

PyroGenesis Canada Inc.
Consolidated Financial Statements
December 31, 2023 and 2022

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Management's Responsibility

Management is responsible for the preparation and presentation of the accompanying consolidated financial statements, including responsibility for significant accounting judgments and estimates in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board. This responsibility includes selecting appropriate accounting principles and methods, and making decisions affecting the measurement of transactions in which objective judgment is required.

The Board of Directors and Audit Committee are composed primarily of Directors who are neither management nor employees of the Company. The Board of Directors is responsible for overseeing management in the performance of its financial reporting responsibilities, and for approving the financial information included in the annual report. The Board fulfills these responsibilities by reviewing the financial information prepared by management and discussing relevant matters with management and the external auditor. The Audit Committee has the responsibility of meeting with management and the external auditors to discuss the internal controls over the financial reporting process, auditing matters and financial reporting issues. The Audit Committee is also responsible for recommending the appointment of the Company's external auditor.

Raymond Chabot Grant Thornton LLP, an independent firm of Chartered Professional Accountants, is appointed by the shareholders to audit the consolidated financial statements and report directly to them; their report follows. The external auditor has full and free access to, and meets periodically and separately with, both the Audit Committee and management to discuss their audit findings.

April 1, 2024

[Signed by P. Peter Pascali]

P. Peter Pascali, Chief Executive Officer

[Signed by Andre Mainella]

Andre Mainella, Chief Financial Officer

Independent Auditor's Report

To the Shareholders of PyroGenesis Canada Inc.

Opinion

We have audited the consolidated financial statements of PyroGenesis Canada Inc. (hereafter "the Company"), which comprise the consolidated statements of financial position as at December 31, 2023 and 2022, and the consolidated statements of comprehensive loss, the consolidated statements of changes in shareholders' equity (deficiency) and the consolidated statements of cash flows for the years then ended, and notes to consolidated financial statements, including material accounting policy information.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the financial position of the Company as at December 31, 2023 and 2022, and its financial performance and its cash flows for the years then ended in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board (hereafter "IFRS Accounting Standards").

Basis for opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the "Auditor's responsibilities for the audit of the consolidated financial statements" section of our report. We are independent of the Company in accordance with the ethical requirements that are relevant to our audit of the consolidated financial statements in Canada, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Material uncertainty related to going concern

We draw attention to Note 2 to the consolidated financial statements, which indicates the existence of a material uncertainty that may cast significant doubt about the Company's ability to continue as a going concern. Our opinion is not modified in respect of this matter.

Key audit matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. In addition to the matter described in the "Material uncertainty related to going concern" section, we have determined the matter described below to be the key audit matter to be communicated in our auditor's report.

Revenue recognition of long-term contracts using the percentage of completion method

As described in Note 4 to the consolidated financial statements, revenue recognition from long-term contracts for made-to-order customized equipment and machines to customer's specifications are determined under the percentage of completion method whereby revenues are recognized over time based on the proportion of total costs and/or hours incurred to date, compared to total costs and/or hours anticipated to provide the service under the entire contract. We identified the revenue recognition of long-term contracts using the percentage of completion method as a key audit matter.

Why the matter was determined to be a key audit matter

The revenue recognition of long-term contracts using the percentage of completion method was significant to our audit because management's assessment of the percentage of completion requires significant judgments and estimation uncertainty including anticipated costs and/or hours on long-term contracts.

How the matter was addressed in the audit

Our audit procedures related to the revenue recognition of long-term contracts using the percentage of completion method included, among others, the following:

- We obtained an understanding of the project budgeting process and assessed the design and implementation of controls surrounding the budgeting process;
- For a sample of contracts, we assessed the effectiveness of the company's contract budgeting process by:
 - o Reviewing the contractual arrangements, including pricing and billing terms, contract changes, and other terms and conditions;
 - o Interviewing management and project managers to understand the status of the different activities for the contracts tested;
 - o Comparing budgeted costs / hours from prior period to actual costs / hours incurred;
- We tested a sample of costs / hours to ensure that they had been incurred and correctly allocated to the respective projects;
- We compared, for a sample of contracts, the total costs incurred to date to the total budgeted costs to complete, in order to validate the appropriateness of the percentage of completion.

Information other than the consolidated financial statements and the auditor's report thereon

Management is responsible for the other information. The other information comprises the information included in Management's Discussion and Analysis.

Our opinion on the consolidated financial statements does not cover the other information and we do not and will not express any form of assurance conclusion thereon. In connection with our audit of the consolidated financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated.

We obtained Management's Discussion and Analysis prior to the date of this auditor's report. If, based on the work we have performed on this other information, we conclude that there is a material misstatement of this other information, we are required to report that fact in this auditor's report. We have nothing to report in this regard.

Responsibilities of management and those charged with governance for the consolidated financial statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with IFRS Accounting Standards, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Company's financial reporting process.

Auditor's responsibilities for the audit of the consolidated financial statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control;
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control;

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management;
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern;
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation;
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are, therefore, the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partner on the audit resulting in this independent auditor's report is Mario Venditti.

Raymond Chabot Grant Thornton LLP¹

Montreal
April 1, 2024

¹ CPA auditor, public accountancy permit no. A121855

PyroGenesis Canada Inc.
Consolidated Statements of Financial Position

December 31, 2023 and 2022
(In Canadian dollars)

	Note	<u>December 31, 2023</u>	<u>December 31, 2022</u>
		<u>\$</u>	<u>\$</u>
Assets			
<i>Current assets</i>			
Cash		1,802,616	3,445,649
Accounts receivable	7	9,265,665	18,624,631
Costs and profits in excess of billings on uncompleted contracts	8	648,813	1,051,297
Inventory		1,905,313	1,876,411
Investment tax credits receivable	9	352,530	276,404
Income taxes receivable		15,900	14,169
Current portion of deposits	12	638,739	432,550
Current portion of royalties receivable	11	684,651	455,556
Contract assets		615,527	499,912
Prepaid expenses		873,671	771,603
Total current assets		16,803,425	27,448,182
<i>Non-current assets</i>			
Deposits	12	46,045	46,053
Strategic investments	10	2,551,427	6,242,634
Property and equipment	13	2,855,226	3,393,452
Right-of-use assets	14	4,200,635	4,818,744
Royalties receivable	11	529,017	952,230
Intangible assets	15	1,449,576	2,104,848
Goodwill	16	—	2,660,607
Total assets		28,435,351	47,666,750
Liabilities			
<i>Current liabilities</i>			
Bank indebtedness	27	181,267	991,902
Accounts payable and accrued liabilities	17	9,345,134	10,115,870
Billings in excess of costs and profits on uncompleted contracts	18	10,992,126	9,670,993
Current portion of term loans	19	117,500	69,917
Current portion of lease liabilities	14	524,802	2,672,212
Income taxes payable		—	187,602
Current portion of balance due on business combination	27	1,726,510	2,088,977
Current portion of convertible debentures	20	923,805	—
Total current liabilities		23,811,144	25,797,473
<i>Non-current liabilities</i>			
Lease liabilities	14	4,582,090	2,861,482
Term loans	19	286,579	320,070
Balance due on business combination		—	1,818,798
Convertible debentures	20	1,636,416	—
Convertible loan	20	947,699	—
Total liabilities		31,263,928	30,797,823
Shareholders' equity (deficiency)			
Common shares	21	90,670,080	85,483,223
Warrants		421,016	223,200
Contributed surplus		27,586,626	24,546,960
Equity portion of convertible debentures		217,663	—
Equity portion of convertible loan		176,349	—
Accumulated other comprehensive income (loss)		(11,279)	402
Deficit		(121,889,032)	(93,384,858)
Total shareholders' equity (deficiency)		(2,828,577)	16,868,927
Total liabilities and shareholders' equity (deficiency)		28,435,351	47,666,750

Contingent liabilities [Note 28].

The accompanying notes form an integral part of the consolidated financial statements.

Approved on behalf of the Board:

[Signed by P. Peter Pascali] P. Peter Pascali

[Signed by Andrew Abdalla] Andrew Abdalla

PyroGenesis Canada Inc.
Consolidated Statements of Comprehensive Loss
For the years ended December 31, 2023 and 2022
(In Canadian dollars)

	Note	2023	2022
		<u>\$</u>	<u>\$</u>
Revenues	6	12,345,081	19,013,503
Cost of sales and services	23	8,903,647	10,869,616
Gross profit		3,441,434	8,143,887
Expenses			
Selling, general and administrative	23	30,964,253	29,025,434
Research and development, net	23	2,212,488	2,317,973
		33,176,741	31,343,407
Net loss from operations		(29,735,307)	(23,199,520)
Changes in fair value of strategic investments	10	(312,216)	(8,340,781)
Finance income (costs), net	24	1,321,602	(550,742)
Loss before income taxes		(28,725,921)	(32,091,043)
Income taxes	30	(221,747)	75,984
Net loss		(28,504,174)	(32,167,027)
Other comprehensive loss			
Items that will be reclassified subsequently to profit or loss			
Foreign currency translation loss on investments in foreign operations		(11,681)	(3,042)
Comprehensive loss		(28,515,855)	(32,170,069)
Loss per share	25		
Basic		(0.16)	(0.19)
Diluted		(0.16)	(0.19)

The accompanying notes form an integral part of the consolidated financial statements.

PyroGenesis Canada Inc.

Consolidated Statements of Changes in Shareholders' Equity (Deficiency)

For the years ended December 31, 2023 and 2022

(In Canadian dollars)

	Number of common shares	Common shares	Warrants	Contributed Surplus	Equity portion of convertible debentures and loan	Accumulated other comprehensive income	Deficit	Total	
Notes									
		\$	\$	\$	\$	\$	\$	\$	
Balance - December 31, 2022		173,580,395	85,483,223	223,200	24,546,960	—	402	(93,384,858)	16,868,927
Shares issued upon exercise of stock options	21	300,000	226,374	—	(73,374)	—	—	—	153,000
Private placement	21	5,000,000	4,960,483	—	—	—	—	—	4,960,483
Convertible debentures – equity component	20	—	—	147,283	—	217,663	—	—	364,946
Convertible loan – equity component	20	—	—	50,533	—	176,349	—	—	226,882
Share-based payments		—	—	—	3,113,040	—	—	—	3,113,040
Other comprehensive loss for the year		—	—	—	—	—	(11,681)	—	(11,681)
Net loss		—	—	—	—	—	—	(28,504,174)	(28,504,174)
Balance – December 31, 2023		178,880,395	90,670,080	421,016	27,586,626	394,012	(11,279)	(121,889,032)	(2,828,577)
Balance - December 31, 2021		170,125,795	82,104,086	—	19,879,055	—	3,444	(61,217,831)	40,768,754
Shares issued upon exercise of stock options	21	2,440,000	2,283,357	—	(870,558)	—	—	—	1,412,799
Private placement	21	1,014,600	1,095,780	223,200	—	—	—	—	1,318,980
Share-based payments		—	—	—	5,538,463	—	—	—	5,538,463
Other comprehensive loss for the year		—	—	—	—	—	(3,042)	—	(3,042)
Net loss		—	—	—	—	—	—	(32,167,027)	(32,167,027)
Balance – December 31, 2022		173,580,395	85,483,223	223,200	24,546,960	—	402	(93,384,858)	16,868,927

The accompanying notes form an integral part of the consolidated financial statements.

PyroGenesis Canada Inc.
Consolidated Statements of Cash Flows
For the years ended December 31, 2023 and 2022
(In Canadian dollars)

	2023	2022
	\$	\$
Cash flows provided by (used in)		
Operating activities		
Net loss	(28,504,174)	(32,167,027)
Adjustments for:		
Share-based payments	3,113,040	5,538,463
Depreciation of property and equipment	615,686	603,894
Depreciation of right-of-use assets	685,854	635,828
Amortization and write-off of intangible assets	902,592	878,030
Amortization of contract assets	100,542	243,626
Lease modification	(19,722)	—
Net finance costs (income)	(1,321,602)	550,742
Other finance costs paid	(215,664)	—
Change in fair value of investments	312,215	8,340,781
Goodwill impairment	2,660,607	—
Deferred income taxes	(221,747)	(42,394)
Unrealized foreign exchange	14,513	(102,236)
	<u>(21,877,860)</u>	<u>(15,520,293)</u>
Net change to working capital items [Note 22]	<u>9,832,357</u>	<u>4,391,408</u>
	(12,045,503)	(11,128,885)
Investing activities		
Additions to property and equipment	(77,460)	(396,051)
Additions to intangible assets	(247,320)	(290,373)
Purchase of strategic investments	(559,460)	(3,604,000)
Disposal of strategic investments	3,938,452	3,922,244
	<u>3,054,212</u>	<u>(368,180)</u>
Financing activities		
Increase (decrease) in bank indebtedness	(810,635)	991,902
Interest paid	(497,314)	(467,453)
Repayment of term loans	(19,917)	(33,003)
Repayment of lease liabilities	(474,825)	(657,381)
Repayment of balance due on business combination	(100,000)	(217,778)
Proceeds from issuance of convertible debentures [Note 20]	2,913,660	—
Proceeds from issuance of convertible loan [Note 20]	1,250,000	—
Proceeds from issuance of term loans	—	292,941
Proceeds from issuance of shares upon exercise of stock options	153,000	1,412,799
Proceeds from private placement [Note 21]	4,960,483	1,318,980
	<u>7,374,452</u>	<u>2,641,007</u>
Effect of exchange rate changes on cash denominated in foreign currencies	<u>(26,194)</u>	<u>99,194</u>
	(1,643,033)	(8,756,864)
Net decrease in cash	(1,643,033)	(8,756,864)
Cash and cash equivalents - beginning of year	<u>3,445,649</u>	<u>12,202,513</u>
Cash - end of year	<u>1,802,616</u>	<u>3,445,649</u>

PyroGenesis Canada Inc.
Consolidated Statements of Cash Flows
For the years ended December 31, 2023 and 2022
(In Canadian dollars)

	2023	2022
	\$	\$
Supplemental cash flow disclosure		
Non-cash transactions:		
Interest on convertible loan	1,146	—
Interest accretion on, and revaluation of balance due on business combination	(2,081,265)	173,350
Accretion interest on royalties receivable	(145,159)	118,290
Accretion on term loan	34,009	28,229
Accretion interest on convertible debentures	151,452	—
Accretion interest on convertible debentures - bridge loan	5,237	—
Initial recognition or modification of lease liabilities and right-of-use assets [Note 14]:		
Right-of-use assets	67,745	(311,421)
Lease liabilities	48,023	867,110

The accompanying notes form an integral part of the consolidated financial statements.

PyroGenesis Canada Inc.
Notes to the Consolidated Financial Statements

For the years ended December 31, 2023 and 2022
(In Canadian dollars)

1. Nature of operations

PyroGenesis Canada Inc. and its subsidiaries (collectively, the “Company”), incorporated under the laws of the Canada Business Corporations Act, was formed on July 11, 2011. The Company owns patents of advanced waste treatment systems technology and designs, develops, manufactures, and commercialises advanced plasma processes and sustainable solutions to reduce greenhouse gases. The Company is domiciled at 1744 William Street, Suite 200, Montreal, Quebec. The Company is publicly traded on the TSX Exchange under the Symbol “PYR”, on the OTCQX Best Market under the symbol "PYRGF" and on the Frankfurt Stock Exchange (FSX) under the symbol “8PY “. Prior to November 2023, the Company’s common shares were traded on NASDAQ, before being voluntarily delisted.

2. Going concern

These consolidated financial statements have been prepared on the going concern basis, which presumes that the Company will be able to continue its operations for the foreseeable and will be able to realize its assets and discharge its liabilities in the normal course of business for the foreseeable future.

