



NXT ENERGY SOLUTIONS INC.

Consolidated Financial Statements

**For the Years ended
December 31, 2023, 2022 and 2021**



REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of NXT Energy Solutions Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheet of NXT Energy Solutions Inc. (the Company) as at December 31, 2023, and the related consolidated statements of loss and comprehensive loss, shareholders' equity, and cash flows for the year ended December 31, 2023, and the related notes and schedules (collectively referred to as the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as at December 31, 2023, and the results of its operations and its cash flows for the year ended December 31, 2023, in conformity with accounting principles generally accepted in the United States of America ("US GAAP").

The consolidated financial statements of the Company as at December 31, 2022 and for the years ended December 31, 2022 and 2021, were audited by other auditors whose report dated March 31, 2023, expressed an unqualified opinion on those consolidated financial statements.

Material Uncertainty Related to Going Concern

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the consolidated financial statements, the Company's current cash position is not expected to be sufficient to meet the Company's obligations and planned operations for a year beyond the date of auditor's report, unless additional financing is obtained or new revenue contracts are completed. This raises substantial doubt about the Company's ability to continue as a going concern. Management's plans regarding these matters are also described in Note 1. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Revenue recognition

Critical Audit Matter Description

The Company recognized revenue of \$2,145,716 for the year ended December 31, 2023. As described in Notes 2 and 21 to the consolidated financial statements, the performance obligation for NXT in SFD® surveys is the acquisition, processing, interpretation and integration of Stress Field Detection (SFD®) data. Revenue from the sale of SFD® survey contracts is recognized over time by measuring the progress toward satisfaction of its performance obligation to the customer. The Company uses direct survey costs as the input measure to recognize revenue in any fiscal period. The percentage of direct survey costs incurred to date over the total expected survey costs to be incurred, provides an appropriate measure of the stage of the performance obligation being satisfied over time.

The accounting for contracts that are not complete at the reporting date involves significant judgment, particularly as it relates to determining the total anticipated costs at completion.

Audit Response

We responded to this matter by performing procedures in relation to revenue recognition. Our audit work in relation to this included, but was not restricted to, the following:

- Agreeing key contractual terms to the executed service agreement signed in the year ended December 31, 2023.
- Agreeing total revenue per the agreement to the issued invoices and other supporting documentation and reconciling it to the revenue recognized during the reporting period.
- Inquiring of management and operational personnel to understand the status of the project and relevant activities.
- Evaluating the reasonableness of management's calculation of the total anticipated costs at completion, including testing of significant inputs, such as estimated labour costs, material costs, subcontractor costs, and other costs, to appropriate supporting documentation.
- Testing the costs incurred to date as at the end of the reporting period, including costs accrued as at December 31, 2023, by testing cut-off and inspecting supporting documents for a sample of transactions.
- Recalculating revenue recognized during the year ended December 31, 2023, based on the total anticipated costs at completion and costs incurred to date as at the end of the reporting period.

Going Concern

Critical Audit Matter Description

As described in Note 1 to the consolidated financial statements, the Company's current cash position is not expected to be sufficient to meet the Company's obligations and planned operations for a year beyond the date that these consolidated financial statements have been issued, unless additional financing is obtained or new revenue contracts are completed.

We identified the assessment of the ability of the Company to continue as a going concern as a critical audit matter due to the significant assumptions and judgements made by management in estimating future cash flows, which are subject to high degree of uncertainty.

This matter is also described in the "Material Uncertainty Related to Going Concern" section of our report.

Audit Response

We responded to this matter by performing procedures in relation to the assessment of the ability of the Company to continue as a going concern. Our audit work in relation to this included, but was not restricted to, the following:

- Obtaining an understanding from management on the Company's future plans for the operations, including financing arrangements.
- Evaluating the key assumptions used in management's model to estimate future cash flows by comparing assumptions used by management against historical performance, budgets, economic and industry indicators and publicly available information.

- Comparing the assumptions related to revenue projections to those used in assessments of impairment indicators for non-financial assets.
- Assessing the adequacy of the going concern disclosure included in Note 1 to the consolidated financial statements and considering whether these appropriately reflected the assessments that management performed.

MNP LLP

Chartered Professional Accountants

We have served as the Company's auditor since 2023.

Calgary, Canada
March 27, 2024

NXT ENERGY SOLUTIONS INC.

Consolidated Balance Sheets

(Expressed in Canadian dollars)

	December 31, 2023	December 31, 2022
Assets		
Current assets		
Cash and cash equivalents	\$ 401,713	\$ 263,437
Accounts receivable (Note 3)	1,828,523	57,065
Prepaid expenses and deposits (Note 4)	53,673	36,157
	2,283,909	356,659
Long term assets		
Deposits (Note 5)	249,917	246,589
Property and equipment (Note 6)	515,809	544,446
Right of Use Assets (Note 7)	665,130	1,259,092
Intellectual property (Note 8)	11,469,995	13,168,509
	\$ 15,184,760	\$ 15,575,295
Liabilities and Shareholders' Equity		
Current liabilities		
Accounts payable and accrued liabilities (Notes 9, 23)	\$ 1,836,741	\$ 1,276,236
Convertible debentures (Note 10)	1,842,566	-
Current portion of long-term debt (Note 11)	111,111	111,111
Current portion of lease obligations (Note 12)	343,513	650,315
	4,133,931	2,037,662
Long-term liabilities		
Convertible debentures (Note 10)	1,513,423	-
Long-term debt (Note 11)	712,963	824,074
Long-term lease obligations (Note 12)	252,004	596,408
Asset retirement obligations (Note 13)	27,030	24,574
	2,505,420	1,445,056
	6,639,351	3,482,718
Shareholders' equity		
Common shares (Note 15): - authorized unlimited		
Issued: 78,025,237 (2022 - 68,949,109) common shares	98,179,271	96,423,648
Contributed capital	9,552,839	9,404,518
Deficit	(99,186,701)	(93,735,589)
	8,545,409	12,092,577
	\$ 15,184,760	\$ 15,575,295

Going Concern (Note 1)

Commitments (Note 14)

Subsequent events (Notes 7, 10, 17)

Signed "Charles Selby"
Director

Signed "Bruce G. Wilcox"
Director

The accompanying notes are an integral part of these consolidated financial statements.

NXT ENERGY SOLUTIONS INC.

Consolidated Statements of Loss and Comprehensive Loss

(Expressed in Canadian dollars)

	For the Year ended December 31,		
	2023	2022	2021
Revenue			
SFD® related revenue (Note 21)	\$ 2,145,716	\$ -	\$ 3,134,250
Expenses			
SFD® related costs, net	2,249,126	1,178,183	1,224,168
General and administrative expenses (Note 17, 22, 23)	3,420,143	3,736,431	3,189,857
Amortization (Notes 6, 8)	1,759,473	1,768,727	1,776,484
	<u>7,428,742</u>	<u>6,683,341</u>	<u>6,190,509</u>
Other expenses (income)			
Interest expense, net	160,262	36,220	37,955
Foreign exchange loss (gain)	(8,028)	(15,340)	8,597
Intellectual property and other	15,852	28,855	20,988
	<u>168,086</u>	<u>49,735</u>	<u>67,540</u>
Loss before income taxes	(5,451,112)	(6,733,076)	(3,123,799)
Income tax expense (Note 18)	-	-	-
Net loss and comprehensive loss	<u>\$ (5,451,112)</u>	<u>\$ (6,733,076)</u>	<u>\$ (3,123,799)</u>
Loss per share (Note 16)			
Basic	\$ (0.07)	\$ (0.10)	\$ (0.05)
Diluted	\$ (0.07)	\$ (0.10)	\$ (0.05)

The accompanying notes are an integral part of these consolidated financial statements.

NXT ENERGY SOLUTIONS INC.

