms. Singh has 30 years of experience and previously served as CFO, VP Risk Management and Treasurer in the energy sector.
Critical Incident Management The release of hydrocarbons or other hazardous substances as a result of accidents could have significant ESG consequences.	• Pieridae has a comprehensive corporate emergency response plan (ERP) with site-specific ERPs and an emergency response assistance program (ERAP) in place. • Participates in the Alberta Government Wildfire Management Plan. • Ongoing emergency response training held in the field at each of the assets. Competency to ICS and number of exercises conducted are measured.	**Positive** • Practices and procedures and training processes are in place to effectively handle emergencies and minimize the risk of negatively impacting the environment, people and communities in which it operates. • An established emergency management program promotes prompt and effective response to emergencies.

Pieridae recognizes that operating our business sustainably requires transparency with our stakeholders about our ESG performance and overall performance. These goals are intended to support this performance, and we commit to updating our stakeholders regularly.

SIGNIFICANT ACCOUNTING JUDGEMENT AND ESTIMATES

The timely preparation of the consolidated financial statements requires management to make judgments, estimates and assumptions that affect the application of accounting policies and reported amounts of assets and liabilities and income and expenses. Accordingly, actual results may differ from these estimates. Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected. Significant judgments and estimates made by management in the preparation of the consolidated financial statements are outlined below.

The following are the critical accounting judgments that management has made in the process of applying the Company's accounting policies and that have the most significant effect on the amounts recognized in the consolidated financial statements:

i. Identification of cash generating units

Some of the Company's assets are aggregated into cash-generating units ("CGU"), for the purpose of calculating depletion and impairment. A CGU is comprised of assets that are grouped together into the smallest group of assets that generate cash inflows from continuing use that are largely independent of the cash inflows of other assets or groups of assets. By their nature, these estimates and assumptions are subject to measurement uncertainty and may impact the carrying value of the Company's assets in future periods.

ii. Impairment of petroleum and natural gas assets

For the purposes of determining whether impairment of petroleum and natural gas assets has occurred, and the extent of any impairment or its reversal, the key assumptions the Company uses in estimating future cash flows are forecasted petroleum and natural gas prices, expected production volumes and anticipated recoverable quantities of proved and probable reserves. These assumptions are subject to change as new information becomes available. Changes in economic conditions can also affect the rate used to discount future cash flow estimates. Changes in the aforementioned assumptions could affect the carrying amounts of assets. Impairment charges and reversals are recognized in profit or loss.

iii. Exploration and evaluation assets

The application of the Company's accounting policy for exploration and evaluation ("E&E") assets requires management to make certain judgments as to future events and circumstances as to whether economic quantities of reserves have been found in assessing commercial viability and technical feasibility.

iv. Lease arrangements

The Company applies judgement when reviewing each of its contractual arrangements to determine whether an arrangement contains a lease. The carrying amounts of the right-of-use assets, lease obligations, and the resulting interest and depreciation expense are based on the implicit interest rate within the lease arrangement or, if this information is unavailable, the incremental borrowing rate. Incremental borrowing rates are based on judgments including economic environment, term, and the underlying risk inherent to the asset.

v. Debt instruments

Debt instruments are initially recognized at fair value based on consideration received and adjusted in respect of any transaction costs that are incremental and directly attributable to the issue of the instrument. Subsequent measurement is at amortized cost and the effective interest rate method. Certain financing arrangements contain options which may revise future estimated cash outflow and result in an adjustment to the carrying value of the financial liability. At each reporting period, the Company will estimate whether such options will be exercised and if an adjustment to the financial liability is required. All adjustments arising from such changes in estimates are recognized immediately in profit or loss.

vi. Assessment of going concern

The Company has concluded that there are no material uncertainties related to events or conditions that may cast significant doubt upon its ability to continue as a going concern. In reaching this conclusion, the Company uses significant judgement and estimates, and considered all relevant information, including feasibility of and effectiveness of management's mitigation plans. Accordingly, actual circumstances will differ from those estimates and the variation may be material.

vii. Reserves

The assessment of reported recoverable quantities of proved and probable reserves include estimates regarding production profile, commodity prices, exchange rates, remediation costs, timing and amount of future development costs and production, transportation and marketing costs for future cash flows. It also requires interpretation of geological, engineering, and geophysical models in anticipated recoveries. The economical, geological and technical factors used to estimate reserves may change from period to period. Changes in reported reserves can impact the carrying values of the Company's property, plant and equipment, the calculation of depletion, the provision for decommissioning obligations and the recognition of deferred tax assets due to changes in expected future cash flows. The recoverable quantities of proved and probable reserves and associated estimated cash flows are independently evaluated by qualified reserve evaluators at least annually.