The Company is subject to certain risks and uncertainty associated with the achievement of profitable operations such as the successful signing and delivery of contracts and access to adequate financing.

The Company has incurred, in the last years, operating losses and negative cash flows from operations, and as a result, the Company has an accumulated deficit of \$121,889,032 as at December 31, 2023 (\$93,384,858 as at December 31, 2022). Furthermore, there have been unexpected delays in the collection of certain accounts receivable from contracts closed in a prior year. This has resulted in a shortfall in cash flows from operating activities that would be used in funding the Company’s operations.

As at December 31, 2023, the Company has working capital deficiency of \$7,007,719 (working capital of \$1,650,709 as at December 31, 2022) including cash of \$1,802,616 (\$3,445,649 as at December 31, 2022). The working capital is net of an allowance for credit losses amounting to \$9,278,135 (\$5,023,283 as at December 31, 2022) as further described in Notes 7 and 8. The Company’s business plan is dependent upon the successful completion of contracts and also the receipt of payments from certain contracts closed in a prior year and expects these payments to be made during fiscal 2024, as well as the achievement of profitable operations through the signing, completion and delivery of additional contracts or a reduction in certain operating expenses. In the absence of this, the Company is dependent upon raising additional funds to finance operations within and beyond the next twelve months. The Company has been successful in securing financing in the past and has relied upon external financing to fund its operations, primarily through the issuance of equity, debt and convertible debentures. The Company completed a private placement in October 2022 for an amount of \$1,318,980 and also completed another private placement in March 2023 for net proceeds \$4,960,483 (Note 21). In addition, in July 2023, the Company also completed a brokered private placement of convertible debenture units for gross proceeds of \$3,030,000 and in December 2023, the Company also completed a brokered private placement of convertible debenture units for gross proceeds of \$1,250,000 (Note 20). While the Company has been successful in securing financing, raising additional funds is dependent on a number of factors, some of which are outside the Company’s control, and therefore there is no assurance that it will be able to do so in the future or that these sources will be available to the Company or that they will be available on terms which are acceptable to the Company. These conditions indicate the existence of a material uncertainty that may cast significant doubt about the Company’s ability to continue operating as a going concern.

The consolidated financial statements have been prepared on a going concern basis and do not include any adjustments to the amounts and to classifications of the assets and liabilities that might be necessary should the Company be unable to achieve its plan and continue in business. If the going concern assumption were not appropriate, adjustments, which could be material, would be necessary to the carrying value of assets and liabilities, the reported expenses, and the classification of items on the consolidated statement of financial position.

3. Basis of preparation

(a) Statement of compliance

These financial statements have been prepared in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board (“IASB”) (“IFRS Accounting Standards”). These financial statements were approved and authorized for issuance by the Board of Directors on April 1, 2024.

PyroGenesis Canada Inc.
Notes to the Consolidated Financial Statements

For the years ended December 31, 2023 and 2022
(In Canadian dollars)

(b) Functional and presentation currency

These consolidated financial statements are presented in Canadian dollars, which is the functional currency of PyroGenesis, and Pyro Green-Gas Inc. The functional currency of Airscience Italia SRL is the euro whereas the functional currency of Airscience Technologies Private Limited is the Indian rupee, and Drosrite International LLC's functional currency is the US dollar.

(c) Basis of measurement

These financial statements have been prepared on the historical cost basis except for:

- (i) strategic investments which are accounted for at fair value;
- (ii) share-based payment arrangements, which are measured at fair value on the grant date pursuant to IFRS 2, Share-based Payment; and
- (iii) lease liabilities, which are initially measured at the present value of minimum lease payments.

(d) Basis of consolidation

For financial reporting purposes, subsidiaries are defined as entities controlled by the Company. The Company controls an entity when it has power over the investee; it is exposed to, or has rights to, variable returns from its involvement with the entity and it has the ability to affect those returns through its power over the entity.

In instances where the Company does not hold a majority of the voting rights, further analysis is performed to determine whether or not the Company has control of the entity. The Company is deemed to have control when, according to the terms of the shareholder's and/or other agreements, it makes most of the decisions affecting relevant activities.

These consolidated financial statements include the accounts of PyroGenesis and its subsidiaries, Drosrite International LLC and Pyro Green-Gas Inc. and its subsidiaries. Drosrite International LLC is owned by a member of the Company's management personnel and close member of the Chief Executive Officer ("CEO") and controlling shareholder's family and is deemed to be controlled by the Company. All transactions and balances between the Company and its subsidiaries have been eliminated upon consolidation.

The material accounting policies set out below have been applied consistently in the preparation of the consolidated financial statements of all years presented. Finance costs and changes in fair value of strategic investments are excluded from the loss from operations in the consolidated statements of comprehensive loss.

4. Summary of accounting policies

(a) Business combinations

Business combinations are accounted for using the acquisition method. Goodwill is measured as the excess of the fair value of the consideration transferred over the net recognized amount of the identifiable assets acquired and liabilities assumed, all measured at the acquisition date.

The consideration transferred is measured as the net of the fair values of assets transferred, liabilities assumed, and equity instruments issued by the Company at the acquisition date, including any asset or liability resulting from a contingent consideration arrangement, in exchange of the acquiree.

The obligation to pay the contingent consideration is classified as a liability and measured as a financial instrument or as a provision. Changes in fair values that qualify as measurement period adjustments of preliminary purchase price allocations are adjusted in the current period and such changes are applied on a retroactive basis.

Acquisition costs that the Company incurs in connection with a business combination are recognized in profit or loss as incurred, except for costs associated with the issuance of debt or equity securities.

PyroGenesis Canada Inc.
Notes to the Consolidated Financial Statements

For the years ended December 31, 2023 and 2022
(In Canadian dollars)

(b) Revenue recognition

Revenue from contracts is recognized for each performance obligation either over a period of time or at a point in time, depending on which method reflects the transfer of control of the goods and services underlying the particular performance obligation.

i) Long-term contracts

Long-term contracts involve made-to-order customized equipment and machines and are generally priced on a fixed fee basis. Under these contracts, the equipment or machines are made to a customer's specifications and if a contract is terminated by the customer, the Company is entitled to the greater of the amounts invoiced at the termination date and the reimbursement of the costs incurred to date of termination, including a reasonable margin. Agreements that contain multiple deliverables require the Company to determine whether they contain separately identifiable performance obligations and to allocate the consideration received to each performance obligation.

Revenue relating to long-term contracts is recognized over time based on the measure of progress determined by the Company's efforts or inputs towards satisfying the performance obligation relative to the total expected inputs. The degree of completion is assessed based on the proportion of total costs and/or hours incurred to date, compared to total costs and/or hours anticipated to provide the service under the entire contract, excluding the effects of inputs that do not depict performance, e.g. uninstalled materials. For long-term contracts with uninstalled materials, the Company adjusts the transaction price and recognizes revenue on uninstalled materials to the extent of those costs incurred, i.e. at a zero percent profit margin, when certain conditions are met.

Estimates are required to determine anticipated costs and/or hours on long-term contracts. A provision is made for the entire amount of expected loss, if any, in the period in which they are first determinable.

Contract modifications are changes in scope and/or price that are approved by the parties to the contract. Approval may be written, oral or implied by customary business practices, and are legally enforceable. The Company accounts for modifications as a separate contract if the modifications add distinct goods or services that are priced commensurate with stand-alone selling prices or if the remaining goods or services are distinct from those already transferred, otherwise modifications are accounted for as part of the original contract.

Costs and profits in excess of billings on uncompleted contracts and trade receivables are both rights to consideration in exchange for goods or services that the Company has transferred to a customer, however the classification depends on whether such right is only conditional on the passage of time (trade receivables) or if it is also conditional on something else (costs and profits in excess of billings on uncompleted contracts), such as the satisfaction of further performance obligations under the contract. Billings in excess of costs and profits on uncompleted contracts is the cumulative amount received and contractually receivable by the Company that exceeds the right to consideration resulting from the Company's performance under a given contract.

The costs to obtain long-term contracts such as sale commissions are recognized as Contract assets and recognized as selling expenses over time based on degree of completion of the related contract.

ii) Sales of goods

Revenue related to sales of goods, which may include powders and spare parts are measured based on the consideration specified in contracts with customers. The Company recognizes revenue at a point in time when it transfers control of the goods to the buyer. This is generally at the time the customer obtains legal title to the product and when it is physically transferred to the custody transfer point agreed with the customer.

iii) Sale of intellectual property

Sale of intellectual property is recognized at the date the recipient obtains control of the asset. Variable consideration related to the sale of intellectual property is recognized to the extent that it is highly probable that a reversal will not occur when the uncertainty associated with the variable consideration is subsequently resolved.

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(c) Foreign currency translation

i) Foreign currency transactions

Revenue and expense transactions in foreign currencies are translated into the functional currency of the respective entity using the average exchange rates prevailing at the time of the transaction. Foreign currency balances are translated into the functional currency of the respective entity at year end exchange rates for monetary items and at historical rates for non-monetary items. Translation gains or losses are included in the determination of net loss.

ii) Foreign operations

The assets and liabilities of foreign operations are translated into Canadian dollars using exchange rates prevailing at the end of the reporting period. Revenue and expense items are translated at the average exchange rates for the period. Exchange differences arising from the translation process of foreign operations are recognized as foreign currency translation adjustments in other comprehensive income and accumulated in equity.

(d) Inventory

Inventory is composed of spare parts for resale. Inventory is valued at the lower of cost and net realizable value. The cost of inventory is based on the first-in, first-out principle and comprises all costs of purchases. Net realizable value is the estimated selling price in the ordinary course of business, less estimated costs of completion and selling costs.

(e) Income taxes

i) Current tax

Current tax assets and liabilities for the current and prior years are measured at the amount expected to be recovered from or paid to the taxation authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted by the date of the consolidated statements of financial position.

iii) Deferred tax

Deferred tax is provided using the liability method, providing for temporary differences between the tax bases of assets and liabilities and their carrying amounts in the consolidated financial statements. The temporary difference is not provided for if it arises from the initial recognition of goodwill or the initial recognition of an asset or liability in a transaction other than a business combination that at the time of the transaction affects neither accounting nor taxable profit or loss. The amount of deferred tax provided is based on the expected manner of realization or settlement of the carrying amount of assets and liabilities, using tax rates enacted or substantively enacted at the financial position reporting date and whose implementation is expected over the period in which the deferred tax is realized or recovered. A deferred tax asset is recognized only to the extent that it is probable that future taxable profits will be available against which the asset can be used.

Deferred tax assets and liabilities are presented as non-current. Assets and liabilities are offset where the entity has a legally enforceable right to offset current tax assets and liabilities or deferred tax assets and liabilities, and the respective assets and liabilities relate to income taxes levied by the same taxation authority on the same taxable entity or different taxable entities which intend to settle the liabilities and assets on a net basis.

(f) Earnings (loss) per share

The Company presents basic earnings (loss) per share data for its common shares. Basic earnings (loss) per share is computed by dividing net earnings (loss) by the weighted average number of common shares outstanding during the year. Diluted earnings (loss) per share is computed similarly to basic earnings (loss) per share, except that the weighted average number of shares outstanding is increased to include shares from the assumed exercise of stock options and share purchase warrants, if dilutive. The number of additional shares is calculated by assuming that outstanding share options and warrants were exercised and that the proceeds from such exercises were used to acquire common shares at the average market price during the year. Potential shares from all outstanding stock options and share purchase warrants are excluded from the calculation of diluted loss per share as their inclusion is considered anti-dilutive in years when a loss is incurred.

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(g) Property and equipment

Property and equipment are measured at cost less accumulated depreciation and accumulated impairment losses if applicable. Cost includes expenditures that are directly attributable to the acquisition of the asset and bringing the asset into operation. Borrowing costs capitalized to asset under development represents the interest expense calculated under the effective interest method and does not include any fair value adjustments of investments designated at fair value through profit and loss. Government assistance and investment tax credits related to the purchase or development of property and equipment are recorded in reduction of the cost. When major parts of an item of property and equipment have different useful lives, they are accounted for separately. Property and equipment are depreciated from the acquisition date over their respective useful life. Depreciation of an asset under construction begins when it is available for use, i.e. when it is in the location and condition necessary for it to be capable of operating in the manner intended by the Company.

Depreciation is calculated using the following methods and rates:

Computer equipment	Straight line over 3 years
Machinery and equipment	Straight line over 10 years
Automobiles	Straight line over 7 years
Leasehold improvements	Lesser of the lease term or the useful life (20 years)

Impairment losses recognized in prior periods are assessed at each reporting date as to whether there are any indications that the previously recognized losses may no longer exist or may be decreased. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognized for the asset in prior years.

Property and equipment are assessed for impairment whenever there is an indication of impairment.

Depreciation methods, useful lives and residual values are reviewed at each financial year end and adjusted prospectively if appropriate.

(h) Leases

Under IFRS 16 Leases, at inception, the Company assesses whether a contract is, or contains, a lease based on whether the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

The Company recognizes a right-of-use asset and a lease liability at the commencement date of the lease, i.e., the date the underlying asset is available for use.

Right-of-use assets

Right-of-use assets are measured at cost, less any accumulated depreciation and accumulated impairment losses, and adjusted for any remeasurement of lease liabilities. Cost of right-of-use assets is comprised of:

- the initial measurement amount of the lease liabilities recognized;
- any lease payments made at or before the commencement date, less any lease incentives received;
- any initial direct costs incurred; and
- an estimate of costs to dismantle and remove the underlying asset, restore the site on which it is located or restore the underlying asset to the condition required by the terms and conditions of the lease contract.

Right-of-use assets are depreciated over the shorter period of the lease term and the useful life of the underlying asset. If a lease transfers ownership of the underlying asset or the cost of the right-of-use asset reflects that the Company expects to exercise a purchase option, the related right-of-use asset is depreciated over the useful life of the underlying asset based on periods detailed above. The depreciation starts at the commencement date of the lease. Right-of-use assets are assessed for impairment whenever there is an indication that the right-of-use assets may be impaired.

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Lease liabilities

Lease liabilities are initially measured at the present value of the lease payments that are not paid at the commencement date over the lease term. The present value of the lease payments is determined using the lessee's incremental borrowing rate at the commencement date if the interest rate implicit in the lease is not readily determinable. The incremental borrowing rate is a function of the lessee's incremental borrowing rate, the nature of the underlying asset, the location of the asset, the length of the lease and the currency of the lease contract. Generally, the Company uses the lessee's incremental borrowing rate for the present value. At the commencement date, lease payments generally include fixed payments, less any lease incentives receivable, variable lease payments that depend on an index (e.g., based on inflation index) or a specified rate, and payments of penalties for terminating the lease, if the lease term reflects the lessee exercising the option to terminate the lease. Lease payments also include amounts expected to be paid under residual value guarantees and the exercise price of a purchase option if the Company is reasonably certain to exercise that option.

Variable lease payments that do not depend on an index or a specified rate are not included in the measurement of lease liabilities but instead are recognized as expenses in the period in which the event or condition that triggers the payment occurs.

After the commencement date, the carrying amount of lease liabilities is increased to reflect the accretion of interest and reduced to reflect lease payments made. In addition, the carrying amount of lease liabilities is remeasured when there is a change in future lease payments arising from a change in an index or specified rate, if there is a modification to the lease terms and conditions, a change in the estimate of the amount expected to be payable under residual value guarantee, or if the Company changes its assessment of whether it will exercise a termination, extension or purchase option. The remeasurement amount of the lease liabilities is recognized as an adjustment to the right-of-use asset, or in the profit and loss statement when the carrying amount of the right-of-use asset is reduced to zero.