Consolidated Statements of Cash Flows

(Expressed in Canadian dollars)

For the Year ended December 31,

	2023	2022	2021
(Lease payments in prior years have been reclassified to improve presentation.)			
Cash from (used in):			
Operating activities			
Net loss	\$ (5,451,112)	\$ (6,733,076)	\$ (3,123,799)
Items not affecting cash:			
Stock based compensation expense (Note 17)	241,271	215,284	287,900
Amortization	1,759,473	1,768,727	1,776,484
Accretion expense (recovery) (Note 13)	2,456	2,237	(404)
Non-cash lease amortization and accretion	683,190	752,149	810,881
Unrealized foreign exchange (gain) loss	(25,451)	13,956	157
Loss on disposal of assets and lease modifications	-	11,921	-
Change in deposits	3,362	-	-
Change in non-cash working capital balances (Note 20)	(1,294,087)	1,755,107	13,717
Lease payments	(739,527)	(720,309)	(798,109)
Prepaid long-term insurance	(11,525)	-	-
	<u>619,162</u>	<u>3,799,072</u>	<u>2,090,626</u>
Net cash used in operating activities	<u>(4,831,950)</u>	<u>(2,934,004)</u>	<u>(1,033,173)</u>
Financing activities			
Proceeds from the Employee Share Purchase plan (Note 17)	36,246	49,738	69,259
Proceeds for Restricted Stock Units	4,370	-	-
Proceeds from (repayment of) long-term debt (Note 11)	(111,111)	(64,815)	1,000,000
Net proceeds from Rights Offering (Note 15)	-	216,062	-
Net proceeds from Private Placement (Note 15)	1,622,057	216,182	-
Net proceeds from Convertible Debentures (Note 10)	3,457,555	-	-
Share issuance costs for Geothermal Right (Note 15)	-	-	(42,697)
Repayment of financial liability and lease obligation	-	(27,950)	(151,134)
Net cash from financing activities	<u>5,009,117</u>	<u>389,217</u>	<u>875,428</u>
Investing activities			
Acquisition of intellectual property (Note 8)	-	-	(65,310)
Purchase of property and equipment, net	(32,322)	-	-
Proceeds from (used in) short-term investments	-	550,000	(208,739)
Net cash from (used in) investing activities	<u>(32,322)</u>	<u>550,000</u>	<u>(274,049)</u>
Effect of foreign exchange rate changes on cash and cash equivalents	<u>(6,569)</u>	<u>369</u>	<u>(497)</u>
Net increase (decrease) in cash and cash equivalents	138,276	(1,994,418)	(432,291)
Cash and cash equivalents, beginning of the year	263,437	2,257,855	2,690,146
Cash and cash equivalents, end of the year	<u>\$ 401,713</u>	<u>\$ 263,437</u>	<u>\$ 2,257,855</u>
Supplemental information			
Cash interest paid	\$ 120,952	\$ 35,779	\$ 14,284
Cash taxes paid	\$ -	\$ -	\$ -

The accompanying notes are an integral part of these consolidated financial statements.

NXT ENERGY SOLUTIONS INC.

Consolidated Statements of Shareholders' Equity

(Expressed in Canadian dollars)

	For the Year ended December 31,		
	2023	2022	2021
Common Shares			
Balance at beginning of the year	\$ 96,423,648	\$ 95,779,352	\$ 95,327,123
Issuance of common stock, net of share issuance costs for:			
Rights offering (Note 15)	-	216,062	-
Private placements (Note 15)	1,622,057	216,182	-
Employee Share Purchase Plan (Note 15)	66,755	89,127	173,023
Restricted Stock Unit Plan (Note 15)	66,811	122,925	114,604
Acquisition of SFD® Geothermal Right (Note 15)	-	-	164,602
Balance at end of the year	<u>\$ 98,179,271</u>	<u>\$ 96,423,648</u>	<u>\$ 95,779,352</u>
Contributed Capital			
Balance at beginning of the year	\$ 9,404,518	\$ 9,381,966	\$ 9,355,716
Issuance of Equity for intellectual property (Note 15)	-	-	207,300
Transfer of equity to common shares (Note 15)	-	-	(207,300)
Recognition of stock based compensation expense (Note 17)	148,321	22,552	26,250
Balance at end of the year	<u>\$ 9,552,839</u>	<u>\$ 9,404,518</u>	<u>\$ 9,381,966</u>
Deficit			
Balance at beginning of the year	(\$93,735,589)	(\$87,002,513)	(\$83,878,714)
Net loss	(5,451,112)	(6,733,076)	(3,123,799)
Balance at end of the year	<u>(\$99,186,701)</u>	<u>(\$93,735,589)</u>	<u>(\$87,002,513)</u>
Total Shareholders' Equity at end of the year	<u>\$ 8,545,409</u>	<u>\$ 12,092,577</u>	<u>\$ 18,158,805</u>

The accompanying notes are an integral part of these consolidated financial statements.

NXT ENERGY SOLUTIONS INC.

Notes to the Consolidated Financial Statements

As at and for the years ended December 31, 2023, 2022 and 2021

(Expressed in Canadian dollars unless otherwise stated)

1. The Company and going concern

NXT Energy Solutions Inc. (the "Company" or "NXT") is a publicly traded company based in Calgary, Alberta Canada and listed on the Toronto Stock Exchange ("TSX").

NXT's proprietary Stress Field Detection ("SFD®") technology is an airborne survey system that utilizes the principles of quantum mechanics to infer stress anomalies of exploration interest. The method can be used both onshore and offshore to remotely identify areas conducive to fluid entrapment in order to recommend areas with commercial hydrocarbon and/or geothermal potential.

These consolidated financial statements of NXT have been prepared by management in accordance with generally accepted accounting principles of the United States of America ("US GAAP").

These consolidated financial statements reflect adjustments, all of which are normal recurring adjustments that are, in the opinion of management, necessary to reflect fairly the financial position and results of operations for the respective periods.

These consolidated financial statements have been prepared on a going concern basis. The going concern basis of presentation assumes that NXT will continue in operation for the foreseeable future and will be able to realize its assets and discharge its liabilities and commitments in the normal course of business.

The events described in the following paragraphs highlight that there is substantial doubt about NXT's ability to continue as a going concern within one year after the date that these consolidated financial statements have been issued. The Company's current cash position is not expected to be sufficient to meet the Company's obligations and planned operations for a year beyond the date that these consolidated financial statements have been issued.

Since 2022, the Company has deferred payment of certain operating costs, including payroll and other general and administrative costs. During 2023 and subsequent to December 31, 2023, the Company completed private placements which resulted in raising an additional net proceeds of \$5,079,612 (Notes 10 and 15) and completed a SFD® survey which generated operating funds. Further financing options that may or may not be available to the Company include issuance of new equity, debentures or bank credit facilities. The need for any of these options will be dependent on the timing of securing new SFD® related revenues and obtaining financing on terms that are acceptable to both the Company and the financier.

NXT continues to develop its pipeline of opportunities to secure new revenue contracts. However, the Company's longer-term success remains dependent upon its ability to convert these opportunities into successful contracts, to continue to attract new client projects, expand its revenue base to a level sufficient to exceed fixed operating costs, and generate consistent positive cash flow from operations. The occurrence and timing of these events cannot be predicted with sufficient certainty.

The consolidated financial statements do not reflect adjustments that would be necessary if the going concern basis was not appropriate. If the going concern basis was not appropriate for these consolidated financial statements, then adjustments would be necessary in the carrying value of the assets and liabilities, the reported revenues and expenses, and the balance sheet classifications used. These adjustments could be material.

NXT ENERGY SOLUTIONS INC.