The Company's petroleum and natural gas reserves represent the estimated quantities of petroleum and natural gas and natural gas liquids which geological, geophysical and engineering data demonstrate with a specified degree of certainty to be economically recoverable in future years from known reservoirs and which are considered economically producible. Such reserves may be considered commercially producible if management has the intention of developing and producing them and such intention is based upon (i) a reasonable assessment of the future economics of such production; (ii) a reasonable expectation that there is a market for all or substantially all the expected petroleum and natural gas production; and (iii) evidence that the necessary production, transmission and transportation facilities are available or can be made available. Reserves may only be considered proven and probable if the ability to produce is supported by either production or conclusive formation tests. Pieridae's petroleum and gas reserves are determined pursuant to National Instrument 51-101, Standard for Disclosures for Oil and Gas Activities.

viii. Business combinations

In a business combination, management makes estimates of the fair value of assets acquired and liabilities assumed which includes assessing the value of oil and gas properties based upon the estimation of recoverable quantities of proven and probable reserves acquired. Various valuation techniques are applied for measuring fair value including market comparables and discounted cash flows which rely on assumptions such as forward commodity prices, reserves and resources estimates, production costs and discount rates. Changes in any of these variables could significantly impact the carrying value of the net assets.

ix. Decommissioning obligations

The Company estimates future decommissioning and remediation costs of production facilities, processing facilities, wells and pipelines at the end of their economic lives. In most instances, abandonment and reclamation of these assets occurs many years into the future. This requires assumptions regarding abandonment date, future environmental and regulatory legislation, the extent of reclamation activities, the engineering methodology for estimating costs, future removal technologies in determining the removal cost, inflation and liability-specific discount rates to determine present value of these cash flows.

x. Share-based payments

All equity-settled, share-based awards issued by the Company are fair valued using the Black-Scholes option-pricing model. In assessing the fair value of equity-based compensation, estimates must be made regarding the expected volatility in share price, weighted average expected life of the instrument, expected dividend yield, risk-free interest rate and estimated forfeitures at the initial grant date.

xi. Financial derivatives

Financial derivatives are measured at fair value on each reporting date. The Company uses quoted commodity prices at period end to determine the fair value of outstanding financial derivatives. Changes in market pricing between period end and settlement of the derivative contracts could result in a change to the estimated valuation of the instrument.

xii. Deferred taxes

Tax provisions are based on enacted or substantively enacted laws. Changes in those laws could affect amounts recognized in profit or loss both in the period of change, which would include any impact on cumulative provisions, and in future periods. Judgments are made by management to determine the likelihood of whether deferred income tax assets at the end of the reporting period will be realized from future taxable earnings. To the extent that assumptions regarding future profitability change, there can be an increase or decrease in the amounts recognized in respect of deferred tax assets as well as the amount recognized in income or loss for the period in which the change occurs.

CONTROL ENVIRONMENT

Disclosure Controls and Procedures

As of December 31, 2020, an internal evaluation was carried out of the effectiveness of the Company’s disclosure controls and procedures as defined in Canada by National Instrument 52-109 Certification of Disclosure in Issuers’ Annual and Interim Filings ("NI 52-109"). Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that the disclosure controls and procedures are effective to ensure that the information required to be disclosed in the reports that the Company files or submits under Canadian Securities Legislation is recorded, processed, summarized and reported, within the time periods specified in the rules and forms therein. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that the information required to be disclosed by the Company in the reports that it files or submits under Canadian Securities Legislation is accumulated and communicated to Pieridae’s Management as appropriate to allow timely decisions regarding the required disclosure.

Internal Controls over Financial Reporting

Internal controls over financial reporting (“ICFR”) is a process designed to provide reasonable assurance that all assets are safeguarded, transactions are appropriately authorized and to facilitate the preparation of relevant, reliable and timely information. Because of its inherent limitations, ICFR may not prevent or detect misstatements. Management has assessed the effectiveness of the Company’s ICFR as defined in Canada by NI 52-109. The assessment was based on the framework in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Management concluded that the Company’s ICFR was effective as of December 31, 2020. No changes were made to the Company’s internal control over financial reporting during the year ended December 31, 2020 that have materially affected, or are reasonably likely to materially affect, the internal controls over financial reporting.

CHANGES IN ACCOUNTING POLICIES

The Company has applied the following new and revised accounting pronouncements in preparing the consolidated financial statements. The Company has not early adopted any standard, interpretation or amendment that has been issued but is not yet effective.

Business Combinations

Effective January 1, 2020, the Company adopted the amendment to IFRS 3 Business Combinations. This amendment narrowed and clarified that in order to be considered a business, an integrated set of activities and assets must include, at a minimum, an input and a substantive process that together significantly contribute to the ability to create output. Furthermore, it clarifies that a business can exist without including all of the inputs and processes needed to create outputs. This permits a simplified assessment to determine whether an acquired set of activities an assets can be recognized as an asset acquisition, rather than a business combination. During the year ended December 31, 2020, the Company did not have any acquisitions requiring the application of this amendment.

Government grants

Government grants are recognized when there is reasonable assurance that the Company will comply with the conditions attached to them and the grants will be received. When the conditions of a grant relate to income or expense, it is recognized in profit or loss in the period in which the expenditures are incurred, or when income is earned. When the conditions of a grant relate to an underlying asset, it is recognized as a reduction to the carrying amount of the related asset and amortized into income on a systematic basis over the expected useful life of the underlying asset through depletion and depreciation. For the year ended December 31, 2020, the Company recognized $3.4 million related to the Canada Emergency Wage Subsidy (“CEWS”) program which reduced operating expenses by $2.5 million and general and administrative expenses by $0.9 million respectively.