Classification and presentation of lease-related expenses

Depreciation charge for right-of-use assets, expenses related to variable lease payments not included in the measurement of lease liabilities and loss (gain) related to lease modifications are allocated in the Company's profit and loss statement based on their function within the Company, while interest expense on lease liabilities is presented within finance costs.

Cash flow classification

Lease payments related to the principal portion of the lease liabilities are classified as cash flows from financing activities while lease payments related to the interest portion of the lease liabilities are classified as interest paid within cash flows from financing activities. Lease incentives received are classified as cash flows from investing activities. Variable lease payments not included in the measurement of lease liabilities are classified as cash flows from operating activities.

(i) Government assistance and investment tax credits

Investment tax credits are comprised of scientific research and experimental development tax credits. Government assistance and investment tax credits are recognized when there is reasonable assurance of their recovery and recorded as a reduction of the related expense or cost of the asset acquired, as applicable. Investment tax credits are subject to the customary approvals by the pertinent tax authorities. Adjustments required, if any, are reflected in the year when such assessments are received.

(j) Intangible assets and Goodwill

Intangible assets acquired separately are measured at cost on initial recognition. Following initial recognition, intangible assets are carried at cost less any accumulated amortization and any accumulated impairment losses.

Identifiable intangible assets acquired in a business combination are recognized separately from goodwill if they meet the definition of an intangible asset and if their fair value can be measured reliably. The cost of these intangible assets equals their acquisition-date fair value.

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Subsequent to initial recognition, identifiable intangible assets acquired in a business combination are recorded at cost less accumulated amortization and impairment losses, if they are amortizable, otherwise only at cost net of accumulated impairment losses. The useful lives of intangible assets are assessed as either finite or indefinite.

Intangible assets with finite lives are amortized over the useful life of the asset and assessed for impairment whenever there is an indication of impairment. Amortization expense on the intangible assets with finite lives is recognized in the consolidated statements of comprehensive loss.

Research costs are charged to comprehensive loss in the year they are incurred, net of related investment tax credits. Development costs are charged to comprehensive loss in the year they are incurred net of related investment tax credits unless they meet specific criteria related to technical, market and financial feasibility in order to be recognized as intangible assets which include:

- the technical feasibility of completing the intangible asset so that it will be available for use or sale;
- the Company has the intention to complete and the ability to use or sell the asset;
- the asset will generate future economic benefits;
- the Company has the resources to complete the asset; and
- ability to measure reliably the expenditure during development.

Costs to establish patents for internally developed technology are considered development costs and are charged to comprehensive loss in the year they are incurred unless they meet specific criteria related to technical, market and financial feasibility. Patent costs include legal and other advisor fees to obtain patents, and patent application fees.

Amortization of the development costs is calculated on a straight-line basis over the remaining useful life of the related patent and begins when development is complete. During the period of development, the asset is tested annually for impairment. Residual values and useful lives are reviewed at each reporting date.

Amortization is calculated on a straight-line basis:

	<u>Useful life</u>
Production backlog	30 months
Patents and development costs	<u>1 to 21 years</u>

Goodwill represents the future economic benefits arising from a business combination that are not individually identified and separately recognized. Goodwill is carried at cost less accumulated impairment losses. Goodwill is not amortized but is tested for impairment annually or if there is an indication of impairment. Impairment losses recognized for goodwill cannot be reversed.

(k) Impairment testing of goodwill, other intangible assets, property and equipment and right-of-use assets

The carrying amounts of the Company's non-financial assets are assessed at each reporting date to determine whether there is an indication of impairment. If any such indication exists, then the asset's recoverable amount is estimated.

For impairment assessment purposes, assets are grouped at the lowest levels for which there are largely independent cash inflows (cash-generating units). As a result, some assets are tested individually for impairment, and some are tested at cash-generating unit level. Goodwill is allocated to those cash-generating units that are expected to benefit from synergies of a related business combination and represents the lowest level within the Company at which management monitors goodwill.

Cash-generating units to which goodwill has been allocated are tested for impairment at least annually. All other individual assets or cash-generating units are tested for impairment whenever events or changes in circumstances indicate the carrying amount may not be recoverable.

The recoverable amount of an asset or cash-generating unit (CGU) is the greater of its value in use and its fair value less costs to sell. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. For the purposes of testing non-financial assets for impairment, management has identified one CGU.

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An impairment loss is recognized if the carrying amount of an asset or its CGU exceeds its recoverable amount. Impairment losses are recognized in the consolidated statements of comprehensive loss. Impairment losses recognized in respect of the CGU are allocated first to reduce the carrying amount of goodwill allocated to the units, and then to reduce the carrying amounts on a pro-rata basis of the other assets in the unit.

(l) Provisions and contingent liabilities

Provisions for legal disputes, onerous contracts or other claims are recognized when the Company has a present legal or constructive obligation as a result of a past event, it is probable that an outflow of economic resources will be required from the Company and amounts can be estimated reliably. The timing or amount of the outflow may still be uncertain.

Provisions are measured at the estimated expenditure required to settle the present obligation, based on the most reliable evidence available at the reporting date, including the risks and uncertainties associated with the present obligation. Where there are a number of similar obligations, the likelihood that an outflow will be required in settlement is determined by considering the class of obligations as a whole. Provisions are discounted to their present values, where the time value of money is material.

No liability is recognized if an outflow of economic resources as a result of present obligations is not probable. Such situations are disclosed as contingent liabilities unless the outflow of resources is remote.

(m) Employee benefits

Share-based payments

The Company applies a fair value-based method of accounting to all share-based payments. Employee and director stock options are measured at their fair value of each tranche on the grant date and recognized in its respective vesting period. Non-employee stock options are measured when the services are rendered by the consultant at the fair value of the services received if the fair value can be measured reliably. In the case the fair value of the services cannot be measured reliably, the services are measured indirectly using the fair value of the equity instruments granted at grant date. The cost of stock options is presented as share-based payment expense. On the exercise of stock options, share capital is credited for the consideration received and for the fair value amounts previously credited to contributed surplus. The Company uses the Black-Scholes option-pricing model to estimate the fair value of share-based payments.

Deferred profit-sharing plan

The Company established a yearly Deferred Profit-Sharing Plan ("DPSP") for all eligible employees who have materially and significantly contributed to the prosperity and profits of the Company. The significance of any contribution of any employee to the prosperity and profits of the Company for purposes of eligibility in the DPSP is determined by the Board of Directors of the Company upon such relevant information as the Board, in its sole discretion, may find relevant. All related persons to the Company are excluded from participating in the DPSP.

For all eligible employees, the Company is required to contribute to the DPSP out of the profits of the Company. The amount of the Company's contribution will be such amount which, in the opinion of its Board of Directors, is warranted by the profits and overall financial position of the Company. During the year, the Company contributed \$Nil to the DPSP (\$Nil in 2022). Obligations for contributions to the DPSP are recognized as an employee benefit expense in the consolidated statements of comprehensive loss in the periods during which services are rendered by employees.

Short-term employee benefits

Short-term employee benefit obligations are measured on an undiscounted basis and are expensed as the related service is provided.

A liability is recognized for the amount expected to be paid under the short-term incentive plan if the Company has a present legal or constructive obligation to pay this amount as a result of past service provided by the employee, and the obligation can be estimated reliably.

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(n) Equity instruments

Issuance of equity instruments

Incremental costs directly attributable to the issue of equity-classified shares are recognized as a deduction from the common shares and warrants, net of any tax effects. Upon issuance of units, the Company uses the residual value to allocate the net proceeds between common shares and warrants.

Extinguishing financial liabilities with equity instruments

When equity instruments issued to a creditor to extinguish all or part of a financial liability are recognized initially, the Company measures them at the fair value of the equity instruments issued, unless that fair value cannot be reliably measured. If the fair value of the equity instruments issued cannot be reliably measured, then the equity instruments shall be measured to reflect the fair value of the financial liability extinguished.

Contributed surplus

Contributed surplus includes amounts related to equity-settled share-based payments until such equity instruments are exercised or settled, in which case the amounts are transferred to common shares or reversed upon forfeiture if not vested. It also includes the unexercised conversion option at the maturity of the convertible debentures.

(o) Financial Instruments

Recognition:

The Company recognizes a financial asset or a financial liability when it becomes a party to the contractual provisions of the instrument.

Purchases or sales of financial assets that require delivery of assets within the time frame generally established by regulation or convention in the marketplace (regular way trades) are recognized on the trade date, i.e., the date that the Company commits to purchase or sell the asset.

Classification

Financial assets are classified at amortized cost, fair value through profit or loss ("FVTPL") or fair value through other comprehensive income ("FVOCI") based on the Company's business model for managing the financial assets and the contractual cash flow characteristics of these assets. Assessment and decision on the business model approach used is an accounting judgment.

A financial asset is measured at amortized cost if it is held within a business model whose objective is to hold financial assets in order to collect contractual cash flows and its contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding. The Company includes in this category cash, trade accounts receivable, other receivables, costs and profits in excess of billings, royalties receivable and deposits.

A financial asset is measured at fair value through profit or loss ("FVTPL") if:

- (a) Its contractual terms do not give rise to cash flows on specified dates that are solely payments of principal and interest (SPPI) on the principal amount outstanding; or
- (b) It is not held within a business model whose objective is either to collect contractual cash flows, or to both collect contractual cash flows and sell; or
- (c) At initial recognition, it is irrevocably designated as measured at FVTPL when doing so eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise from measuring assets or liabilities or recognizing the gains and losses on them on different bases.

The Company includes in this category strategic investments in equity instruments.

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All financial liabilities, other than those measured at fair value through profit or loss, are included in the financial liabilities measured at amortized cost. The Company includes in this category bank indebtedness, accounts payable and accrued liabilities, term loans, convertible debentures and convertible loan. The balance due on business combination is measured at FVTPL.

Initial measurement

Financial assets and liabilities (other than financial assets at FVTPL) are measured initially at their fair value plus any directly attributable incremental costs of acquisition or issue.

Financial assets and financial liabilities at FVTPL are recorded in the consolidated statements of financial position at fair value. All transaction costs for such instruments are recognized directly in profit or loss.

Subsequent measurement

Financial assets (other than financial assets at FVTPL) are measured at amortized cost using the effective interest method less any allowance for impairment. Gains and losses are recognized in profit or loss when the debt instruments are derecognized or impaired, as well as through the amortization process.

Financial liabilities are measured at amortized cost using the effective interest method except for derivatives and financial liabilities designated at FVTPL. Gains and losses are recognized in profit or loss when the liabilities are derecognized, as well as through the amortization process. Changes in fair value of financial liabilities attributable to changes in the entity's own credit risk are to be presented in other comprehensive income unless they affect amounts recorded in income.

Fair value measurement principles

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

Where financial assets and financial liabilities measured at fair value through profit or loss have a quoted price in an active market at the reporting date, the fair value is based on this price. A financial instrument is regarded as quoted in an active market if quoted prices are readily and regularly available from a stock exchange and those prices represent actual and regularly occurring market transactions on an arm's length basis.

Securities traded on stock exchanges are stated at market price based on the closing price on the relevant valuation day.

Derecognition

A financial asset is derecognized where the rights to receive cash flows from the asset have expired, or the Company has transferred its rights to receive cash flows from the asset. The Company derecognizes a financial liability when the obligation under the liability is discharged, cancelled, or expired.

Offsetting of financial instruments

Financial assets and financial liabilities are offset, and the net amount reported in the consolidated statements of financial position if, and only if, there is a currently enforceable legal right to offset the recognized amounts and there is an intention to settle on a net basis, or to realize the assets and settle the liabilities simultaneously.

Impairment of financial instruments

The Company applies the "expected credit loss" ("ECL") model to financial assets measured at amortized cost. The Company's financial assets subject to this impairment model are cash, trade and other receivables, costs and profits in excess of billings on uncompleted contracts, royalties receivable and deposits.

The trade accounts receivable have no financing component and have maturities of less than 12 months at amortized cost and, as such, the Company applies the simplified approach for expected credit losses (ECLs) to all its trade accounts receivable. Therefore, the Company recognizes a loss allowance based on lifetime ECLs at each reporting date.

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The Company's approach to ECLs reflects a probability-weighted outcome, the time value of money and reasonable and supportable information that is available without undue cost or effort at the reporting date about past events, current conditions, and forecasts of future economic conditions.

The Company uses the provision matrix as a practical expedient to measure ECLs on trade receivables and costs and profits in excess of billings on uncompleted contracts, based on days past due for groupings of receivables with similar loss patterns. Contracts with particular recovery history are analysed separately from other accounts. The loss rates are based on historical observed loss rates over the expected life of the receivables and are adjusted for forward-looking estimates to reflect differences between economic conditions during the period over which the historical data has been collected.

Impairment losses are recognized in profit or loss and reflected in an allowance account presented in reduction of receivables and cost in excess of billings on uncompleted contracts.

Write-off

The gross carrying amount of a financial asset is written off when the Company has no reasonable expectations of recovering a financial asset in its entirety or a portion thereof.

Failure to engage and communicate with the Company on alternative payment arrangements and failure to make payments within 90 days of the due date, amongst others, are considered possible indicators of no reasonable expectation of recovery of accounts receivable.

Compound Financial Instruments

Compound financial instrument issued by the Company comprises convertible debentures and a convertible loan that can be converted into common shares at the option of the holder, and the number of shares to be issued does not vary with changes in their fair value.

The component parts of the compound instrument issued by the Company are initially classified separately as financial liabilities and equity in accordance with the substance of the contractual arrangements and the definitions of a financial liability and an equity instrument. The conversion option that will be settled by the exchange of a fixed amount of cash or another financial asset for a fixed number of the Company's own equity instruments as well as the attached warrants are equity instruments.

At the date the convertible debentures or convertible loan are issued, the liability component is initially recognized at the fair value of similar debt instruments which do not have an equity conversion option. The initial amount of the liability component is determined by discounting the face value of the convertible debentures using a rate of interest prevailing for similar non-convertible instruments at the date of issue for instruments of similar terms and risks. The conversion option and warrants are classified as equity components are determined by deducting the amount of the liability component from the gross proceeds. The value attributed to each equity component is based on the pro-rata of their relative fair values. The equity components are recognized net of income tax effects within the other equity accounts.

Subsequently, the liability component is accounted for at amortized cost and is accreted using the effective interest method, up to the face value of the convertible debentures or convertible loan during the period they are outstanding. Interest expense on the convertible debentures and convertible loan is composed of the interest calculated on the face value of the convertible debentures and convertible loan and a non-cash notional interest representing the accretion of the carrying value of the convertible debentures and convertible loan. The equity components are not remeasured.

The conversion option and warrants classified as equity remain in the other equity account until the conversion option or warrants are exercised, in which case, the balance recognized in other equity is transferred to share capital. When the conversion option remains unexercised at the maturity date of the convertible debentures or convertible loan, the balance recognized in other equity will be transferred to contributed surplus. No gain or loss is recognized in the consolidated comprehensive income (loss) statement upon conversion or expiration of the conversion option and warrants.

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Transaction costs related to the issuance of convertible debentures and convertible loan are allocated to the liability and equity components in proportion to the allocation of the gross proceeds. Transaction costs relating to the equity components are recognized directly in other equity. Transaction costs relating to the liability component are included in the carrying amount of the liability component and are amortized over the term of the convertible debentures and convertible loan using the effective interest method.