Notes to the Consolidated Financial Statements

As at and for the years ended December 31, 2023, 2022 and 2021

(Expressed in Canadian dollars unless otherwise stated)

Use of Estimates and Judgements

In preparing these consolidated financial statements, NXT is required to make estimates and assumptions that affect both the amount and timing of recording assets, liabilities, revenues and expenses since the determination of these items may be dependent on future events. The Company uses the most current information available and exercises careful judgment in making these estimates and assumptions. In the opinion of management, these consolidated financial statements have been properly prepared within reasonable limits of materiality and within the framework of the Company's significant accounting policies. The estimates and assumptions used are based upon management's best estimate as at the date of the consolidated financial statements. Estimates and assumptions are reviewed periodically and the effects of revisions are reflected in the period when determined. Actual results may differ from those estimates.

Certain estimates and judgments have a material impact where the assumptions underlying these accounting estimates relate to matters that are highly uncertain at the time the estimate or judgment is made or are subjective. In 2023 and 2022, the estimates and judgments included the assessment of impairment indicators of intellectual property and recognition of SFD[®] related revenue.

The Company reviews intellectual property for impairment whenever events or changes in circumstances indicate the carrying value may not be recoverable. The Company considers both internal and external factors when assessing for potential indicators of impairment of its intellectual property, including the consideration of historical and forecasted SFD[®] related revenues, market capitalization, control premiums, and the SFD[®] related revenue multiples compared to industry peers. When indicators of impairment exist, the Company first compares the total of the estimated undiscounted future cash flows or the estimated sale price to the carrying value of an asset. If the carrying value exceeds these amounts, an impairment loss is recognized for the excess of the carrying value over the estimated fair value of the intellectual property.

Other accounting estimates and judgments that may have a material impact on the financial statements include: the forward looking assumptions related to the going concern assumption, the estimated useful lives of intellectual property and property, plant and equipment, lease interest rates and terms, and the assumptions used to measure stock based compensation expense.

2. Significant Accounting Policies

Basis of Presentation

These consolidated financial statements for the year ended December 31, 2023 have been prepared by management in accordance with generally accepted accounting principles of the United States of America ("US GAAP").

Consolidation

These consolidated financial statements reflect the accounts of the Company and its wholly owned subsidiaries (all of which are inactive). All significant inter-company balances and transactions among NXT and its subsidiaries have been eliminated and are therefore not reflected in these consolidated financial statements.

NXT ENERGY SOLUTIONS INC.

Notes to the Consolidated Financial Statements

As at and for the years ended December 31, 2023, 2022 and 2021

(Expressed in Canadian dollars unless otherwise stated)

Cash and Cash Equivalents

Cash and cash equivalents consist of cash on hand and short term Guaranteed Investment Certificates (“GIC’s”) with an original maturity less than 90 days from the date of acquisition.

Short Term Investments

Short term investments consist of short term GICs, with original maturity dates greater than 90 days and up to one year.

Derivative Instruments

As at December 31, 2023 and 2022, NXT had no outstanding derivative instruments.

Fair Value Measures

For any balance sheet items recorded at fair value on a recurring basis or non-recurring basis, the Company is required to classify the fair value measure into one of three categories based on the fair value hierarchy noted below.

In Level I, the fair value of assets and liabilities is determined by reference to quoted prices in active markets for identical assets and liabilities that the Company has the ability to assess at the measurement date.

At December 31, 2023 the fair value of the share based payment “Compensation Expense” was based on share price using Level I inputs. At December 31, 2022, the fair value of the restricted stock units (“RSU”) liability based on share price was determined using Level I inputs.

In Level II, determination of the fair value of assets and liabilities is based on the extrapolation of inputs, other than quoted prices included within Level I, for which all significant inputs are observable directly or indirectly. Such inputs include published exchange rates, interest rates, yield curves and stock quotes from external data service providers. Transfers between Level I and Level II would occur when there is a change in market circumstances. There are no Level II fair value measures.

In Level III, the fair value of assets and liabilities measured on a recurring basis is determined using a market approach based on inputs that are unobservable and significant to the overall fair value measurement. Assets and liabilities measured at fair value can fluctuate between Level II and Level III depending on the proportion of the value of the contract that extends beyond the time frame for which inputs are considered to be observable. As contracts near maturity and observable market data becomes available, the contracts are transferred out of Level III and into Level II.

The determination of the fair value of the acquisition of the Intellectual property (Note 8) was determined using Level III inputs in 2021.

Measurement of credit losses on financial instruments

The impairment model of financial instruments is based on expected losses rather than incurred losses. In making the assessment of expected losses, the Company considers the following factors: historically

NXT ENERGY SOLUTIONS INC.

Notes to the Consolidated Financial Statements

As at and for the years ended December 31, 2023, 2022 and 2021

(Expressed in Canadian dollars unless otherwise stated)

realized bad debts; a counterparty's present financial condition and whether a counterparty has breached certain contracts; the probability that a counterparty will enter bankruptcy; changes in economic conditions that correlate to increased levels of default and term to maturity of the specific receivable. These expected credit losses are recognized as an allowance rather than as a direct write-down of the amortized cost basis.

Deposits

Deposits consist of security payments made to lessors for the Company's office and aircraft lease. They are classified as long term if the lease end date is greater than one year.

Property and Equipment

Property and equipment is recorded at cost, less accumulated amortization, which is recorded over the estimated service lives of the assets using the following annual rates and methods:

Survey equipment	20% declining balance
Aircraft equipment	10% declining balance
Computers	30% declining balance
Furniture and other equipment	20% declining balance
Leasehold improvements	10% declining balance

Intellectual Property

Intellectual property acquired is recorded at cost, less accumulated amortization, which is recorded over the estimated minimum useful life of the assets. The Company incurs periodic costs that are expensed when incurred to file patents and to maintain them.

Impairment of Long-Lived Assets

The Company reviews long-lived assets, which includes property, equipment and intellectual property for impairment whenever events or changes in circumstances indicate the carrying value may not be recoverable. The Company considers both internal and external factors when assessing for potential indicators of impairment, and with respect to intellectual property, the Company's assessment includes consideration of historical and forecasted SFD[®] related revenues, market capitalization, control premiums, and the SFD[®] related revenue multiples compared to industry peers.

When indicators of impairment exist, the Company first compares the total of the estimated undiscounted future cash flows or the estimated sale price to the carrying value of an asset. If the carrying value exceeds these amounts, an impairment loss is recognized for the excess of the carrying value over the estimated fair value of the asset.

Convertible Debentures

Convertible debentures are recorded as a current liability if the Company has an obligation to deliver cash to the holder on demand on or before the maturity date and a long-term liability if non-demand and the maturity date is greater than one year. If the convertible debentures are converted to either voting

NXT ENERGY SOLUTIONS INC.

Notes to the Consolidated Financial Statements

As at and for the years ended December 31, 2023, 2022 and 2021

(Expressed in Canadian dollars unless otherwise stated)

preferred or common shares, the preferred or common shares will be classified as equity. Interest on the convertible debenture is accrued as earned. Dividends on preferred shares will only be accrued on dividends declared by the Board of Directors of the Company.

Research and Development Expenditure

Research and development ("R&D") expenditures incurred to develop, improve and test the SFD[®] survey system and related components are expensed as incurred. Any intellectual property that is acquired for the purpose of enhancing research and development projects, if there is no alternative use for the intellectual property, is expensed in the period acquired. No significant external R&D was incurred in the years ended 2023, 2022 and 2021.

Foreign Currency Translation

The Company's functional currency is the Canadian dollar. Revenues and expenses denominated in foreign currencies are translated into Canadian dollars at the average exchange rate for the applicable period. Monetary assets and liabilities are translated into Canadian dollars at the exchange rate in effect at the end of the applicable period. Non-monetary assets and liabilities are recorded at the relevant exchange rates for the period in which the balances arose. Any related foreign exchange gains and losses resulting from these translations are included in the determination of net income (loss) for the period.