OUTLOOK AND GUIDANCE

2021 Guidance

Below is a summary of the Company’s 2021 annual guidance:

($ 000s unless otherwise noted)	**2021 Guidance**
Total production (boe/d)	40,000 - 45,000
Net operating income (1)	100,000 - 130,000
Adjusted flow of funds from operations (1)	80,000 - 110,000
Capital expenditures	45,000 - 55,000
Goldboro capital expenditures post-FID (2)	250,000 – 350,000
Development expense (3)	15,000 - 20,000
Commodity hedging (4)	55% - 65%
Corporate and upstream G&A ($/boe) (3)	1.10 - 1.30
Adjusted operating expense ($/boe) (1)	9.50 – 10.50

(1) Refer to Non-GAAP measures
(2) Assumes FID date of June 30, 2021
(3) Reflects the reallocation of $6.2 million of LNG G&A from G&A to development expense
(4) Commodity hedging of net production on an 18-month rolling boe/day basis not including transportation costs of approximately $1.02/boe.

NON-GAAP MEASURES

Management has identified certain industry benchmarks such as net operating income, operating netback, adjusted operating expense and adjusted funds flow from operations to analyze financial and operating performance. These benchmarks are commonly used in the oil and gas industry; however, they do not have any standardized meanings prescribed by IFRS. Therefore, they may not be comparable with the calculation of similar measures for other entities.

Net Operating Income

Net operating income equals total revenue including realized gains and losses on commodity risk management contracts less royalties, operating expenses and transportation expenses.

	Three months ended December 31		Year ended December 31	
($ 000s)	2020	2019	2020	2019
Total revenue [(1)]	77,009	62,883	279,482	113,749
Royalties	(4,402)	(2,387)	(9,609)	(3,755)
Operating expense	(55,485)	(32,949)	(203,432)	(77,036)
Transportation expense	(4,293)	(3,077)	(15,718)	(7,957)
Net operating income [(2)]	**12,829**	**24,470**	**50,723**	**25,001**

[(1)] Excludes unrealized gains or losses from risk management contracts.
[(2)] Minimum 2020 NOI per the TEC covenant waiver of $55 million allows for a $14.3 million adjustment related to the arbitration settlement amount. Refer to Note 21 of the consolidated financial statements.

Operating Netback

The operating netback equals revenue including realized gains and losses on commodity risk management contracts less royalties, operating expenses and transportation expenses calculated on a per BOE basis. Management considers net operating income and operating netback important measures to evaluate the Company's operational performance as it demonstrates Pieridae's field level profitability relative to current commodity prices.

	Three months ended December 31		Year ended December 31	
($ per boe)	2020	2019	2020	2019
Total revenue	18.69	16.21	18.19	13.92
Royalties	(1.07)	(0.62)	(0.63)	(0.46)
Operating expense	(13.46)	(8.50)	(13.23)	(9.42)
Transportation expense	(1.04)	(0.79)	(1.02)	(0.97)
Operating netback ($/boe)	**3.12**	**6.30**	**3.31**	**3.07**

Adjusted Operating Expense

Adjusted operating expense is intended to provide an industry-comparable view of operating expenses for our sour gas processing facilities. Management considers comparability to mean consideration for all volumes running through these facilities, not only Pieridae-owned volumes, and some factor to normalize the increased expense of running sulphur recovery units at these facilities. Adjusted operating expense is calculated as operating expenses, less third-party processing revenue and sulphur revenue.

	Three months ended December 31		Year ended December 31	
($ 000s except per boe)	2020	2019	2020	2019
Operating expense	55,485	32,949	203,432	77,036
Third party processing revenue	(5,801)	(5,389)	(25,538)	(6,831)
Sulphur revenue	(3,866)	117	(8,270)	(4,311)
Adjusted operating expense	**45,818**	**27,677**	**169,624**	**65,894**
Adjusted operating expense ($/boe)	**11.12**	**7.14**	**11.03**	**8.06**

Adjusted Funds Flow from Operations

Pieridae defines adjusted funds flow from operations as its net loss, less financial income and expense, where financial income and expense excludes accretion, less depletion and depreciation. Development expenses are also added back to better focus the metric on the Company's upstream operational performance.

	Three months ended December 31		Year ended December 31	
($ 000s)	**2020**	**2019**	**2020**	**2019**
Net loss	(45,968)	(25,877)	(100,693)	(71,583)
Development expense	8,682	805	18,742	9,150
Finance expense	13,493	9,745	47,928	13,465
Depletion and depreciation	15,452	10,044	44,013	21,986
Impairment of property, plant and equipment	16,876	-	16,876	-
Impairment of exploration and evaluation assets	-	19,731	-	27,590
Adjusted funds flow from operations	**8,535**	**14,448**	**26,866**	**608**