Effective Interest Method

The effective interest method is a method of calculating the amortized cost of a financial asset/financial liability and of allocating interest income/expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash receipts/payments (including all fees and points paid or received that form an integral part of the effective interest rate, transaction costs and other premiums or discounts) through the expected life of the financial instrument, or (when appropriate) a shorter period, to the net carrying amount on initial recognition.

Standards, amendments and Interpretations to existing Standards that are not yet effective and have not been adopted by the Company

At the date of authorization of these consolidated financial statements, several other new, but not yet effective, standards and amendments to existing standards, and interpretations have been published by the IASB. None of these standards or amendments to existing standards have been adopted early by the Company.

Management anticipates that all relevant pronouncements will be adopted for the first period beginning on or after the effective date of the pronouncement. New standards, amendments and interpretations not adopted in the current year have not been disclosed as they are not expected to have a material impact on the Company's consolidated financial statements.

5. Significant accounting judgments, estimates and assumptions

The preparation of consolidated financial statements requires management to make judgments, estimates and assumptions based on currently available information that affect the reported amounts of assets, liabilities and contingent assets and liabilities at the date of the consolidated financial statements and reported amounts of revenues and expenses during the reporting period. Estimates and judgments are continuously evaluated and are based on management's experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. However, actual results could differ from those estimated. By their very nature, these estimates are subject to measurement uncertainty and the effect of any changes in estimates on the financial statements of future periods could be material.

In the process of applying the Company's accounting policies, management has made the following judgments, estimates, and assumptions which have the most significant effect on the amounts recognized in the consolidated financial statements.

Critical judgments in applying accounting policies

(a) Assessment of whether there is any indication that property and equipment, right-of-use assets and intangible assets may be impaired

At each reporting date, the Company reviews the carrying amounts of its property and equipment, right-of-use assets and intangible assets with a finite useful life to determine whether there is any indication of impairment. If any such indication exists, then the asset's recoverable amount is estimated. Management's judgment is required in assessing whether there is any indication that an asset may be impaired.

(b) Intangible assets

The recognition of development costs as intangible assets requires judgments to determine whether the required criteria for recognition are met including management estimates of future economic benefits.

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(c) Sale of intellectual property and related royalties

The recognition of variable consideration related to the sale of intellectual property requires management's judgments to determine whether it is highly probable that a reversal will not occur when the uncertainty associated with the variable consideration is subsequently resolved.

(d) Investment tax credits receivable

The investment tax credits are estimated by management based on quantitative and qualitative analysis and interpretation of various government programs, related restrictions, limitations, definitions, and eligibility conditions. Uncertainty over the eligibility and final assessment by taxation authorities of investment tax credits requires judgment. Management involves its technical staff and external specialists in determining if the expenditures meet the requirements of the different tax credit claims.

Key sources of estimation uncertainty

(a) Revenue recognition

Revenue recognition for long-term contracts completion requires the use of estimates to determine the recorded amount of revenues, costs in excess of billings and billings in excess of costs and profits on uncompleted contracts.

The determination of anticipated costs for completing a contract is based on estimates that can be affected by a variety of factors, including the cost of materials, labour and sub-contractors, as well as potential claims from customers and subcontractors.

As risks and uncertainties are different for each project, the sources of variations between anticipated costs and actual costs incurred will also vary by project. The determination of estimates is based on the Company's business practices as well as its historical experience. Estimates are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimate is revised.

Given this estimation process, it is possible that changes in future conditions could cause a material change in the recognized amount of revenues and costs and profits in excess of billings on uncompleted contracts and accrued expenses.

Agreements that contain multiple deliverables require the use of judgment to determine whether they contain separately identifiable performance obligations and to allocate the consideration received to each performance obligation.

(b) Share-based payments, conversion options and warrants

The Company uses the fair value method of valuing compensation cost associated with the Company's stock option plan and for estimating the fair values of conversion options and warrants. Estimating fair value requires determining the most appropriate valuation model for an issuance of equity instruments, which is dependent on the terms and conditions of the issuance. This also requires determining the most appropriate inputs to the valuation model including the expected life of the instrument and volatility. The assumptions and models are discussed in Notes 20 and 21.

(c) Useful lives of property and equipment and intangible assets

The Company estimates the useful lives of property and equipment and intangible assets based on the period over which the assets are expected to be available for use. The estimated useful lives of property and equipment and intangible assets are reviewed periodically and are updated if expectations differ from previous estimates due to physical wear and tear and legal or other limits on the use of the relevant assets. In addition, the estimation of the useful lives of property and equipment and intangible assets are based on management's experience with similar assets. It is possible, however, that future results of operations could be materially affected by changes in the estimates brought about by changes in factors mentioned above. The amounts and timing of recorded expenses for any period would be affected by changes in these factors and circumstances. Useful lives, depreciation and amortization rates and residual values are reviewed at least annually.

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(d) Impairment of non-financial assets and goodwill

In assessing impairment, management estimates the recoverable amount of each asset or cash generating unit based on expected future cash flows and uses an interest rate to discount them. Estimation uncertainty relates to assumptions about future operating results and the determination of a suitable discount rate (see Note 4 (I)).

(e) Fair value of strategic investments

Where the fair values of investments recorded in the consolidated statements of financial position cannot be derived from active markets, they are determined using valuation techniques including the Black-Scholes model. The inputs to these models are taken from observable markets where possible, but where this is not feasible, a degree of judgment is required in establishing the fair values. The judgments include considerations of inputs such as the expected volatility and the initial allocation of the consideration paid between the fair value of the common shares and warrants received. Should any of the inputs to these models or changes in assumptions about these factors occur, this could affect the reported fair value of the investments.

(f) Right-of-use assets and lease liabilities

In determining the carrying amount of the right-of-use assets and corresponding lease liabilities, assumptions include the non-cancellable term of the lease plus periods covered by an option to renew or purchase the assets, estimated useful lives of the related assets, and incremental borrowing rate. Renewal and purchase options are only included in the lease term if management is reasonably certain to renew. Management considers factors such as market conditions, comparable rental rates and similar property values. The Company is also required to estimate the incremental borrowing rate specific to each portfolio of leased assets with similar characteristics if the interest rate in the lease is not readily determined. Management determines the incremental borrowing rate using the base rate for similar loans plus a risk premium.

(g) Income taxes

The Company has unused available tax losses, deductible temporary differences and investment tax credits. The Company recognizes deferred income tax assets for these unused tax losses and deductible temporary differences only to the extent that, in management's opinion, it is probable that future taxable profit will be available against which these available tax losses and temporary differences can be utilized. The Company recognizes investment tax credits when it has reasonable assurance that it has complied with the conditions of the program and that the amounts will be realized (i.e. that it will generate future federal income taxes payable against which the tax credits can be applied). The Company's projections of future taxable profit involve the use of significant assumptions and estimates with respect to a variety of factors, including future sales and operating expenses. There can be no assurance that the estimates and assumptions used in our projections of future taxable income will prove to be accurate predictions of the future, and in the event that our assessment of the recoverability of these deferred tax assets and investment tax credits changes in the future, a material increase or reduction in the carrying value of these deferred tax assets and investment tax credits could be required, with a corresponding charge to net loss.

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6. Revenues

The following table is a summary of the Company's revenues from contracts by product line:

	<u>2023</u>	<u>2022</u>
	<u>\$</u>	<u>\$</u>
High purity metallurgical grade silicon & solar grade silicon from quartz (PUREVAP™)	1,660,928	6,272,697
Aluminium and zinc dross recovery (DROSRITE™)	535,868	1,912,807
Development and support related to systems supplied to the U.S. Navy	3,245,618	1,288,356
Torch-related sales	3,396,458	5,558,210
Refrigerant destruction (SPARC™)	605,962	—
Biogas upgrading and pollution controls	1,713,810	3,347,443
Other sales and services	1,186,437	633,990
	<u>12,345,081</u>	<u>19,013,503</u>

The following is a summary of the Company's revenues by revenue recognition method:

	<u>2023</u>	<u>2022</u>
	<u>\$</u>	<u>\$</u>
Revenue from contracts with customers:		
Sales of goods under long-term contracts recognized over time	10,417,484	13,997,163
Sales of goods at a point of time	1,771,574	1,135,498
Other revenue:		
Sale of intellectual properties (i)	—	3,600,000
Royalties	156,023	280,842
	<u>12,345,081</u>	<u>19,013,503</u>

See Note 31 for sales by geographic area.

(i) Sale of intellectual properties

In September 2022, the Company sold intellectual property to a subsidiary of a company in which it holds a strategic investment for a non-refundable fee of \$3,600,000. Under the terms of the sale agreement, control of the intellectual property was transferred to the purchaser and the Company has no obligation to undertake activities that will significantly affect the intellectual property. The Company agreed that the invoice will be paid by HPQ Silicon Inc. through the issuance of common shares of HPQ Silicon Inc. or by cash, no later than June 30, 2024.

Transaction price allocated to remaining performance obligations.

As at December 31, 2023, revenue expected to be recognized in the future related to performance obligations that are unsatisfied (or partially satisfied) at the reporting date is \$27,527,124 (2022 - \$26,741,550). Revenue will be recognized as the Company satisfies its performance obligations under long-term contracts, which is expected to occur over the next 3 years.

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7. Accounts receivable

Details of accounts receivable based on past due terms were as follows:

	December 31, 2023	December 31, 2022
	\$	\$
Current	444,300	6,578,269
1 – 30 days	745,187	15,959
31 – 60 days	28,246	57,944
61 – 90 days	142,339	718,239
Greater than 90 days	14,738,199	13,790,716
Holdback receivable	706,667	1,536,115
Total trade accounts receivable	16,804,938	22,697,242
Allowance for expected credit loss	(8,597,635)	(4,693,283)
Other receivables	842,715	240,560
Sales tax receivable	215,647	380,112
	9,265,665	18,624,631

As at December 31, 2023 the allowance for expected credit loss on trade accounts receivable is \$8,597,635 (2022 - \$4,693,283), whereby \$3,904,000 was recognized during 2023 (\$4,150,000 during 2022). The portion recognized at December 31, 2023, includes \$7,447,813 attributable to one specific customer, whereby the carrying amount has been reduced from \$10,797,813 to \$3,350,000. The carrying value of all other trade receivables was reduced from \$6,007,125 to \$4,857,303. On the basis of the Company's expected credit loss policy, the allowance was determined generally by applying a loss rate of 1% on balances 1-30 days past the invoice date, 2% for 31-60 days, 3% for 61-90 days and a minimum of 10% for those beyond 90 days. Specific consideration was applied for situations where the receivable is a holdback on a contract, and also for customers that have exceeded normal payment terms.

The closing balance of the trade receivables credit loss allowance as at December 31, reconciles with the trade receivables credit loss allowance opening balance as follows:

Loss allowance at January 1, 2022	520,000
Loss recognized during the year	4,150,000
Foreign exchange	23,283
Loss allowance at December 31, 2022	4,693,283
Loss recognized during the year	3,904,000
Foreign exchange	352
Loss allowance at December 31, 2023	8,597,635

8. Costs and profits in excess of billings on uncompleted contracts

As at December 31, 2023, the Company had thirteen contracts with total billings of \$18,850,084 which were less than total costs incurred and had recognized cumulative revenue of \$20,179,397 since those projects began. This compares with eighteen contracts with total billings of \$10,475,299 which were less than total costs incurred and had recognized cumulative revenue of \$11,856,596 as at December 31, 2022.

The net amount of \$648,813 as at December 31, 2023 (\$1,051,297 as at December 31, 2022) includes an expected credit loss allowance of \$680,500 (\$330,000 as at December 31, 2022). On the basis of the Company's expected credit loss policy, the allowance was determined generally by applying a loss rate of 2% on all balances, and adjusting for specific situations, such as past due customers, whereby the loss rate varied from 25% to 50%, or greater, if needed.

Changes in costs and profits in excess of billings on uncompleted contracts during the year are explained by \$1,041,422 (2022 - \$4,164,109) recognized at the beginning of the year being transferred to accounts receivable, \$989,438 (2022 -

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\$622,696) resulting from changes in the measure of progress and the variation in expected credit loss allowance of \$350,500 (\$330,000 in 2022).

9. Investment tax credits

An amount recognized in 2023 included \$183,097 (2022 - \$169,434) of investment tax credits earned in the year, \$102,880 (2022 - \$70,258) of the investment tax credits recognized in the year was recorded against cost of sales and services, \$50,217 (2022 - \$69,176) against research and development expenses and \$30,000 (2022 - \$30,000) against selling general and administrative expenses.

Eligible scientific research and experimental development (“SR&ED”) expenses for the year amounted to \$3,700,664 (2022 – \$2,783,450) less investment tax credits of (\$183,097) (2022 – (\$169,434)), less government grants of (\$415,934) (2022 – \$296,043) totalling \$3,101,633(2022 – \$2,317,973).

10. Strategic investments

	<u>2023</u>	<u>2022</u>
	<u>\$</u>	<u>\$</u>
Beauce Gold Fields (“BGF”) shares – level 1	35,903	56,419
HPQ Silicon Inc. (“HPQ”) shares - level 1	2,515,524	5,415,749
HPQ warrants – level 3	—	770,466
	<u>2,551,427</u>	<u>6,242,634</u>

The change in the strategic investments is summarized as follows:

	("BGF") shares – level 1		("HPQ") shares - level 1		HPQ warrants – level 3		Total
	Quantity	\$	Quantity	\$	Quantity	\$	\$
Balance, December 31, 2021	1,025,794	123,095	26,752,600	12,306,196	9,594,600	2,472,368	14,901,659
Additions	—	—	6,800,000	3,196,000	6,800,000	408,000	3,604,000
Disposed	—	—	(11,447,500)	(3,922,244)	—	—	(3,922,244)
Change in the fair value	—	(66,676)	—	(6,164,203)	—	(2,109,902)	(8,340,781)
Balance, December 31, 2022	1,025,794	56,419	22,105,100	5,415,749	16,394,600	770,466	6,242,634
Exercise of warrants	—	—	5,594,600	651,406	(5,594,600)	(91,946)	559,460
Disposed	—	—	(16,265,500)	(3,938,452)	—	—	(3,938,452)
Expired ⁽¹⁾	—	—	—	—	(4,000,000)	—	—
Change in the fair value	—	(20,516)	—	386,821	—	(678,520)	(312,215)
Balance, December 31, 2023	<u>1,025,794</u>	<u>35,903</u>	<u>11,434,200</u>	<u>2,515,524</u>	<u>6,800,000</u>	<u>—</u>	<u>2,551,427</u>

¹In September 2023, 4,000,000 warrants at an exercise price of \$0.61 per warrant, were not exercised and have expired.

The Company owns 4.62% on a fully diluted basis of HPQ as at December 31, 2023 (2022 – 9.82%) and has other business transactions with this entity– see Notes 6(i) and 11.

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The following table sets out the details and activity of the HPQ warrants:

Expiry date	Number of warrants			Number of warrants		Exercise price (\$)
	Dec 31, 2022	Exercised	Expired	Dec 31, 2023		
April 29, 2023	1,200,000	(1,200,000)	—	—		0.10
June 2, 2023	4,394,600	(4,394,600)	—	—		0.10
September 3, 2023	4,000,000	—	(4,000,000)	—		0.61
April 20, 2024	6,800,000	—	—	6,800,000		0.60
	16,394,600	(5,594,600)	(4,000,000)	6,800,000		

2023 Transactions

5,594,600 warrants of HPQ were exercised in cash for an amount of \$559,460 in 2023.

16,265,500 HPQ common shares were disposed for cash amounts totalling \$3,938,452 resulting in a realized loss of \$1,590,114.