Income Taxes

NXT follows the asset and liability method of accounting for income taxes. This method recognizes deferred income tax assets and liabilities based on temporary differences in reported amounts for financial statement and income tax purposes, at the income tax rates expected to apply in the future periods when the temporary differences are expected to be reversed or realized. The effect of a change in income tax rates on deferred income tax assets and deferred income tax liabilities is recognized in income in the period when the tax rate change is enacted. Valuation allowances are provided when necessary to reduce deferred tax assets to the amount that is more likely than not to be realized.

Stock Based Compensation

NXT follows the fair value method of accounting for stock options, restricted stock units, deferred stock units, and the employee share purchase plan (the "Share Compensation Plans") that are granted to acquire common shares under NXT's Share Compensation Plans. For equity-settled stock-based compensation awards, fair values are determined at the grant date and the expense, net of estimated forfeitures, is recognized over the requisite service period with a corresponding increase recorded in contributed capital. An adjustment is made to compensation for any differences between the estimated forfeitures and the actual forfeitures. For cash-settled stock-based compensation awards, fair values, based on observable prices, are determined at each reporting date and periodic changes are recognized as compensation costs, with a corresponding change to liabilities. Stock-based awards with performance conditions are recognized as compensation costs only when the performance condition is probable of being met.

NXT ENERGY SOLUTIONS INC.

Notes to the Consolidated Financial Statements

As at and for the years ended December 31, 2023, 2022 and 2021

(Expressed in Canadian dollars unless otherwise stated)

Upon exercise or realization of the equity-settled Share Compensation Plans, the consideration received by NXT, and the related amount which previously recorded in contributed capital, is recognized as an increase in the recorded value of the common shares of the Company.

Net Income (Loss) Per Share

Basic income (loss) per share amounts are calculated by dividing net income (loss) by the weighted average number of common shares that are outstanding for the fiscal period. Shares issued during the period are weighted for the portion of the period that the shares were outstanding. Diluted income per share, in periods when NXT has net income, is computed using the treasury stock method, whereby the weighted average number of shares outstanding is increased to include any additional shares that would be issued from the assumed exercise of stock options and restricted stock units. The incremental number of shares added under the treasury stock method assumes that outstanding stock options and restricted stock units that are exercisable at exercise prices below the Company's average market price (i.e. they were "in-the-money") for the applicable fiscal period are exercised and then that number of incremental shares is reduced by the number of shares that could have been repurchased by the Company from the issuance proceeds, using the average market price of the Company's shares for the applicable fiscal period.

No addition to the basic number of shares is made when calculating the diluted number of shares if the diluted per share amounts become anti-dilutive (such as occurs in the case where there is a net loss for the period).

Revenue

SFD® Surveys

The performance obligation for NXT in SFD® surveys is the acquisition, processing, interpretation and integration of Stress Field Detection (SFD®) data. Revenue from the sale of SFD® survey contracts (excluding any related foreign value added taxes) is recognized over time by measuring the progress toward satisfaction of its performance obligation to the customer. All funds received or invoiced in advance of recognition of revenue are reflected as contract obligations and classified as a current liability on our balance sheet.

The Company uses direct survey costs as the input measure to recognize revenue in any fiscal period. The percentage of direct survey costs incurred to date over the total expected survey costs to be incurred, provides an appropriate measure of the stage of the performance obligation being satisfied over time.

SFD® Data Sales

The performance obligation for NXT in SFD® data sales is the delivery of the promised specific services as itemized in the contract with the customer. Revenue from the sale of SFD® data (excluding any related foreign value added taxes) is recognized once the services are completed and the data is transferred to the customer.

NXT ENERGY SOLUTIONS INC.

Notes to the Consolidated Financial Statements

As at and for the years ended December 31, 2023, 2022 and 2021

(Expressed in Canadian dollars unless otherwise stated)

Leases

The Company determines if an arrangement is an operating or finance lease, as defined under U.S. GAAP, at inception. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. These leases are included in right-of-use ("ROU") assets and lease obligations in the Consolidated Balance Sheet.

ROU assets represent the Company's right to use an underlying asset for the lease term and lease obligations represent the obligation to make lease payments arising from such leases. Lease obligations are recognized at the lease commencement date based on the present value of remaining lease payments over the lease term, taking into consideration conditions such as incentives and termination penalties, as appropriate. A corresponding ROU asset is recognized at the amount of the lease obligation, adjusted for payments made prior to lease commencement or initial direct costs, if any.

When calculating the present value, the Company uses the rate implicit in the lease, or uses its incremental borrowing rate for a similar term and risk profile based on the information available at the commencement date. The Company's lease terms may have options to extend or terminate the lease which are included in the calculation of lease obligations when it is reasonably certain that it will exercise those options. Lease expense for operating leases is recognized on a straight-line basis over the lease term. Office and equipment lease expenses are included within General and administrative expenses; the aircraft lease cost is included within SFD® related costs.

Lease agreements can contain both lease and non-lease components, which are accounted for separately.

Government grants

Government grants are recognized when there is reasonable assurance that the grant will be received, and all attached conditions will be complied with. When the grant relates to an expense item, it is recognized as an expense reduction in the period in which the costs are incurred. Where the grant relates to an asset, it is recognized as a reduction to the net book value of the related asset and then subsequently in net loss over the expected useful life of the related asset through lower charges to amortization and impairment.

NXT ENERGY SOLUTIONS INC.

Notes to the Consolidated Financial Statements

As at and for the years ended December 31, 2023, 2022 and 2021

(Expressed in Canadian dollars unless otherwise stated)

3. Accounts Receivable

	December 31, 2023	December 31, 2022
Trade receivables	\$ 1,738,694	\$ -
Other receivables	89,829	57,065
	1,828,523	57,065
Allowance for doubtful accounts	-	-
Net accounts receivable	1,828,523	57,065

The entire trade receivable was with one client as of December 31, 2023. Approximately \$1,427,188 of the trade receivable was collected from the client subsequent to December 31, 2023.

4. Prepaid expenses and deposits

	December 31, 2023	December 31, 2022
Prepaid expenses	\$ 53,673	\$ 36,157
Deposit	-	-
	53,673	36,157

5. Deposits

Security deposits have been made to the lessors of the office building and the aircraft. The aircraft deposit is denominated in United States Dollars.

	December 31, 2023	December 31, 2022
Prepaid expenses	\$ 8,164	\$ -
Building	43,309	43,309
Aircraft	198,444	203,280
	249,917	246,589

NXT ENERGY SOLUTIONS INC.

Notes to the Consolidated Financial Statements

As at and for the years ended December 31, 2023, 2022 and 2021

(Expressed in Canadian dollars unless otherwise stated)

6. Property and equipment

	December 31, 2023		
	Cost Base	Accumulated Amortization	Net book value
Survey equipment	\$ 924,959	\$ 743,239	\$ 181,720
Computers and software	1,265,045	1,254,000	11,045
Furniture and other equipment	528,419	520,525	7,894
Leasehold improvements	1,064,225	749,075	315,150
	3,782,648	3,266,839	515,809

	December 31, 2022		
	Cost Base	Accumulated Amortization	Net book value
Survey equipment	\$892,637	\$724,002	\$168,635
Computers and software	1,265,045	1,249,267	15,778
Furniture and other equipment	528,419	518,552	9,867
Leasehold improvements	1,064,225	714,059	350,166
	3,750,326	3,205,880	544,446

7. Right of use assets

	December 31, 2023		
	Cost Base	Accumulated Amortization	Right of Use
Aircraft	\$1,847,617	\$1,728,958	\$ 118,659
Office Building	1,725,414	1,186,673	538,741
Printer	9,716	1,986	7,730
	3,582,747	2,917,617	665,130

	December 31, 2022		
	Cost Base	Accumulated Amortization	Right of Use
Aircraft	\$1,847,617	\$1,407,743	\$ 439,874
Office Building	1,725,414	915,773	809,641
Printer	9,716	139	9,577
	3,582,747	2,323,655	1,259,092

NXT ENERGY SOLUTIONS INC.

Notes to the Consolidated Financial Statements

As at and for the years ended December 31, 2023, 2022 and 2021

(Expressed in Canadian dollars unless otherwise stated)

Subsequent Event

On March 22, 2024 the Company extended its Aircraft lease for three years, until March 28, 2027. The Aircraft Lease will be converted to a capital lease and the Company will own the aircraft at the end of the lease. Terms of the extension include a principle of US\$1,210,000, an interest rate of 12%, and monthly payments of US\$40,189. The Company has an early purchase option to acquire the aircraft on any of the following date, March 28, 2025, September 28, 2025, March 28, 2026 or September 28, 2026. The purchase price would be the amortized value of the lease liability, plus a four month interest penalty.

8. Intellectual property

	December 31, 2023		
	Cost Base	Accumulated amortization	Net book Value
SFD® Hydrocarbon Right acquired	\$ 25,271,000	\$ 14,039,868	\$ 11,231,132
SFD® Geothermal Right acquired	275,610	36,747	238,863
	25,546,610	14,076,615	11,469,995

	December 31, 2022		
	Cost Base	Accumulated amortization	Net book Value
SFD® Hydrocarbon Right acquired	\$ 25,271,000	\$ 12,355,134	\$ 12,915,866
SFD® Geothermal Right acquired	275,610	22,967	252,643
	25,546,610	12,378,101	13,168,509

SFD® Hydrocarbon Right

During 2015, NXT acquired the rights to the SFD® technology for use in the exploration of hydrocarbons (“Hydrocarbon Right”) from Mr. George Liszicasz, the former President and CEO of NXT (“CEO”), and recorded the acquisition as an intellectual property asset on the balance sheet. The asset was recorded at the fair value of the consideration transferred, including the related tax effect of approximately \$25.3 million.

The Hydrocarbon Right is being amortized on a straight line basis over its estimated useful life of 15 years. The annual amortization expense expected to be recognized is approximately \$1.7 million per year for a 5 year aggregate total of \$8.5 million.

NXT ENERGY SOLUTIONS INC.

Notes to the Consolidated Financial Statements

As at and for the years ended December 31, 2023, 2022 and 2021

(Expressed in Canadian dollars unless otherwise stated)

SFD® Geothermal Right

The Company acquired the SFD® technology rights for geothermal resources (“Geothermal Right”) from the CEO on April 18, 2021. The consideration deliverable by the Company in connection with the acquisition of the Geothermal Right is set forth below:

1. US\$40,000 (CDN\$50,310) signature payment, which became due immediately and was paid on April 22, 2021;
2. 300,000 common shares, which were issued in December 2021;
3. CDN\$15,000 signature milestone payment paid in August 2021;
4. US\$200,000 milestone payment which will become due in the event that the Company's cash balance exceeds CDN\$5,000,000 due to receipt of specifically defined funds from operations; and
5. US\$250,000 milestone payment would have become due in the event that the Company executed and completed and received full payment for an SFD® contract valued at US\$10,000,000 or greater, provided such contract was entered into and completed and payment of at least US\$5,000,000 was received by April 18, 2023. This milestone expired as of April 18, 2023.

As of December 31, 2023, the Company has recognized \$275,610 for the acquisition Geothermal Right which is the combination of the US\$40,000 (CDN\$50,310) and CDN\$15,000 signature payments, the value of the 300,000 common shares of \$207,300 and other costs of \$3,000. The cost of the remaining milestone will be recognized when it is deemed probable that the milestone will be achieved by a special committee of the Board of Directors, comprised entirely of independent directors. The Board of Directors delegated authority to the special committee to determine when the milestones have been achieved. As of December 31, 2023 the remaining milestone is still deemed not probable of being achieved.

The current book value of the Geothermal Right is being amortized on a straight line basis over its estimated useful life of 20 years. The annual amortization expense expected to be recognized is approximately \$13,781 per year for a 5 year aggregate total of approximately \$68,902.

Reconciliation of Intellectual Property

	SFD® Hydrocarbon Right	SFD® Geothermal Right	Total
Net book value at			
December 31, 2021	\$14,600,600	\$ 266,423	\$14,867,023
Amortization	(1,684,734)	(13,780)	(1,698,514)
Net book value at			
December 31, 2022	12,915,866	252,643	13,168,509
Amortization	(1,684,734)	(13,780)	(1,698,514)
Net book value at			
December 31, 2023	11,231,132	238,863	11,469,995

NXT ENERGY SOLUTIONS INC.

Notes to the Consolidated Financial Statements

As at and for the years ended December 31, 2023, 2022 and 2021

(Expressed in Canadian dollars unless otherwise stated)

9. Accounts payable and accrued liabilities

	December 31, 2023	December 31, 2022
Accrued liabilities related to:		
Consultants and professional fees	\$ 225,224	\$ 533,863
Payroll related	525,472	459,913
Board of director's fees	228,199	162,500
Interest payable	38,222	-
	1,017,117	1,156,276
Trade payables and other	819,624	119,960
	1,836,741	1,276,236

10. Convertible Debentures

On May 31, 2023 the Company issued a two-year term convertible debenture for US\$1,200,000 (CDN\$1,631,954) to Ataraxia Capital and an additional US\$200,000 (CDN\$265,560) on July 10, 2023. The terms of the convertible debenture include an annual interest rate of 10%, paid quarterly in arrears, a fixed conversion price of US\$0.143 per common share. The debenture may also be converted into voting preferred shares with an annual dividend rate of 10% paid per quarter. The preferred shares are not transferable, but may be converted on a one-to-one basis into common shares. The convertible debenture is payable on demand and is secured by a general security agreement, subordinate to the long term debt.

On November 2, 2023, the Company received conditional approval from the TSX to offer a multi-tranche convertible debenture (the "November Debentures") The November Debentures bear interest at 10.0% per annum, paid quarterly in arrears, and are due and payable two years after issuance of the November Debentures. The November Debentures are convertible into common shares in the capital of NXT (at a fixed conversion price of US\$0.1808 (CDN\$0.25)).

On November 8, 2023 the Company issued the first tranche of the November Debentures for US\$1,000,000 (approximately CDN\$1,378,340) to MCAPM, LP and Michael P. Mork ("Mork Capital"). As of December 31, 2023, Mork Capital had the right to obtain 5,530,973 common shares upon the conversion of the November Debentures at the fixed conversion price of US\$0.1808 subject to shareholder approval at the next annual general meeting of shareholders ("AGM"). With the acquisition of the November Debentures, Mork Capital has the right to own, including the conversion of the first tranche of the November Debentures, 20,452,206 common shares, representing approximately 24.2% of the issued and outstanding common shares at December 31, 2023 (after giving effect to the conversion of the full amount of November Debentures as of December 31, 2023). The Company has agreed to appoint a representative from Mork Capital to its board of directors in the near future.

On December 22, 2023 the Company issued the second tranche of the November Debentures for US\$150,000 (approximately CDN\$199,260) which gives the subscriber the right to obtain an additional 829,646 common shares upon the conversion of the November Debentures.

NXT ENERGY SOLUTIONS INC.