2022 Transactions

6,800,000 common shares and 6,800,000 warrants of HPQ were purchased in cash for an amount of \$3,604,000 in April 2022.

11,447,500 HPQ common shares were disposed for cash amounts totalling \$3,922,244 resulting in a realized loss of \$225,527.

At inception, the fair value of the HPQ warrants purchased in 2022 was measured using the Black-Scholes option pricing model using the following assumptions:

Number of warrants	6,800,000
Date of issuance	April 20, 2022
Exercise price (\$)	0.60
Assumptions under the Black-Scholes model:	
Fair value of the shares (\$)	0.47
Risk-free interest rate (%)	2.47
Expected volatility (%)	107.60
Expected dividend yield	—
Contractual remaining life (number of months)	24

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As at December 31, 2023 and 2022, the fair value of the HPQ warrants was measured using the Black-Scholes option pricing model using the following assumptions:

	2023	2022			
Number of warrants	6,800,000	1,200,000	4,394,600	4,000,000	6,800,000
Date of issuance	April 20, 2022	April 29, 2020	June 2, 2020	Sept. 3, 2020	April 20, 2022
Exercise price (\$)	0.60	0.10	0.10	0.61	0.60
Assumptions under the Black-Scholes model:					
Fair value of the shares (\$)	0.22	0.25	0.25	0.25	0.25
Risk-free interest rate (%)	3.94	4.03	4.03	4.03	4.03
Expected volatility (%)	58.02	80.55	73.74	76.85	74.58
Expected dividend yield	—	—	—	—	—
Contractual remaining life (in months)	4	4	5	8	16

As at December 31, 2023, no gain from the initial recognition of the warrants (\$280,926 – 2022) has been deferred off balance sheet until realized.

11. Royalties receivable

	December 31 2023	December 31 2022
	\$	\$
Opening balance	1,407,786	1,258,654
Accretion interest	145,159	118,290
Royalties recognized during the year	250,000	450,000
Discounting	(93,977)	(169,158)
Amounts received during the year	—	(250,000)
Changes in assumptions in cashflows	(495,300)	—
Balance at end of the year	1,213,668	1,407,786
Current portion	684,651	455,556
Non-current portion	529,017	952,230
	1,213,668	1,407,786

The Company sold intellectual property to HPQ Silicon Inc. (“HPQ”) in 2016 (“HPQ 2016 contract”) and its wholly owned subsidiary, HPQ Nano Silicon Powders Inc. in 2020 (“HPQ Nano contract”), and HPQ Silica Polvere Inc. (“HPQ Polvere contract”) in 2021. The terms of those sales contracts include, a pre-determined purchase price and a variable consideration in the form of royalty payments:

HPQ 2016 contract:

Royalties are 10% of net sales, with minimum payments of \$200,000 in 2021 and \$250,000 in 2022 and every year thereafter. Payment is due no later than 30 days after the year-end of HPQ Silicon Inc.

HPQ Nano contract:

Royalties are 10% of net sales, with minimum payments of \$50,000 in 2021, \$100,000 in 2022, \$150,000 in 2023, and \$200,000 in 2024 and every year thereafter. Payments are due no later than 10 days after the year-end of HPQ Nano Silicon Powders Inc. On November 17, 2023, HPQ announced that after careful review of the Nano Silicon material market environment, the technology advancement and associated future development costs needed to get the PUREVAP Nano Silicon Reactor (NSiR) to a potential commercial stage, HPQ confirmed that it no longer intended to pursue the development of this technology and therefore, the ownership of the intellectual property will revert back to the Company at no cost. Accordingly, as a result, royalties related to this agreement previously accounted for as variable considerations are no longer applicable and accordingly, an amount of \$495,300 reflecting the changes in the cashflows assumptions was adjusted.

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HPQ Polvere contract:

Royalties are 10% of net sales with minimum payments of \$50,000 in 2023, \$100,000 in 2024, \$150,000 in 2025 and \$200,000 in 2026 and every year thereafter. Royalty payments are limited to the total net sales for the period. Payments are due no later than 10 days after the year-end of HPQ Silica Polvere Inc.

During the year ended December 31, 2023, the Company recognized an additional \$250,000 for the HPQ 2016 contract of royalties receivable, which have been discounted using 12.5% discount rate.

During the year ended December 31, 2022, the Company recognized an additional \$250,000 and \$200,000 for the HPQ 2016 contract and HPQ Nano contracts, respectively, of royalties receivable, which have been discounted using 12.5% discount rate.

The Company only recognizes variable consideration, including minimum royalties, arising from these agreements in the period(s) when it is highly probable that a reversal will not occur when the uncertainty associated with the variable consideration is subsequently resolved. Minimum royalties are recognized for the period the Company evaluates the collectability of the minimum royalties is probable, which the Company has estimated over four years.

The HPQ Nano contract (until the Company completed procedures to take ownership of the intellectual property) and the HPQ Polvere contract each provide the Company with the option to convert, at any time, the future royalties that would be owed to it into a 50% equity stake in HPQ Nano Silicon Powders Inc and HPQ Silica Polvere Inc, respectively. The remaining option is considered an embedded derivative that is initially measured at fair value and subsequently remeasured at fair value at each reporting period. The Company determined that the embedded derivatives had a fair value of \$Nil at the inception of the contracts and \$Nil at each of the reporting dates.

12. Deposits

	<u>2023</u>	<u>2022</u>
	<u>\$</u>	<u>\$</u>
Current portion:		
Suppliers	598,498	392,309
Security deposit on leased premises	40,241	40,241
Total current	<u>638,739</u>	<u>432,550</u>
Non-current portion:		
Suppliers	7,242	7,250
Security deposit on leased premises	38,803	38,803
Total non-current	<u>46,045</u>	<u>46,053</u>
Total deposits	<u><u>684,784</u></u>	<u><u>478,603</u></u>

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13. Property and equipment

	Computer equipment	Machinery and equipment	Automobiles	Leasehold improvements	Equipment under construction	Total
	\$	\$	\$	\$	\$	\$
Cost						
Balance at December 31, 2021	809,228	2,034,958	336,659	933,105	2,024,377	6,138,327
Additions ⁽¹⁾	164,059	(89,085)	—	209,435	—	284,409
Assets under construction put in service	—	1,065,672	—	958,705	(2,024,377)	—
Balance at December 31, 2022	973,287	3,011,545	336,659	2,101,245	—	6,422,736
Additions	39,237	—	—	38,223	—	77,460
Balance at December 31, 2023	1,012,524	3,011,545	336,659	2,139,468	—	6,500,196
Accumulated depreciation						
Balance at December 31, 2021	597,522	1,624,381	81,707	121,780	—	2,425,390
Depreciation	146,550	297,021	57,543	102,780	—	603,894
Balance at December 31, 2022	744,072	1,921,402	139,250	224,560	—	3,029,284
Depreciation	177,509	276,069	55,719	106,389	—	615,686
Balance at December 31, 2023	921,581	2,197,471	194,969	330,949	—	3,644,970
Carrying amounts						
Balance at December 31, 2022	229,215	1,090,143	197,409	1,876,685	—	3,393,452
Balance at December 31, 2023	90,943	814,074	141,690	1,808,518	—	2,855,226

⁽¹⁾ The adjustment to additions to Machinery and Equipment of \$89,085, relates to the discounting of the non-interest bearing loan from the Economic Development Agency of Canada, representing government assistance (see Note 19).

Equipment under construction included the leasehold improvements of a clean room and the costs related to building the new Plasma Powder Production equipment which have been put in service during the year ended December 31, 2022.

14. Leases

The Company has entered into lease contracts mainly for buildings and computer equipment, which expire at various dates through the year 2036. Some leases have extension or purchase options for various terms. The lease contracts do not impose any financial covenants.

On January 1, 2022, a lease for rent of a property with a trust whose beneficiary is the controlling shareholder and CEO of the Company, was modified to extend the lease term until December 2026. The lessor also reimbursed an amount of \$1,070,264 representing the balance at the date of modification of the original prepayment amount of \$1,178,530 made in 2020. At the date of modification, the lease liability was remeasured using a discount rate of 4%. As a result, the lease liability was increased by an amount of \$1,070,264 and the right-of-use assets was decreased by an amount of \$108,267. In November 2023, the property held by the trust was sold to a third party.

On September 1, 2022, a lease of a property was modified to extend the term, to postpone the exercise of the purchase option of the property, and to factor a deposit of \$275,000 required to exercise the purchase option. As a result, the lease liability was remeasured using a discount rate of 8.6% and the lease liability and the right-of-use assets were decreased by \$203,154.

In June 2023, the terms and conditions of the lease agreement between the Company and the trust were modified, to adjust the base rent and duration. As a result, the right-of-use asset increased by \$67,745, the lease liability increased by \$48,023, and a reduction of expense of \$19,722 was recorded in the statement of comprehensive loss.

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a) Right-of-use assets

	<u>Land and building</u>	<u>Computer equipment</u>	<u>Total</u>
	\$	\$	\$
Balance at January 1, 2022	5,757,537	8,457	5,765,993
Modification of lease agreements	(311,421)	—	(311,421)
Depreciation	(631,600)	(4,228)	(635,828)
Balance at December 31, 2022	4,814,516	4,229	4,818,744
Modification of lease agreement	67,745	—	67,745
Depreciation	(681,625)	(4,229)	(685,854)
Balance at December 31, 2023	4,200,636	—	4,200,635

b) The table below summarizes changes to the lease liabilities:

	\$
Balance at January 1, 2022	5,323,965
Modification of lease agreements	867,110
Payments	(657,381)
Balance at December 31, 2022	5,533,694
Modification of lease agreement	48,023
Payments	(474,825)
Balance at December 31, 2023	5,106,892
Current portion	2,672,212
Non-current portion	2,861,482
Balance at December 31, 2022	5,533,694
Current portion	524,802
Non-current portion	4,582,090
Balance at December 31, 2023	5,106,892

c) Amount recognized in the consolidated statements of comprehensive loss:

	<u>2023</u>	<u>2022</u>
	\$	\$
Depreciation of right-of-use assets	685,854	635,828
Interest on lease liabilities	362,051	378,611
Expense related to lease payments excluded in the measurement of lease liabilities	233,357	243,209

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d) Maturity analysis – contractual undiscounted cash flows of lease liabilities as at December 31, 2023

	\$
2024	713,194
2025	2,968,386
2026	229,332
2027	229,332
2028	229,332
Thereafter	1,662,657
	<u>6,032,233</u>

15. Intangible assets

	Production backlog	Patents	Development costs	Total
	\$	\$	\$	\$
Cost				
Balance at December 31, 2021	2,120,000	897,345	244,871	3,262,216
Additions	—	208,680	—	208,680
Balance at December 31, 2022	2,120,000	1,106,025	244,871	3,470,896
Additions	—	247,320	—	247,320
Write-off and disposal	—	(8,345)	—	(8,345)
Balance at December 31, 2023	2,120,000	1,345,000	244,871	3,709,871
Accumulated amortization				
Balance at December 31, 2021	353,333	68,653	66,032	488,018
Amortization	848,000	13,522	16,508	878,030
Balance at December 31, 2022	1,201,333	82,175	82,540	1,366,048
Amortization	848,000	37,721	16,508	902,229
Write-off and disposal	—	(7,982)	—	(7,982)
Balance at December 31, 2023	2,049,333	111,914	99,048	2,260,295
Carrying amounts				
Balance at December 31, 2022	918,667	1,023,850	162,331	2,104,848
Balance at December 31, 2023	70,667	1,233,086	145,823	1,449,576

The Company's development costs have been incurred to develop plasma-related technologies and the patents protect the design and specification of these technologies.

16. Goodwill

The Company tests goodwill for impairment annually, or more frequently when an indicator of impairment is identified. Goodwill is considered impaired if the recoverable amount is less than the carrying amount.

The recoverable amount of an operating segment is determined based on value-in-use calculations, covering a detailed five-year forecast, followed by an extrapolation of expected cash flows for the remaining useful lives using a declining growth rate determined by management. The present value of the expected cash flows of the operating segment is determined by applying a suitable discount rate reflecting current market assessments of the time value of money and risks specific to the segment.

For the purpose of impairment testing, goodwill is allocated to the operating segment, Pyro Green-Gas, which is expected to benefit from the synergies of the business combination in which the goodwill arises and is compared to its recoverable value.

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At December 31, 2023, it was determined that the recoverable amounts no longer exceed the carrying amount, and impairment was required, the entirety of the \$2,660,607 balance was impaired. At December 31, 2022, it was determined that the recoverable amounts exceed the carrying amount, and no impairment was required. The recoverable amount in the most recent impairment test performed in 2023 was determined using a pre-tax discount rate of 12.5% and terminal growth rate of 2% (2022 - pre-tax discount rate of 12.5% and terminal growth rate of 2%).

	\$
Balance at January 1, 2022 and December 31, 2022	2,660,607
Impairment	(2,660,607)
Balance at December 31, 2023	—

17. Accounts payable and accrued liabilities

	December 31	December 31
	2023	2022
	\$	\$
Accounts payable	4,850,681	6,065,996
Accrued liabilities	2,897,663	2,891,053
Sale commissions payable ¹	920,012	904,724
Accounts payable to the controlling shareholder and CEO	676,778	254,097
	9,345,134	10,115,870

¹ Sale commissions payable relate to the costs to obtain long-term contracts with clients.

18. Billings in excess of costs and profits on uncompleted contracts

The amount to date of costs incurred and recognized profits less recognized losses for construction projects in progress amounted to \$32,833,122 (2022 - \$37,374,909).

Payments to date received were \$44,216,248 on contracts in progress (2022 - \$47,045,902).

Changes in billings in excess of costs and profits on uncompleted contracts during the year are explained by \$3,158,553 (2022 - \$2,416,229) recognized at the beginning of the year being recognized as revenue, and an increase of \$4,479,686 (2022 - \$2,686,991) resulting from cash received excluding amounts recognized as revenue.

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19. Term loans

	Economic Development Agency of Canada Loan ¹	Other Term Loans ²	Other Term Loans ³	Canada Emergency Business Account Loan ⁴	Total
	\$	\$	\$	\$	\$
Balance, December 31, 2021	87,985	24,700	28,220	50,000	190,905
Addition	292,941	—	—	—	292,941
Discounting	(89,085)	—	—	—	(89,085)
Accretion	28,229	—	—	—	28,229
Payments	—	(13,083)	(19,920)	—	(33,003)
Balance, December 31, 2022	320,070	11,617	8,300	50,000	389,987
Accretion	34,009	—	—	—	34,009
Payments	—	(11,617)	(8,300)	—	(19,917)
Balance, December 31, 2023	354,079	—	—	50,000	404,079
Less current portion	(67,500)	—	—	(50,000)	(117,500)
Balance, December 31, 2023	286,579	—	—	—	286,579

¹ maturing in 2029, non-interest bearing, payable in equal instalments of \$7,500 from April 2024 to March 2029.

² matured on October 23, 2023, bore interest at a rate of 6.95% per annum, payable in monthly instalments of \$1,200 secured by an automobile.

³ matured in May 2023, bore interest at 7.45%, payable in monthly instalments of \$1,660.

⁴ loan bearing no interest and no minimum repayment.

Economic Development Agency of Canada Loan

On March 5, 2020, the Company entered into a repayable contribution agreement up to \$450,000 under the Regional Economic Growth through Innovation program from the Economic Development Agency of Canada ("EDC"). The contribution is repayable in 60 equal monthly instalments due and payable 24 months following the completion of the project. During the year ended December 31, 2022, the Company received contributions totalling \$292,941. The loan was discounted using the effective interest method using a rate of 8% as it is non-interest bearing. The difference between the discounted amount and the proceeds received of \$89,085 represents government assistance and was accounted for as a reduction of the property and equipment.