Notes to the Consolidated Financial Statements

As at and for the years ended December 31, 2023, 2022 and 2021

(Expressed in Canadian dollars unless otherwise stated)

Repayment of principal and interest (US\$):	US\$	CDN\$ ¹
2024	\$ 255,000	\$ 337,355
2025	2,740,000	3,624,910
Total principal and interest payments	2,995,000	3,962,265
Less interest	(445,000)	(588,717)
Less Debt issuance costs	(13,273)	(17,559)
Net principal remaining	2,536,727	3,355,989
Current portion of convertible debentures	1,400,000	1,842,566
Non-current portion of convertible debentures	1,136,727	1,513,423

1. Converted at 1.32296

Subsequent Event

On January 12, 2024, the Company closed the final tranche of the November Debentures for an additional US\$722,000 (approximately CDN\$966,036). Including the final tranche, the Company issued a total of US\$1,872,000 (approximately CAD\$2,543,636) of the November Debentures, which will allow the subscribers to obtain an aggregate of up to 10,353,982 common shares. Insiders which included Mork Capital and all of the directors of NXT, were issued November Debentures valued, in the aggregate principal amount, at US\$1,522,000 (approximately CDN\$2,076,776).

Mork Capital purchased an additional US\$375,000 (approximately CDN\$501,750) of November Debentures in the final tranche. Subject to shareholder approval at the next AGM, Mork Capital will have the right to own, after conversion of all of their November Debentures at a fixed price of US\$0.1808, 22,526,321 common shares, representing approximately 28.8% of the issued and outstanding common shares, as of the date of these financial statements.

11. Long-term debt

On May 26, 2021, the Company received \$1,000,000 from the Business Development Bank of Canada's ("BDC") Highly Affected Sectors Credit Availability Program ("HASCAP Loan"), funded by the Royal Bank of Canada. The HASCAP Loan is a \$1,000,000 non-revolving ten year term credit facility with an interest rate of 4%. Repayment terms were interest only until May 26, 2022, and monthly principal plus interest payments for the remaining nine years. The HASCAP Loan is secured by a general security agreement and is guaranteed by BDC.

NXT ENERGY SOLUTIONS INC.

Notes to the Consolidated Financial Statements

As at and for the years ended December 31, 2023, 2022 and 2021

(Expressed in Canadian dollars unless otherwise stated)

Repayment of principal and interest:	
2024	\$ 142,037
2025	137,593
2026	133,148
2027	128,704
2028	124,259
2029 to 2031	281,944
Total principal and interest payments	947,685
Less interest	(123,611)
Total principal remaining	824,074
Current portion of long-term debt	111,111
Non-current portion of long-term debt	712,963

12. Lease obligation

	December 31, 2023	December 31, 2022
Aircraft	\$ 37,242	\$ 378,769
Office Building	550,548	858,378
Printer	7,727	9,576
	595,517	1,246,723
Current portion of lease obligations	343,513	650,315
Long-term lease obligations	252,004	596,408

Maturity of lease liabilities:		Weighted Average Remaining Lease Term
2024	\$ 381,939	1.7 years
2025	259,528	0.8 years
2026	3,139	0.9 years
Total lease payments	644,606	
Less imputed interest	(49,089)	
Total discounted lease payments	595,517	
Current portion of lease obligations	343,513	
Non-current portion of lease obligations	252,004	

	Lease Term Till	Option to Extend	Incremental Borrowing Rate
Aircraft	April 2024	Executed	11.2%
Office Building	September 2025	No	6.1%
Printer	November 2026	No	10.8%

As of December 31, 2023 and December 31, 2022 all of the Company's leases were classified as operating leases. The Company's total operating lease expenditures for the period ended December 31, 2023 was \$709,521 (2022 - \$774,047). The Company's total financing lease expenditures for the period ended December 31, 2023 was \$ nil (2022 - \$27,950).

NXT ENERGY SOLUTIONS INC.

Notes to the Consolidated Financial Statements

As at and for the years ended December 31, 2023, 2022 and 2021

(Expressed in Canadian dollars unless otherwise stated)

13. Asset Retirement Obligations

Asset retirement obligations ("ARO") relate to minor non-operated interests in oil and natural gas wells in which NXT has outstanding abandonment and reclamation obligations in accordance with government regulations. The estimated future abandonment liability is based on estimates of the future timing and costs to abandon, remediate and reclaim the well sites within the next five years. The net present value of the ARO is as noted below, and has been calculated using an inflation rate of 3.4% and discounted using a credit-adjusted risk-free interest rate of 10%.

	2023	2022	2021
ARO balance, beginning of the year	\$ 24,574	\$ 22,337	\$ 22,741
Accretion expense	2,069	2,069	2,069
Change in ARO estimates	387	168	(2,473)
ARO balance, end of the year	27,030	24,574	22,337

14. Commitments

The table below is the non-lease operating cost components associated with the costs of the building lease.

For the fiscal period ending December 31,	Office Premises
2024	\$ 225,255
2025	168,941
Total	394,196

15. Common shares

The Company is authorized to issue an unlimited number of common shares, of which the following are issued and outstanding:

	For the years ended December 31,			
	2023		2022	
	# of shares	\$ amount	# of shares	\$ amount
As at the beginning of the year	68,949,109	96,423,648	65,250,710	\$95,779,352
Rights offering, net of issuance costs	-	-	2,149,180	216,062
Private placement, net of issuance costs	8,510,000	1,622,057	1,148,282	216,182
Employee Share Purchase Plan (Note 17)	309,509	66,755	188,633	89,127
Restricted Stock Units	256,619	66,811	212,304	122,925
As at the end of the year	78,025,237	98,179,271	68,949,109	96,423,648

NXT ENERGY SOLUTIONS INC.

Notes to the Consolidated Financial Statements

As at and for the years ended December 31, 2023, 2022 and 2021

(Expressed in Canadian dollars unless otherwise stated)

	For the year ended December 31, 2021	
	# of shares	\$ amount
As at the beginning of the year	64,437,790	\$95,327,123
Employee Share Purchase Plan	304,550	173,023
Restricted Stock Units	208,370	114,604
SFD® Geothermal Right (Note 8)	300,000	164,602
As at the end of the year	65,250,710	95,779,352

On December 22, 2022 the Company announced a multi-tranche private placement (the “Private Placement”) at \$0.195 per share. At December 22, 2022 the Company issued 1,148,282 common shares for gross proceeds of \$223,915 in the first tranche, less issuance costs of \$7,732. On January 25, 2023, the Company closed the Private Placement by issuing an additional 8,510,000 common shares, at \$0.195 per common share, for additional aggregate gross proceeds of approximately \$1,659,450, less issuance costs of \$37,393.

On December 2, 2022, NXT closed the Rights Offering that had been announced on October 31, 2022. The Company issued 2,149,180 common shares a price of \$0.18 per common share, for aggregate gross proceeds of a \$386,852. Share issue costs of \$170,790 were recorded as a reduction to share capital.

In December 2021, the TSX approved the issuance of 300,000 common shares for the SFD® Geothermal Right for a value of \$207,300 less issuance costs of \$42,697 (Note 8). Before the approval of the TSX, the Company recorded the value of the common share consideration in Contributed capital.

16. Loss per share

	For the years ended December 31,		
	2023	2022	2021
Net loss for the year	\$(5,451,112)	\$(6,733,076)	\$(3,123,799)
Weighted average number of shares outstanding for the year:			
Basic	77,646,094	65,602,875	64,658,380
Diluted	77,646,094	65,602,875	64,658,380
Net loss per share – Basic	\$(0.07)	\$(0.10)	\$(0.05)
Net loss per share – Diluted	\$(0.07)	\$(0.10)	\$(0.05)

In periods in which a loss results, all outstanding stock options are excluded from the diluted loss per share calculations as their effect is anti-dilutive.

NXT ENERGY SOLUTIONS INC.

Notes to the Consolidated Financial Statements

As at and for the years ended December 31, 2023, 2022 and 2021

(Expressed in Canadian dollars unless otherwise stated)

17. Share based compensation

The Company has an equity compensation program in place for its executives, employees and directors. Executives and employees are given equity compensation grants that vest based on a recipient's continued employment. The Company's stock-based compensation awards outstanding as at December 31, 2023, include stock options, deferred share units ("DSUs") and the employee share purchase plan ("ESP Plan"). The following tables provide information about stock option, RSUs, DSU, and ESP Plan activity.

	For the years ended December 31,		
	2023	2022	2021
Stock Option Expense	\$92,500	\$22,552	\$26,250
Restricted Stock Units	62,441	153,343	154,715
Employee Share Purchase Plan	30,508	39,389	106,935
Compensation Expense	55,822	-	-
Total stock based compensation expense	241,271	215,284	287,900

Stock Options:

The following is a summary of stock options which are outstanding as at December 31, 2023.

Exercise price per share	# of options outstanding	# of options exercisable	Average remaining life (in years)
\$0.174	69,200	69,200	3.9
\$0.200	166,200	166,200	4.4
\$0.216	2,005,200	55,200	4.0
\$0.252	115,250	115,250	4.7
\$0.259	100,000	-	4.7
\$0.260	52,650	52,650	4.0
\$0.264	177,200	177,200	4.0
\$0.440	21,360	21,360	2.5
\$0.510	16,000	16,000	1.8
\$0.520	100,000	100,000	0.5
\$0.550	30,000	30,000	1.1
\$0.620	18,050	18,050	3.0
\$0.680	32,250	32,250	3.2
\$0.720	24,460	24,460	3.4
	2,927,820	877,820	3.9

NXT ENERGY SOLUTIONS INC.

Notes to the Consolidated Financial Statements

As at and for the years ended December 31, 2023, 2022 and 2021

(Expressed in Canadian dollars unless otherwise stated)

A continuity of the number of stock options which are outstanding at the end of the current year and as at the prior fiscal years ended December 31, 2022 and 2021 are as follows:

	For the years ended December 31,			
	2023		2022	
	# of stock Options	weighted average exercise price	# of stock Options	Weighted Average exercise price
Options outstanding, start of the year	461,320	\$0.51	358,660	\$0.56
Granted	2,716,500	\$0.22	134,060	\$0.40
Forfeited	(100,000)	\$(0.22)	-	-
Expired	(150,000)	\$(0.59)	-	-
Cancelled	-	-	(31,400)	\$(0.51)
Options outstanding, end of the year	2,927,820	\$0.25	461,320	\$0.51
Options exercisable, end of the year	877,820	\$0.32	461,320	\$0.51

	For the year ended December 31, 2021	
	# of stock Options	Weighted Average exercise price
Options outstanding, start of the year	421,000	\$0.83
Granted	62,660	\$0.56
Expired	(125,000)	\$(1.48)
Options outstanding, end of the year	358,660	\$0.56
Options exercisable, end of the year	358,660	\$0.56

Stock options granted generally expire, if unexercised, five years from the date granted and entitlement to exercise them generally vests at a rate as determined by the Board of Directors.

Stock based compensation expense ("SBCE") is calculated based on the fair value attributed to grants of stock options using the Black-Scholes valuation model and utilizing the following weighted average assumptions:

For the year ended	2023	2022	2021
Expected dividends paid per common share	Nil	Nil	Nil
Expected life in years	5.0	5.0	5.0
Weighted average expected volatility in the price of common shares	79%	75%	108%
Weighted average risk free interest rate	3.32%	3.05%	0.38%
Weighted average fair market value per share at grant date	\$0.22	\$0.40	\$0.56
Forfeiture rate	18.5%	0%	0%

NXT ENERGY SOLUTIONS INC.

Notes to the Consolidated Financial Statements

As at and for the years ended December 31, 2023, 2022 and 2021

(Expressed in Canadian dollars unless otherwise stated)

On January 6, 2023 the Company announced the grant of 2,050,000 incentive stock options at a price of \$0.216 to employees, officers and directors. These incentive stock options will vest upon receipt of cash for SFD® services performed: 1/3 upon collection of US\$6.5 million, 1/3 upon the collection of the next US\$7.0 million and the final 1/3 upon collection of an additional US\$7.5 million.

Deferred Stock Units:

A continuity of the number of DSUs which are outstanding at the end of the current year and as at the prior fiscal years ended December 31, 2022 and 2021 are as follows:

Opening balance	For the years ended December 31,		
	2023	2022	2021
Opening balance	37,354	37,354	37,354
Granted	-	-	-
Closing balance	37,354	37,354	37,354

The DSUs plan is a long-term incentive plan that permits the grant of DSUs to qualified directors. DSUs granted under the DSUs plan are to be settled at the retirement, resignation or death of the Board member holding the DSUs

Restricted Stock Units:

RSUs entitle the holder to receive, at the option of the Company, either the underlying number of shares of the Company's common shares upon vesting of such units or a cash payment equal to the value of the underlying shares. The RSUs vest at a rate of one-third at the end of each of the first three years following the date of grant. In the third quarter of 2022, the Company settled the RSUs that vested with shares and cash.

A continuity of the number of RSUs, including fair value ("FV") which are outstanding at the end of the current year and as the end of the prior fiscal years ended December 31, 2022 and 2021 are as follows:

	For the years ended December 31,			
	2023		2022	
	# of RSUs	FV/Unit	# of RSUs	FV/Unit
RSUs outstanding, start of the year	348,334	\$0.21	696,666	\$0.61
Granted	-	-	-	-
Common shares issued	(256,619)	(\$0.26)	(212,304)	(\$0.58)
Payroll withholdings settled in cash	(91,715)	(\$0.23)	(136,028)	(\$0.58)
RSUs outstanding, end of the year	-	-	348,334	\$0.21

NXT ENERGY SOLUTIONS INC.

Notes to the Consolidated Financial Statements

As at and for the years ended December 31, 2023, 2022 and 2021

(Expressed in Canadian dollars unless otherwise stated)

For the year ended December 31, 2021		
	# of RSUs	FV/Unit
RSUs outstanding, start of the year	1,200,000	\$0.79
Granted	-	-
Common shares issued	(208,370)	(\$0.55)
Payroll withholdings settled in cash	(139,964)	(\$0.55)
Forfeited	(155,000)	(\$0.79)
RSUs outstanding, end of the year	696,666	\$0.61

On February 21, 2024 the Company granted 1,035,000 RSUs to employees and officers which will vest over a three year period.

Employee Share Purchase Plan:

The ESP Plan allows employees and other individuals determined by the Board to be eligible to contribute a minimum of 1% and a maximum of 10% of their earnings to the plan for the purchase of common shares in the capital of the Company, of which the Company will make an equal contribution. Common shares contributed by the Company may be issued from treasury or acquired through the facilities of the TSX. During 2022, 2021, and 2020 the Company has elected to issue common shares from treasury.

A continuity of the number of commons shares under the ESP Plan which are outstanding at the end of the current period and as at the prior fiscal years ended December 31, 2022 and 2021 are as follows:

	For the years ended December 31,			
	2023		2022	
	# of shares	\$ amount	# of shares	\$ amount
Purchased by employees	168,515	\$ 36,246	105,221	\$ 49,738
Matched by the Company	140,994	30,509	83,412	39,389
Total Common Shares issued	309,509	66,755	188,633	89,127

For the year ended December 31, 2021		
	# of shares	\$ amount
Purchased by employees	127,790	\$ 69,260
Matched by the Company	102,641	55,733
Bonus match by the Company	74,119	48,030
Total Common Shares issued	304,550	173,023

If the employee does not withdraw common shares from the ESP Plan in the first year of their participation, the Company will match an additional 100% of the employee contributions, up to \$15,000 per employee (the "Bonus Match"). The Company matched employee contributions for a total of \$52,867,

NXT ENERGY SOLUTIONS INC.

Notes to the Consolidated Financial Statements

As at and for the years ended December 31, 2023, 2022 and 2021

(Expressed in Canadian dollars unless otherwise stated)

less any payroll withholdings in 2021. As at December 31, 2023 the Company has accrued \$nil for the Bonus Match (\$nil as at December 31, 2022).