Canada Emergency Business Account ("CEBA") Loan

The Company's subsidiary participated in the CEBA program whereby it obtained an interest free and partially forgivable loan. The loan bears no interest and no minimum repayment terms, and one third of the loan amount (original amount of \$60,000) is forgiven if repaid by January 2024. Subsequent to December 31, 2023, the Company paid the entirety of the loan balance and recognized \$10,000 in consolidated comprehensive income as government assistance.

20. Convertible debentures and convertible loan

Convertible Debentures, \$3,030,000 July 2023

On July 21, 2023, the Company closed a brokered private placement offering 3,030 unsecured convertible debenture units at a price of \$1,000 per debenture unit. Each convertible debenture unit consists of one 10.0% unsecured convertible debenture with a maturity of 36 months from date of issuance and 1,000 common share purchase warrants. Each warrant shall entitle the holder therefor to acquire one common share at an exercise price of \$1.25 for a period of 24 months following the closing date.

The convertible debenture bears interest at a rate of 10.0% per annum from the date of issue, payable semi-annually in arrears on the last day of June and December in each year, at the sole discretion of the Company, in: (i) cash or (ii) subject to regulatory approval, common shares at a deemed issue price equal to the volume weighted average price for five (5) consecutive trading days ending five (5) trading days preceding the date of repayment on the TSX, or other principal exchange the common shares are listed. Interest is computed on the basis of a 360-day year composed of twelve 30-day months. The first interest payment represented accrued interest for the period from the closing of the offering to December 31, 2023.

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Commencing on February 21, 2024, the principal amount of the convertible debentures will be repaid on a monthly basis, payable in arrears, in either, at the sole discretion of the Company: (i) cash or (ii) subject to regulatory approval, common shares at a deemed issue price equal to the volume weighted average price for five (5) consecutive trading days ending five (5) trading days preceding the date of repayment on the TSX, or other principal exchange the common shares are listed. For greater clarity, the Company will repay 1/30th of the outstanding principal amount per month for the remaining 30 months remaining until the maturity date.

The 2023 convertible debenture is a compound financial instrument, and the total proceeds of the issuance was allocated between a liability for the debentures and an equity component for the conversion feature and warrants. The fair value of the debt liability component at inception of \$2,504,948 was determined using estimated future cash flows discounted using a market interest rate of 25%. The residual amount representing the value of the conversion option equity component and warrants totalling \$525,052 was classified in the shareholders' equity (deficiency) net of deferred taxes amounting to \$126,369. The amount was allocated between the two equity components based on their relative fair values.

In connection with the convertible debentures, the Company paid transaction fees in the amount of \$116,339 to the agent, and such fees have been allocated between the liability and equity components. The effective interest rate of the liability component is 28.07%.

Convertible Loan, \$1,250,000 December 2023

On December 20, 2023, the Company closed a \$1,250,000 non-brokered private placement of a convertible loan with Fiducie de Crédit Mellon Trust, a related party.

The loan, bears an interest rate of 3% per annum, will be paid quarterly in arrears and will mature eighteen months following the closing date. During this period, the lender may convert, in whole or in part, (i) the principal amount of the loan into common shares of the Company at the conversion price equal to \$0.4918, which amount represents a 20% premium to the per share volume weighted average trading price (VWAP) of the common shares on the TSX for the five trading days immediately preceding the date of the closing date, and (ii) subject to the approval of the TSX, any accrued interest into common shares at a conversion price equal to the higher of the (a) current market price for the period immediately preceding the date of payment of the accrued interest and (b) conversion price.

As part of the loan, the Company also granted to the lender share purchase warrants to subscribe for up to 625,000 common shares at a purchase price of \$0.4098 per share (representing the current market price on the effective date of the loan). The warrants expire eighteen months following the closing date. The warrants were subject to a hold period of four months and one day from the date hereof in accordance with applicable securities laws.

At any time after March 1, 2024, the lender may require the prepayment of the entire outstanding balance of the loan amount. The Company's lender has agreed that no payment will be requested before 2025. The Company also has the right to prepay the balance of the loan at any time upon thirty days prior notice to the lender. The loan will be secured by a subordinated hypothec on the universality of the Company's movable property.

The 2023 convertible debenture loan is a compound financial instrument, and the total proceeds of the issuance was allocated between a liability for the loan and an equity component for the conversion feature and warrants. The fair value of the debt liability component at inception of \$941,317 was determined using estimated future cash flows discounted using a market interest rate of 25%. The residual amount representing the value of the conversion option equity component and warrants totalling \$308,683 was classified in the shareholders' equity (deficiency) net of deferred taxes amounting to \$95,972. The amount was allocated between the two equity components based on their relative fair values.

The effective interest rate of the liability component is 28.07%.

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The Company has recognized the following with regards to the convertible debentures:

	Debt Component	Equity components	
		Warrants	Conversion option
	\$	\$	\$
Issuance of convertible debentures	3,030,000	—	—
Equity components	(525,052)	211,896	313,156
	2,504,948	211,896	313,156
Transaction costs	(96,179)	(8,135)	(12,025)
Deferred taxes	—	(56,478)	(83,468)
	2,408,769	147,283	217,663
Accrued interest	134,667	—	—
Interest paid	(134,667)	—	—
Accretion interest	151,452	—	—
Balance, December 31, 2023	2,560,221	147,283	217,663
Current portion	923,805		
Non-current portion	1,636,416		
	2,560,221		

The residual amount of the equity components was separated between the warrants and the conversion option based on their relative fair values determined using the Black-Scholes option pricing model and the following assumptions:

	Warrants	Conversion option
Fair value of the shares (\$)	0.88	0.88
Exercise price (\$)	1.25	1.01
Risk-free interest rate (%)	4.70	4.70
Expected volatility (%)	83.31	85.12
Expected dividend yield	—	—
Expected life (number of months)	24	36

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The Company has recognized the following with regards to the convertible loan:

	Debt Component	Equity components	
		Warrants	Conversion option
	\$	\$	\$
Issuance of convertible loan	1,250,000	—	—
Equity components	(308,683)	68,753	239,930
	941,317	68,753	239,930
Deferred taxes	—	(18,220)	(63,581)
	941,317	50,533	176,349
Accrued interest	1,146	—	—
Accretion interest	5,236	—	—
Balance, December 31, 2023	947,699	50,533	176,349
Current portion	—		
Non-current portion	947,699		
	947,699		

The residual amount of the equity components was separated between the warrants and the conversion option based on their relative fair values determined using the Black-Scholes option pricing model and the following assumptions:

	Warrants	Conversion option
Fair value of the shares (\$)	0.42	0.42
Exercise price (\$)	0.41	0.49
Risk-free interest rate (%)	3.94	3.94
Expected volatility (%)	80.21	80.21
Expected dividend yield	—	—
Expected life (number of months)	18	18

21. Shareholders' equity

Common shares and warrants

Authorized:

The Company is authorized to issue an unlimited number of common shares without par value.

Issuance of units

On March 8, 2023, the Company completed a non-brokered private placement consisting of the issuance and sale of 5,000,000 units of the Company at a price of \$1.00 per unit, for net proceeds of \$4,960,483 net of transaction costs (gross proceeds of \$5,000,000). Each unit consists of one common share of the Company and one common share purchase warrant. Each warrant entitles the holder thereof to purchase one common share at a price of \$1.25 until March 7, 2025. The entire amount is allocated to the common shares as the fair value of the common shares on March 8, 2023, was \$1.38.

On October 19, 2022, the Company completed a non-brokered private placement consisting of 1,014,600 units at a price of \$1.30 per unit for aggregate gross proceeds to the Company of \$1,318,980. Each unit is comprised of one common share of the Company and one common share purchase warrant of the company. Each warrant entitles the holder to purchase one additional common share at an exercise price of \$1.75 for a period of 24 months. The Company allocated an amount of \$1,095,780 to share capital representing the fair value of the shares on October 19, 2022, of \$1.08 per share and the residual amount of \$223,200 to warrants.

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Shares issued upon exercise of stock options, share purchase warrants and compensation options

During the year ended December 31, 2023, 300,000 (2,440,000 - 2022) stock options were exercised for net proceeds of \$153,000 (\$1,412,799 – 2022). The amounts credited to share capital from the exercise of stock options include an ascribed value from contributed surplus of \$73,374 (\$870,558 – 2022).

Share redemptions for cancellation

In February 2022, the Company announced it had been authorized to repurchase 7,500,000 of its common shares from February 15, 2022, to February 14, 2023. During the year 2023, the Company did not repurchase any common shares for purpose of cancellation. The Company was under no obligation to repurchase its common shares as at December 31, 2023.

In January 2021, the Company announced it had been authorized to repurchase for cancellation, on the open market, or subject to the approval of any securities authority by private agreements, 5,000,000 common shares from January 14, 2021, to January 13, 2022. During the year 2022, the Company did not repurchase any common shares for purpose of cancellation. The Company was under no obligation to repurchase its common shares as at December 31, 2022.

Stock options

The Company has a stock option plan authorizing the Board of Directors to grant options to directors, officers, employees and consultants to acquire common shares of the Company at a price computed by reference to the closing market price of the shares of the Company on the business day before the Company notifies the stock exchanges of the grant of the option. The number of shares which may be granted to any one person shall not exceed 5% (2% for consultants) of total share capital over a twelve-month period.

The following table sets out the activity in stock options:

	Number of options	Weighted average exercise price
		\$
Balance – December 31, 2021	8,403,000	3.10
Granted	2,475,000	3.55
Exercised ⁽¹⁾	(2,440,000)	0.58
Forfeited	(242,500)	4.07
Balance, December 31, 2022	8,195,500	3.96
Granted	3,050,000	0.80
Exercised ⁽¹⁾	(300,000)	0.51
Forfeited	(183,000)	2.25
Balance, December 31, 2023	10,762,500	3.19

⁽¹⁾ The weighted fair market value of the share price for options exercised in 2023 was \$1.01 (\$1.44 in 2022).

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Grants in 2023

In January 2023, the Company granted 150,000 stock options to the President and Chief Executive Officer of the Company, and 500,000 stock options to members of its Board of Directors. The stock options have an exercise price of \$1.03 per common share, vest immediately and are exercisable over a period of five years. The Company recorded an expense of \$453,204 related to these options in fiscal 2022 as the stock options granted related to the services rendered in 2022, for which there was a shared understanding of the terms and conditions related to such grant prior to the grant date.

Also, in January 2023, the Company also granted 975,000 stock options to employees of the Company. The stock options have an exercise price of \$1.03 per common share. The 975,000 options will vest as follows: 10 percent as of the day of the grant, 20 percent at the first anniversary of the date of the grant, 30 percent on the second anniversary of the date of the grant and 40 percent on the third anniversary of the date of the grant. All options mentioned above are exercisable over a period of five (5) years.

In September 2023, the Company granted 450,000 stock options to the President and Chief Executive Officer of the Company, and 975,000 stock options to members of its Board of Directors. The stock options have an exercise price of \$0.53 per common share, 50% vested immediately and 50% vest six months following the grant date and are exercisable over a period of five (5) years.

Subsequent to December 31, 2023, the Company granted 50,000 stock options to the President and Chief Executive Officer of the Company, and 600,000 stock options to members of its Board of Directors. The stock options have an exercise price of \$0.43 per common share, vest immediately and are exercisable over a period of five (5) years. The Company accounted for an expense amounting to \$193,506 related to these options as the stock options granted related to the services in 2023 and there was a shared understanding of the terms and conditions related to such grant prior to the grant date.

The Company recorded an expense amounting to \$1,823,519 related to these options in fiscal 2023.

Grants in 2022

On January 3, 2022, the Company granted 150,000 stock options to the President and Chief Executive Officer of the Company, and 300,000 stock options to members of its Board of Directors. The stock options have an exercise price of \$3.36 per common share, vest immediately and are exercisable over a period of five (5) years.

On April 5, 2022, the Company granted 400,000 stock options to employees of the Company. The stock options have an exercise price of \$2.96 per common share. The 400,000 options will vest as follows: 10 percent as of the day of the grant, 20 percent at the first anniversary of the date of the grant, 30 percent on the second anniversary of the date of the grant and 40 percent on the third anniversary of the date of the grant. All options mentioned above are exercisable over a period of five (5) years.

On June 2, 2022, the Company granted 600,000 stock options to the President and Chief Executive Officer of the Company, and 900,000 stock options to members of its Board of Directors. The 1,500,000 options will vest as follows: 25 percent as of the day of the grant, 25 percent at the first anniversary of the date of the grant, 25 percent on the second anniversary of the date of the grant and 25 percent at the third anniversary of the date of the grant. The stock options have an exercise price of \$3.88 per common share and are exercisable over a period of five (5) years.

On July 3, 2022, the Company granted 125,000 stock options to employees of the Company. The stock options have an exercise price of \$2.14 per common share. The 125,000 options will vest as follows: 10 percent as of the day of the grant, 20 percent at the first anniversary of the date of the grant, 30 percent on the second anniversary of the date of the grant and 40 percent on the third anniversary of the date of the grant. All options mentioned above are exercisable over a period of five (5) years.

The weighted average fair value of stock options granted for the year ended December 31, 2023, was \$0.50 (\$2.37 in 2022) and \$0.30 (\$0.70 in 2022) per option for stock options granted subsequent to the year end. The weighted average fair value of each option granted was estimated at the grant date for purposes of determining share-based payment expense using the Black-Scholes option pricing model based on the following weighted-average assumptions:

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Years ended December 31,	2023			2022	
Number of options granted or recognized	650,000	1,425,000	975,000	2,475,000	650,000
Exercise price (\$)	0.43	0.53	1.03	3.55	1.03
Fair value of each option under the Black-Scholes model (\$)	0.30	0.37	0.70	2.37	0.70
Assumptions under the Black-Scholes model:					
Fair value of the shares (\$)	0.43	0.53	1.03	3.54	1.03
Risk-free interest rate (%)	3.14	4.21	3.38	2.43	3.38
Expected volatility (%)	86.47	86.33	83.15	83.17	83.15
Expected dividend yield	—	—	—	—	—
Expected life (number of months)	60	60	60	60	60

The underlying expected volatility was determined by reference to historical data of the Company's share price. No special features inherent to the stock options granted were incorporated into the measurement of fair value.

As at December 31, 2023, the outstanding options, as issued under the stock option plan to directors, officers, employees and consultants for the purchases of one common share per option, are as follows:

	Number of stock options				Number of stock options		Exercise price per option (\$)	Expiry date
	Dec 31, 2022	Granted	Exercised	Forfeitures	Dec 31, 2023	vested ⁽¹⁾		
July 3, 2018	300,000	—	(300,000)	—	—	—	0.51	July 3, 2023
September 29, 2019	100,000	—	—	—	100,000	100,000	0.51	September 29, 2024
January 2, 2020	100,000	—	—	—	100,000	100,000	0.45	January 2, 2025
July 16, 2020	2,200,500	—	—	(33,000)	2,167,500	2,167,500	4.41	July 16, 2025
October 26, 2020	50,000	—	—	—	50,000	50,000	4.00	October 26, 2025
April 6, 2021	550,000	—	—	—	550,000	510,000	8.47	April 6, 2026
June 1, 2021	200,000	—	—	—	200,000	150,000	6.59	June 1, 2026
June 14, 2021	100,000	—	—	—	100,000	75,000	6.70	June 14, 2026
October 14, 2021	100,000	—	—	—	100,000	60,000	5.04	October 14, 2026
December 17, 2021	1,920,000	—	—	—	1,920,000	1,920,000	3.13	December 17, 2026
December 30, 2021	100,000	—	—	—	100,000	100,000	3.61	December 30, 2026
January 3, 2022	450,000	—	—	—	450,000	450,000	3.36	January 3, 2027
April 5, 2022	400,000	—	—	—	400,000	120,000	2.96	April 5, 2027
June 2, 2022	1,500,000	—	—	—	1,500,000	750,000	3.88	June 2, 2027
July 13, 2022	125,000	—	—	(100,000)	25,000	7,500	2.14	July 13, 2027
January 2, 2023	—	1,625,000	—	(50,000)	1,575,000	742,500	1.03	January 2, 2028
September 29, 2023	—	1,425,000	—	—	1,425,000	712,500	0.53	September 29, 2028
	8,195,500	3,050,000	(300,000)	(183,000)	10,762,500	8,015,000	3.19	

⁽¹⁾ At December 31, 2023, the weighted average exercise price for options outstanding which are exercisable was \$3.56.

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As at December 31, 2022, the outstanding options, as issued under the stock option plan to directors, officers, employees and consultants for the purchases of one common share per option, are as follows:

	Number of stock options				Number of stock options Dec 31, 2022	Number of stock options vested	Exercise price per option (\$)	Expiry date
	Dec 31, 2021	Granted	Exercised	Forfeitures				
November 3, 2017	2,400,000	—	(2,400,000)	—	—	—	0.58	November 3, 2022
July 3, 2018	300,000	—	—	—	300,000	300,000	0.51	July 3, 2023
October 29, 2018	40,000	—	(40,000)	—	—	—	0.52	October 29, 2023
September 29, 2019	100,000	—	—	—	100,000	100,000	0.51	September 29, 2024
January 2, 2020	100,000	—	—	—	100,000	100,000	0.45	January 2, 2025
July 16, 2020	2,243,000	—	—	(42,500)	2,200,500	1,775,500	4.41	July 16, 2025
October 26, 2020	250,000	—	—	(200,000)	50,000	37,500	4.00	October 26, 2025
April 6, 2021	550,000	—	—	—	550,000	410,000	8.47	April 6, 2026
June 1, 2021	200,000	—	—	—	200,000	100,000	6.59	June 1, 2026
June 14, 2021	100,000	—	—	—	100,000	50,000	6.70	June 14, 2026
October 14, 2021	100,000	—	—	—	100,000	30,000	5.04	October 14, 2026
December 17, 2021	1,920,000	—	—	—	1,920,000	1,920,000	3.13	December 17, 2026
December 30, 2021	100,000	—	—	—	100,000	30,000	3.61	December 30, 2026
January 3, 2022	—	450,000	—	—	450,000	450,000	3.36	January 3, 2027
April 5, 2022	—	400,000	—	—	400,000	40,000	2.96	April 5, 2027
June 2, 2022	—	1,500,000	—	—	1,500,000	375,000	3.88	June 2, 2027
July 13, 2022	—	125,000	—	—	125,000	12,500	2.14	July 13, 2027
	8,403,000	2,475,000	(2,440,000)	(242,500)	8,195,500	5,730,500	3.96	

For the year ended December 31, 2023, a share-based compensation expense of \$3,113,040 (2022 - \$5,538,463) was recorded in Selling, general and administrative expenses in the consolidated statements of comprehensive loss.

As at December 31, 2023, an amount of \$1,341,001 (2022 - \$3,184,866) remains to be amortized until October 2028 related to the grant of stock options.

Share purchase warrants

The following table reflects the activity in warrants during the year ended December 31, 2022, and the number of issued and outstanding share purchase warrants at December 31, 2022:

	Number of warrants Dec 31, 2021		Number of warrants Dec 31, 2022		Exercise price per warrant (\$)	Expiry date
	Issued	Outstanding	Issued	Outstanding		
Issuance of units – October 20, 2022	—	1,014,600	1,014,600	—	1.75	October 19, 2024
	—	1,014,600	1,014,600	—		

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The following table reflects the activity in warrants during the year ended December 31, 2023, and the number of issued and outstanding share purchase warrants at December 31, 2023:

	Number of warrants Dec 31, 2022	Issued	Number of warrants Dec 31, 2023	Exercise price per warrant (\$)	Expiry date
Issuance of warrants - October 20, 2022	1,014,600	—	1,014,600	1.75	October 19, 2024
Issuance of warrants - March 8, 2023	—	5,000,000	5,000,000	1.25	March 7, 2025
Issuance of warrants - July 21, 2023	—	3,030,000	3,030,000	1.25	July 20, 2025
Issuance of broker warrants - July 21, 2023 ⁽¹⁾	—	51,243	51,243	1.25	July 20, 2025
Issuance of warrants - December 20, 2023	—	625,000	625,000	0.41	June 20, 2025
	1,014,600	8,706,243	9,720,843		

(1) As part of the issuance of convertible debentures, 51,243 broker warrants were issued with an exercise price of \$1.25 and expiring 24 months following the closing date.

22. Supplemental disclosure of cash flow information

	2023	2022
	\$	\$
Accounts receivable	9,358,966	(985,015)
Costs and profits in excess of billings on uncompleted contracts	402,484	3,871,413
Inventory	(28,902)	(988,821)
Investment tax credits receivable	(76,126)	(19,891)
Royalties receivable	339,277	(30,842)
Deposits	(206,181)	2,277,136
Contract assets	(216,157)	(562,809)
Prepaid expenses	(102,068)	(53,942)
Accounts payable and accrued liabilities	(770,736)	346,003
Billings in excess of costs and profits on uncompleted contracts	1,321,133	270,762
Income taxes	(189,333)	267,414
	9,832,357	4,391,408

23. Supplemental disclosure on comprehensive income statement

	2023	2022
	\$	\$
Cost of Sales and Services:		
Amortization of intangible assets	894,247	878,030
Inventories recognized in cost of sales	466,002	844,304
Selling, General and Administrative Expenses:		
Employee benefits	14,197,675	12,576,821
Share-based payments	3,113,040	5,538,463
Government grants	378,282	204,791
Depreciation of property and equipment	615,686	603,894
Depreciation of right-of-use assets	685,854	635,828
Goodwill impairment	2,660,607	—

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24. Net finance costs

	<u>2023</u>	<u>2022</u>
	<u>\$</u>	<u>\$</u>
Financial expenses		
Interest on term loans	597	3,198
Interest on lease liabilities	362,051	378,611
Interest on convertible debentures	134,667	—
Interest on convertible debenture loan	1,146	—
Interest accretion on and revaluation of balance due on business combination ¹	(2,081,265)	173,350
Interest accretion on long term loans	34,009	28,229
Interest accretion of convertible debentures	151,452	—
Interest accretion of convertible debenture loan	5,236	—
Penalties and other interest expenses	215,664	85,644
	<u>(1,176,443)</u>	<u>669,032</u>
Financial income		
Interest accretion on royalty receivable	<u>(145,159)</u>	<u>(118,290)</u>
Net finance costs (income)	<u>(1,321,602)</u>	<u>550,742</u>

¹ In June 2023, the Company determined that a milestone related to the business combination would not be achieved and therefore, a reversal of the liability was recorded. In March 2023, the Company's Italian subsidiary and a customer agreed on the final acceptance of a contract, prior to final completion, as a result, the contract did not attain the agreed milestone in connection with the balance due on business combination, and a reversal of the liability was recorded.

25. Loss per share

The following table provides a reconciliation between the number of basic and fully diluted shares outstanding as at December 31, 2023 and 2022:

	<u>2023</u>	<u>2022</u>
	<u>\$</u>	<u>\$</u>
Weighted daily average of Common shares	177,838,203	170,953,374
Dilutive effect of stock options	—	—
Dilutive effect of warrants	—	—
Weighted average number of diluted shares	<u>177,838,203</u>	<u>170,953,374</u>
Number of anti-dilutive stock options and warrants excluded from fully diluted loss per share calculation	20,483,343	6,745,100

26. Related party transactions

During the years ended December 31, 2023, and 2022, the Company concluded the following transactions with related parties:

In 2023, rent and property taxes for the rental of property were charged by a trust whose beneficiary is the controlling shareholder and CEO of the Company in the amount of \$352,721 (2022 - \$277,389). On January 1, 2022, the lease agreement for rent of such property was modified to extend the lease term until December 2026. The lessor also reimbursed an amount of \$1,070,264 representing the balance at the date of modification of the original prepayment amount of \$1,178,530 made in 2020. At the date of modification, the lease liability was remeasured using a discount rate of 4%. As a result, the lease liability was increased by an amount of \$1,070,264 and the right-of-use assets was decreased by an amount of \$108,267. In June 2023, the terms and conditions of the lease agreement between the Company and the trust were modified, to adjust the base rent and duration. As a result, the right-of-use asset increased by \$67,745, the lease liability increased by \$48,023, and a reduction of expense of \$19,722 was recorded in the statement of comprehensive loss. In November 2023, the property held by the trust was sold to a third party.

As at December 31, 2023 the right-of-use asset and the lease liabilities amount to \$606,656 and \$668,475 respectively (2022 - \$680,980 and \$799,090).

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A balance due to the controlling shareholder and CEO of the Company amounted to \$676,778 (2022 - \$254,097) is included in accounts payable and accrued liabilities.

In October 2022, a close family member of the President and CEO participated in a non-brokered private placement for gross proceeds of \$369,980. Certain officers and a director of the Company also participated for an amount totalling \$42,250.

In March 2023, the President and CEO, along with a close family member, participated in a non-brokered private placement for gross proceeds of \$2,500,000 and \$99,650, respectively. A director of the Company also participated for an amount of \$20,000.

In July and December 2023, the President and CEO, participated in a brokered private placement for 2,000 unsecured convertible debenture units for gross proceeds of \$2,000,000 and a non-brokered private placement of a convertible loan in the amount of \$1,250,000.

The key management personnel of the Company, in accordance with IAS 24 Related Party Disclosures, are the members of the Board of Directors and certain officers. Total compensation to key management consisted of the following:

	<u>2023</u>	<u>2022</u>
	\$	\$
Salaries – key management	1,236,804	1,204,306
Pension contributions	22,859	22,479
Fees – Board of Directors	182,252	157,900
Share-based compensation – officers	1,234,783	2,017,348
Share-based compensation – Board of Directors	1,305,746	2,293,167
Other benefits – key management	169,609	244,621
Total compensation	<u>4,152,053</u>	<u>5,939,821</u>

27. Financial instruments

As part of its operations, the Company carries a number of financial instruments. It is management's opinion that the Company is not exposed to significant interest, currency or credit risks arising from these financial instruments except as otherwise disclosed. The Company's overall risk management program focuses on the unpredictability of the financial market and seeks to minimize potential adverse effects on the Company's financial performance. The Company does not use derivative financial instruments to hedge these risks.

Foreign currency risk

The Company enters into transactions denominated in US dollars for which the related revenues, expenses, accounts receivable and accounts payable and accrued liabilities balances are subject to exchange rate fluctuations.

As at December 31, the Company's exposure to foreign exchange risk for amounts denominated in US dollars is as follows:

	<u>2023</u>	<u>2022</u>
	\$	\$
Cash	818,337	2,871,062
Accounts receivable	1,730,014	13,537,912
Accounts payable and accrued liabilities	<u>(1,318,652)</u>	<u>(1,713,717)</u>
Total	<u>1,229,699</u>	<u>14,695,257</u>

Foreign currency risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates.

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Sensitivity analysis

At December 31, 2023, if the US Dollar changes by 10% against the Canadian dollar with all other variables held constant, the impact on pre-tax gain or loss and equity for the year ended December 31, 2023 would have been \$123,000 (December 31, 2022 - \$1,470,000).

Credit concentration

During the year ended December 31, 2023, two customers accounted for 44% (December 31, 2022 – two customers for 52%) of revenues from operations.

	2023		2022
	% of total		% of total
Revenues	revenues	Revenues	revenues
\$	%	\$	%
Customer 1	23	5,598,653	29
Customer 2	21	4,314,225	23
Total	44	9,912,878	52

Two customers accounted for 64% and 21%, respectively (December 31, 2022 – three customers for 56%, 16% and 11%, respectively) of trade accounts receivable before expected credit loss allowance of \$14,305,053 (2022 - \$18,894,727), representing the Company's major credit risk exposure. Credit concentration is determined based on customers representing 10% or more of total revenues and/or total accounts receivable.

Credit risk

Credit risk is the risk that one party to a financial instrument will cause a financial loss for the other party by failing to discharge an obligation. The maximum credit risk to which the Company is exposed as at December 31, 2023 represents the carrying amount of cash, accounts receivable (except sales tax receivable), costs and profits in excess of billings on uncompleted contracts, deposits and royalties receivable.

Cash is held with major reputable financial institutions.

Management has established a credit policy under which each new customer is analysed individually for creditworthiness before the Company's payment and delivery terms and conditions are offered. The Company's review could include reviewing external ratings, if they are available, financial statements, credit agency information, industry information and in some cases bank references. The Company's exposure to credit risk is mainly influenced by the individual characteristics of each customer. In monitoring customer credit risk, customers are identified according to their characteristics such as their geographic location, industry, trading history with the Company and existence of previous financial difficulties.

The Company does not generally require collateral or other security from customers on accounts receivable, however, the contract terms may include the possibility of recourse in the event of late payment. The Company believes that there is no unusual exposure associated with the collection of these receivables.

The credit risk associated with costs and profits in excess of billings on uncompleted contracts is similar to that of accounts receivable, as these amounts are accumulated and converted to accounts receivable as invoicing milestones are reached.

The royalties receivable are due from a company in which the Company has a strategic investment. The Company does not have collateral or other security associated with the collection of this receivable. The carrying amount of the royalties receivable have been discounted to reflect the time value of money and credit risk of the counterparty.

The deposits are payments made to suppliers and entities from which the Company leases property. The Company does not have collateral or other security associated with the collection of these deposits. As at December 31, 2023 and 2022, no loss allowance has been recognized in connection with these deposits and the maximum exposure is the carrying amount of these deposits.

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During the years 2023 and 2022, provisions for expected credit losses were recorded, however the accounts provisioned by the loss are still subject to enforcement activity in order to collect the balances due.

Interest rate risk

Interest rate risk is the risk that the value of a financial instrument might be adversely affected by a change in interest rates. Changes in market interest rates may have an effect on the cash flows associated with some financial assets and liabilities, known as cash flow risk, and on the fair value of other financial assets or liabilities, known as price risk, and on the fair value of investments or liabilities, known as price risks. The Company is exposed to a risk of fair value on term loans, convertible debentures and the convertible loan as those financial instruments bear interest at fixed rates and to cash flow risk from the variable interest rate of the bank indebtedness. The Company has determined the risk not to be significant.

Price risk

Price risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market price (other than those arising from foreign currency risk and interest risk), whether those changes are caused by factors specific to the individual financial instrument or its issuers or factors affecting all similar financial instruments traded in the market. The most significant exposure to the price risk for the Company arises from its investments in shares and warrants of public companies quoted on the TSX Venture Exchange. If equity prices had increased or decreased by 25% as at December 31, 2023, with all other variables held constant, the Company's investments would have increased or decreased respectively, by approximately \$638,000 (December 31, 2022 - \$1,841,484).

Liquidity risk

Liquidity risk is the risk that the Company will encounter difficulty in meeting obligations associated with financial liabilities that are settled by delivery of cash or another financial asset. The Company manages its liquidity risk by forecasting cash flows from operations and anticipating any investing and financing activities.