Compensation Expense:

On October 1, 2023 the Company entered into a four month service agreement with a marketing consultant to provide sales and market services to introduce potential customers to the SFD® technology, attend trade shows, and update the Company's market systems. The consultant agreed to be compensated in Common Shares only for approximately US\$16,000 per month, based on the five day volume average price at the end of each month. Issuance of any shares is subject to approval by the TSX. If the TSX does not approve the share issuance, the marketing consultant will be paid in cash. As of December 31, 2023, 360,139 common shares, less withholding taxes, are due to the marketing consultant.

18. Income Tax Expense

Payments made to NXT for services rendered to clients and branch offices in certain countries may be subject to foreign income and withholding taxes. Such taxes incurred are only recoverable in certain limited circumstances, including potential utilization in Canada as a foreign tax credit, or against future taxable earnings from the foreign jurisdictions.

Income tax expense is different from the expected amount that would be computed by applying the statutory Canadian federal and provincial income tax rates to NXT's income (loss) before income taxes as follows:

	For the years ended December 31,		
	2023	2022	2021
Net loss before income taxes	\$(5,451,112)	\$(6,733,076)	\$(3,123,799)
Canadian statutory income tax rate	23.0%	23.0%	23.0%
Income tax (recovery) at statutory income tax rate	(1,253,756)	(1,548,607)	(718,474)
Effect of non- deductible expenses and other items:			
Stock-based compensation and other expenses	58,801	53,379	67,948
Change in statutory tax rates	-	(11,997)	(92,850)
Foreign exchange adjustments	2,754	-	662
True-up	(10,060)	(3,280)	-
US loss expiry and Other	437,330	(33,113)	1,206,056
Change in valuation allowance	764,931	1,543,618	(463,342)
Income tax expense (recovery)	-	-	-

NXT ENERGY SOLUTIONS INC.

Notes to the Consolidated Financial Statements

As at and for the years ended December 31, 2023, 2022 and 2021

(Expressed in Canadian dollars unless otherwise stated)

A valuation allowance has been provided for the Company's deferred income tax assets due to uncertainty regarding the amount and timing of their potential future utilization, as follows:

	For the years ended December 31,		
	2023	2022	2021
Net operating losses carried forward:			
Canada (expiration dates 2027 to 2042)	\$ 9,594,511	\$ 9,136,353	\$ 8,051,504
USA (expiration dates 2024 to 2026)	5,631	169,359	248,289
Timing differences on property & equipment, Right of Use of Assets, Lease obligations and financing costs	1,806,446	1,726,603	1,674,085
SRED Expenditures	676,518	676,518	575,747
Foreign Tax Credit	285,772	285,772	285,772
	12,368,878	11,994,605	10,835,397
Intellectual property	(2,638,099)	(3,028,757)	(3,411,411)
Less valuation allowance	(9,730,779)	(8,965,848)	(7,423,986)
	-	-	-

19. Financial instruments

Non-derivative financial instruments:

The Company's non-derivative financial instruments consist of cash and cash equivalents, accounts receivable, deposits, accounts payables and accrued liabilities, long-term debt and convertible debentures. The carrying value of these financial instruments, excluding lease obligations and long-term debt, approximates their fair values due to their short terms to maturity.

Credit Risk

Credit risk arises from the potential that the Company may incur a loss if counterparty to a financial instrument fails to meet its obligation in accordance with agreed terms. The Company's financial instruments that are exposed to concentrations of credit risk consist primarily of cash and cash equivalents and accounts receivable. The carrying value of cash and cash equivalents and accounts receivable reflects management's assessment of maximum exposure to credit risk. At December 31, 2023, cash and cash equivalents included balances in bank accounts placed with financial institutions with investment grade credit ratings and Accounts Receivable. The Company manages Accounts Receivable credit risk by requiring advance payments before entering into certain contract milestones and when possible, accounts receivable insurance.

Foreign Exchange Risk

The Company is exposed to foreign exchange risk in relation to its holding of significant US\$ balances in cash and cash equivalents, deposits, accounts payables, accrued liabilities, and lease obligations, and entering into United States dollar revenue contracts. The Company does not currently enter into hedging contracts, but to mitigate exposure to fluctuations in foreign exchange the Company uses strategies to reduce the volatility of United States Dollar assets including converting excess United States dollars to Canadian dollars. As at December 31, 2023, the Company held net U.S. dollar liabilities totaling

NXT ENERGY SOLUTIONS INC.

Notes to the Consolidated Financial Statements

As at and for the years ended December 31, 2023, 2022 and 2021

(Expressed in Canadian dollars unless otherwise stated)

US\$1,179,649. Accordingly, a hypothetical 10% change in the value of one United States dollar expressed in Canadian dollars as at December 31, 2023 would have had an approximately \$156,063 effect on the unrealized foreign exchange gain or loss for the year.

20. Change in non-cash operating working capital

The changes in non-cash operating working capital balances are comprised of:

	For the years ended December 31,		
	2023	2022	2021
Accounts receivable	\$ (1,835,922)	\$ 784,502	\$ 123,587
Prepaid expenses and deposits	(17,516)	229,279	3,262
Accounts payable and accrued liabilities	559,351	741,326	14,375
Contractual obligations	-	-	(127,507)
	(1,294,087)	1,755,107	13,717

21. Geographic information

The Company generates revenue from its SFD[®] survey system that enables the clients to focus their exploration decisions concerning land commitments, data acquisition expenditures and prospect prioritization on areas with the greatest potential. NXT conducts all of its survey operations from its head office in Canada, and occasionally maintains administrative offices in foreign locations if and when needed. Revenue fluctuations are a normal part of SFD[®] survey system sales and can vary significantly year-over-year.

Revenues for the years ended December 31, 2023 and 2021 were generated solely from the Hydrocarbon Right and only one customer in each year, but not the same customer between years. There were no revenues attributable to the Geothermal Right since its acquisition in 2021.

	2023	2022	2021
International	\$ 2,145,716	\$ -	\$ 3,134,250
Other	-	-	-
	2,145,716	-	3,134,250

NXT ENERGY SOLUTIONS INC.

Notes to the Consolidated Financial Statements

As at and for the years ended December 31, 2023, 2022 and 2021

(Expressed in Canadian dollars unless otherwise stated)

22. Government Grants

During the year ended December 31, 2021 the Company received government grants through the Canada Emergency Wage Subsidy (“CEWS”), the Canada Emergency Rent Subsidy (“CERS”) and the National Research Council of Canada Industrial Research Assistance Program (“NRC IRAP”). The CEWS, CERS and the NRC IRAP were recognized as a reduction to general and administrative expenses.

	For the years ended December 31,		
	2023	2022	2021
CEWS	\$ -	\$ -	\$ 226,607
CERS	-	-	188,983
NRC IRAP	-	-	50,000
Government grants recognized	-	-	465,590

23. Other related party transactions

One of the members of NXT’s Board of Directors is a partner in a law firm which provides legal advice to NXT. Accounts payable and accrued liabilities includes a total of \$36,938 (\$76,843 as at December 31, 2022) payable to this law firm.

Another member of NXT’s Board of Directors is a board member of Pana Holdings Mauritius, the parent company of Ataraxia Capital, which holds convertible debentures (Note 10). Accounts payable and accrued liabilities includes a total of \$19,699 (US\$14,890) (\$nil as at December 31, 2022) to Ataraxia Capital.

A company owned by a family member of a former executive officer was contracted to provide presentation design services to the Company during 2021.

	For the years ended December 31,		
	2023	2022	2021
Legal Fees	\$ 129,600	\$ 92,308	\$ 85,815
Interest Expense ¹	107,792	-	-
Design Services ²	-	-	4,013

1. US\$79,356

2. US\$3000