The following table summarizes the contractual amounts payable and maturities of financial liabilities and other liabilities as at December 31, 2023:

	Carrying value	Total contractual amount	Less than one year	2-3 years	4-5 years	Over 5 years
	\$	\$	\$	\$	\$	\$
Bank indebtedness	181,267	181,267	181,267	—	—	—
Accounts payable and accrued liabilities ¹	8,006,660	8,006,660	8,006,660	—	—	—
Term loans	404,079	450,000	67,500	180,000	180,000	22,500
Balance due on business combination	1,726,510	1,860,020	1,860,020	—	—	—
Lease liabilities	5,106,892	6,032,233	713,194	3,197,718	458,664	1,662,657
Convertible debentures	2,560,221	3,450,665	1,371,804	2,078,861	—	—
Convertible loan	947,699	1,307,083	38,125	1,268,958	—	—
	18,933,328	21,287,928	12,238,570	6,725,537	638,664	1,685,157

¹ Accounts payable and accrued liabilities exclude amounts which are not financial liabilities.

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The following table summarizes the contractual amounts payable and maturities of financial liabilities and other liabilities as at December 31, 2022:

	Carrying value	Total contractual amount	Less than one year	2-3 years	4-5 years	Over 5 years
	\$	\$	\$	\$	\$	\$
Bank indebtedness	991,902	991,902	991,902	—	—	—
Accounts payable and accrued liabilities ¹	9,620,591	9,620,591	9,620,591	—	—	—
Term loans	389,987	520,444	59,917	190,587	180,000	89,940
Balance due on business combination	3,907,775	4,137,820	2,177,800	1,960,020	—	—
Lease liabilities	5,533,694	6,745,329	2,984,243	1,165,281	703,816	1,891,989
	20,443,949	22,016,086	15,834,453	3,315,888	883,816	1,981,929

¹ Accounts payable and accrued liabilities exclude amounts which are not financial liabilities.

The Company's Canadian subsidiary benefits from a line of credit of \$500,000, of which \$181,267 (\$498,200 as at December 31, 2022) was drawn on this facility. The Italian subsidiary benefited from a 400,000 Euro line of credit which was paid in full and extinguished in June 2023 (amount drawn of \$341,473 Euros (\$493,702) as at December 31, 2022). The Canadian facility bears interest at a variable rate which is the bank's prime rate plus 1%, therefore, 8.2% (7.45% for the Canadian facility and 8% for the Italian facility as at December 31, 2022). There are no imposed financial covenants on the credit facilities.

Fair value of financial instruments

The fair value represents the amount that would be received for the sale of an asset or paid for the transfer of a liability in an orderly transaction between market participants at the measurement date. The fair value estimates are calculated at a specific date taking into consideration assumptions regarding the amounts, the timing of estimated future cash flows and discount rates. Accordingly, due to its approximate and subjective nature, the fair value must not be interpreted as being realizable in an immediate settlement of the financial instruments.

There are three levels of fair value that reflect the significance of inputs used in determining fair values of financial instruments:

Level 1 — quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2 — inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices).

Level 3 — inputs for the asset or liability that are not based on observable market data.

The fair values of cash, trade accounts receivable, other receivables, deposits, bank indebtedness, accounts payable and accrued liabilities approximate their carrying amounts due to their short-term maturities.

Investments in BGF and HPQ shares are valued at quoted market prices and are classified as Level 1.

Royalties receivable are discounted according to their corresponding agreements and are classified as Level 2.

Investments in HPQ warrants are valued using the Black-Scholes pricing model and are classified as Level 3 (Note 10).

The fair value of the term loans, the convertible debentures and convertible loan, as at December 31, 2023 is determined using the discounted future cash flows method and management's estimates for market interest rates for similar issuances. The balance due on business combination is determined by estimating the present value of probable future economic

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outflows from the settlement of the provisions contained in the purchase agreement. Accordingly, as a result, their fair market values correspond to their carrying amount. The term loans, convertible debentures and convertible loan are classified as level 2 and the balance due on business combination as Level 3.

The following table presents the variation of the balance due on business combination:

	<u>\$</u>
Balance due on business combination at December 31, 2021 - Current and Non-Current	3,952,203
Disbursement	(217,778)
Interest accretion	173,350
Balance due on business combination at December 31, 2022 - Current and Non-Current	3,907,775
Disbursement	(100,000)
Interest accretion on and revaluation of balance due on business combination	(2,081,265)
Balance due on business combination at December 31, 2023 - Current and Non-Current	<u>1,726,510</u>

28. Contingent liabilities

The Company is currently a party to various legal proceedings. If management believes that a loss arising from these proceedings is probable and can reasonably be estimated, that amount of the loss is recorded. As additional information becomes available, any potential liability related to these proceedings is assessed and the estimates are revised, if necessary. Based on currently available information, management believes that the ultimate outcome of these proceedings, individually and in aggregate, will not have a material adverse effect on the Company's financial position or overall trends in results of operations.

The Company had received a government grant in prior years of approximately \$800,000 to assist with the development of a new system of advanced waste treatment systems technology. The grant is potentially repayable at the rate of 3% of any consideration received as a result of the project, for which funding has been received, to a maximum of the actual grant received. This repayment provision will remain in effect until May 30, 2024. The Company abandoned the project in 2011 and accordingly, no amount is expected to be repaid.

In August 2023, the Autorité des marchés financiers (the "AMF") initiated administrative proceedings against Mr. P. Peter Pascali, President and CEO, Mr. Alan Curleigh, Chair of the Board of Directors, and the Company with the Tribunal administratif des marchés financiers. The allegations largely relate to a series of connected transactions that occurred in 2018. The administrative penalty sought by the AMF and attributable to the Company is \$550,000. The Company is currently assessing the merits of the AMF's allegations and therefore it is not possible to determine at this time an amount, if any, for the administrative penalty sought by the AMF, and accordingly, no provision has been recorded in this respect.

29. Capital management

The Company's objectives in managing capital are:

- a) To ensure sufficient liquidity to support its current operations and execute its business plan; and
- b) To provide adequate return to the shareholders

The Company's primary objectives when managing capital is to ensure the Company continues as a going concern as well as to maintain optimal returns to shareholders and benefits for other stakeholders.

The Company currently funds these requirements from cash flows from operations and with financing arrangements with third parties and shareholders.

The Company is not subject to any externally imposed capital requirements. The Company monitors its working capital in order to meet its financial obligations. As at December 31, 2023, the Company's working capital deficiency was \$7,007,719 (working capital of \$1,650,709 at December 31, 2022).

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The management of capital includes shareholders' deficiency for a total amount of \$2,828,577 (2022 – shareholders' equity of \$16,868,927), term loans of \$404,079 (2022 - \$389,987), convertible debentures of \$2,560,221 (\$Nil in 2022), and the convertible loan of \$947,699 (\$Nil in 2022), as well as cash amounting to \$1,802,616 (2022 - \$3,445,649).

There were no significant changes in the Company's approach during the current and preceding fiscal year, however, in order to maintain or adjust capital structure, the Company may issue new shares, sell portions of its strategic investment and periodically purchase its own shares on the open market.

30. Income taxes

a) Income tax expenses is comprised of the following:

	<u>2023</u>	<u>2022</u>
	<u>\$</u>	<u>\$</u>
Current tax		
Current year	—	118,378
Deferred tax		
Origination and reversal of temporary differences	(6,524,722)	(6,219,309)
Change in unrecognized deductible temporary differences	6,302,975	6,176,915
	<u>(221,747)</u>	<u>(42,394)</u>
Income tax expense (recovery)	<u>(221,747)</u>	<u>75,984</u>

b) Reconciliation of effective tax rate

	<u>2023</u>	<u>2022</u>
	<u>\$</u>	<u>\$</u>
Loss before income taxes	(28,725,921)	(32,091,043)
Income tax rates	26.5%	26.5%
Income tax recovery at the combined basic Federal and Provincial tax rates	(7,612,369)	(8,504,126)
Permanent differences	1,054,195	2,165,385
Tax rate changes	20,907	(826)
Prior year adjustment	58,796	115,118
Change in unrecognized deductible temporary differences	6,302,975	6,176,915
Other	(46,251)	123,518
Income tax expense (recovery)	<u>(221,747)</u>	<u>75,984</u>

The applicable statutory tax rates are 26.5% in 2023 and 26.5% in 2022. The Company's applicable tax rate is the Canadian combined rates applicable in the jurisdiction in which the Company operates.

c) Deferred tax assets and liabilities

Recognized deferred tax assets and liabilities:

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As at December 31, 2023 and 2022, recognized deferred tax assets and liabilities are attributable to the following:

	Assets		Liabilities		Net	
	2023	2022	2023	2022	2023	2022
	\$	\$	\$	\$	\$	\$
Non-capital losses carried forward	550,503	772,343	—	—	550,503	772,343
Convertible debentures	—	—	(106,025)	—	(106,025)	—
Convertible loan	—	—	(80,413)	—	(80,413)	—
Royalties receivable	—	—	(321,621)	(373,063)	(321,622)	(373,063)
Property and equipment	—	—	(23,717)	(155,833)	(23,716)	(155,833)
Intangibles	—	—	(18,727)	(243,447)	(18,727)	(243,447)
Right-of-use assets net of lease liabilities	1,113,168	1,276,967	(1,113,168)	(1,276,967)	—	—
Tax assets (liabilities)	1,663,671	2,049,310	(1,663,671)	(2,049,310)	—	—
Set off of tax	(1,663,671)	(2,049,310)	1,663,671	2,049,310	—	—
Net tax assets (liabilities)	—	—	—	—	—	—

Deferred taxes from temporary differences and unused tax losses and tax credits are summarized as follows:

	January 1, 2022	Recognized in profit or loss	December 31, 2022	January 1, 2023	Recognized in equity	Recognized in profit or loss	December 31, 2023
	\$	\$	\$	\$	\$	\$	\$
Non-capital losses carried forward	1,705,073	(932,730)	772,343	772,343	—	(221,840)	550,503
Strategic investments	(656,507)	656,507	—	—	—	—	—
Royalties receivable	(333,543)	(39,520)	(373,063)	(373,063)	—	51,442	(321,621)
Property and equipment	(147,127)	(8,706)	(155,833)	(155,833)	—	132,116	(23,717)
Intangibles	(468,167)	224,720	(243,447)	(243,447)	—	224,720	(18,727)
Deferred income	(21,000)	21,000	—	—	—	—	—
Convertible debentures	—	—	—	—	(139,946)	33,921	(106,025)
Convertible loan	—	—	—	—	(81,801)	1,388	(80,413)
Right-of-use assets net of lease liabilities	(121,123)	121,123	—	—	—	—	—
	(42,394)	42,394	—	—	(221,747)	221,747	—

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As at December 31, 2023 and 2022, the amounts and expiry dates of tax attributes and temporary differences for which no deferred tax assets were recognized are as follows:

	December 31, 2023		December 31, 2022	
	Federal	Provincial	Federal	Provincial
	\$	\$	\$	\$
Research and development expenses, without time limitation:	14,587,512	14,850,166	11,917,963	12,150,617
Federal research and development investment tax credits:				
2029	299,881	—	299,881	—
2030	89,879	—	89,879	—
2031	223,759	—	223,759	—
2032	186,031	—	186,031	—
2033	105,216	—	105,216	—
2034	212,609	—	212,609	—
2035	488,555	—	488,555	—
2036	359,594	—	359,594	—
2037	253,885	—	253,885	—
2038	186,015	—	186,015	—
2039	340,728	—	340,728	—
2040	101,562	—	101,562	—
2041	167,461	—	167,461	—
2042	476,101	—	256,417	—
	3,491,276	—	3,271,592	—

	December 31, 2023			December 31, 2022		
	Federal	Provincial	Italy	Federal	Provincial	Italy
	\$	\$	\$	\$	\$	\$
Tax losses carried forward:						
2032	3,512,139	2,000,035	—	2,866,759	2,866,759	—
2033	2,047,643	2,047,643	—	2,047,643	2,047,643	—
2034	589,007	589,007	—	589,007	589,007	—
2035	703,664	416,827	—	703,664	416,827	—
2036	3,579,827	3,440,527	—	3,579,827	3,440,527	—
2037	1,577,876	1,568,739	—	1,577,876	1,568,739	—
2038	5,716,536	5,650,620	—	5,716,536	5,650,620	—
2039	4,772,060	4,079,919	—	4,772,060	4,079,919	—
2040	1,433,236	1,476,826	—	533,485	533,485	—
2041	4,613,955	4,568,998	—	3,818,898	3,773,941	—
2042	15,686,530	15,679,967	—	16,135,868	16,140,505	—
2043	15,560,955	15,467,304	—	—	—	—
Indefinite	—	—	1,504,394	—	—	908,073
	59,793,428	56,986,412	1,504,394	42,341,623	41,107,972	908,073

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	December 31, 2023		December 31, 2022	
	Federal	Provincial	Federal	Provincial
	\$	\$	\$	\$
Other deductible temporary differences, Without time limitation:				
Strategic investments	895,240	895,240	1,534,189	1,534,189
Financing costs	353,959	353,959	677,789	677,789
Intangible assets	3,515,414	3,249,482	3,460,822	3,194,890
Non-deductible reserves	4,531,756	4,531,756	—	—
Right-of-use assets net of liabilities	906,257	906,257	687,896	687,896
	10,202,626	9,936,694	6,360,696	6,094,764

Deferred tax assets and investment tax credits have not been recognized in respect to these items because it is uncertain that future taxable profit will be available against which the Company can utilise the benefits therefrom. The generation of future taxable profit depends on the successful commercialisation of the Company's products and technologies.

31. Segment information

The Company operates in one segment, based on financial information that is available and evaluated by the Company's Board of Directors. The Company's head office is located in Montreal, Quebec. The operations of the Company are located in three geographic areas: Canada, Italy and India.

The following is a summary of the Company's total revenues by geography:

	2023	2022
	\$	\$
Brazil	154,345	162,797
Canada	5,665,513	11,933,904
France	117,391	—
Germany	—	11,606
India	501,074	91,699
Israel	(69,415)	27,360
Italy ¹	(381,522)	1,309,478
Mexico	58,876	371,668
Netherlands	145,303	112,634
New Zealand	605,962	—
Poland	53,339	47,591
Saudi Arabia	476,992	1,511,142
South Africa	—	29,997
Spain	394	22,049
United States of America	5,009,255	2,661,071
Vietnam	7,574	720,507
	12,345,081	19,013,503

¹ In March 2023 revenue attributable to Italy was reduced following the agreement between the Company's Italian subsidiary and their customer to deliver a project prior to final completion, which resulted in an adjustment to revenue and to costs and profits in excess of billings on uncompleted contracts.

Revenue by product line and revenues recognized by revenue recognition method are presented in Note 6.

PyroGenesis Canada Inc.
Notes to the Consolidated Financial Statements

For the years ended December 31, 2023 and 2022
(In Canadian dollars)

The following is a summary of selected asset categories by geographic market, at December 31:

	2023			2022		
	\$	\$	\$	\$	\$	\$
	Canada	India	Total	Canada	India	Total
Property and equipment	2,841,272	13,954	2,855,226	3,372,356	21,096	3,393,452
Right-of-use assets	4,200,635	—	4,200,635	4,818,744	—	4,818,744
Intangible assets	1,449,576	—	1,449,576	2,104,848	—	2,104,848
Goodwill	—	—	—	2,660,607	—	2,660,607
	8,491,483	13,954	8,505,437	12,956,555	21,096	12,977,651

In 2023 and 2022, none of the selected asset categories above were located in Italy.