



NXT ENERGY SOLUTIONS INC.

Management's Discussion and Analysis

For the three and nine months ended

September 30, 2024

Management's Discussion and Analysis

This management's discussion and analysis ("MD&A") was prepared by management of NXT Energy Solutions Inc. ("NXT", "we", "us", "our" or the "Company") based on information available as at November 7, 2024 and unless otherwise stated, has been approved by the Board of the Company (the "Board"), and should be reviewed in conjunction with the unaudited condensed consolidated interim financial statements and related notes for the three and nine-months ended September 30, 2024 (the "unaudited condensed consolidated interim financial statements"). This MD&A covers the unaudited three and nine months ended September 30, 2024, with comparative amounts for the unaudited three and nine months ended September 30, 2023.

Our functional and reporting currency is the Canadian dollar. All references to "dollars," "\$" and "CDN\$" in this MD&A are to Canadian dollars unless specific reference is made to United States dollars ("US\$").

NXT® and SFD® are registered trademarks of NXT in Canada and the United States.

Advisories

Forward-looking Information

Certain statements contained in this MD&A constitute "forward-looking information" within the meaning of applicable securities laws. These statements typically contain words such as "anticipate," "believe," "would," "could," "should," "estimate," "expect," "intend," "may," "plan," "will," "continue" and similar words and phrases suggesting future outcomes or an outlook. Forward-looking statements in this document include, but are not limited to:

- Execution of the African SFD® survey (as defined herein);
- Execution of the Southeast Asia SFD® survey (as defined herein)
- Execution of the AL-Haj Enterprises Private Limited SFD® survey (as defined herein);
- the Company's ability to successfully work with Synergy and Ataraxia (each as defined herein) to develop future business in the African continent;
- receipt of funding under the NRC IRAP (as defined herein);
- expectations regarding maintenance performed on the Company's leased aircraft;
- expectations regarding the future vesting, settlement and expiry of securities issued in connection with the Company's share-based compensation plans;
- expectations regarding the amortization of the Company's intellectual property ("IP") assets;
- the Company's ability to achieve the remaining milestone with respect to the Consideration (as defined herein) owing to the estate of Mr. George Liszicasz, the future payment of such Consideration to the estate of Mr. George Liszicasz, and the satisfaction of the conditions thereto (including with respect to cash balances, receipt of funds, and the execution and completion of contracts);
- the development, commercialization, and protection of the SFD® technology for geothermal resource exploration;
- the extent to which expanding the Company's scope of business to include exploring for both hydrocarbon and geothermal resources is anticipated to result in an expansion of its scope of revenue sources;
- the Company's pursuit of opportunities to secure new revenue contracts;
- expectations regarding competition within the industries in which the Company operates;

- approval by the Toronto Stock Exchange (“TSX”) to issue common shares for payables to the marketing consultant and the issuance of such shares in connection therewith;
- the Company’s ability to continue operating as a going concern;
- the Company’s ability to pay deferred operating costs such as payroll and G&A;
- the Company’s ability to continue making payments on its office lease, its aircraft lease and the effects of any default under either such lease;
- the Company’s ability to pay amounts owing under the Ataraxia Debentures, the November Debentures, or the 2024 Debentures (together the “Debentures”);
- expectations regarding the future conversion of the Debentures into common shares or preferred shares of the Company, as applicable;
- the Company’s ability to repay the amounts owing under the HASCAP Loan (as defined herein);
- the timing and value of payments owing under the Company’s office lease;
- expectations regarding the Company’s DCPs and ICFR (each as defined herein), including the Company’s ability to further adjust such DCPs and ICFR and mitigate material weaknesses going forward;
- estimates related to our future financial position and liquidity including certain contractual obligations; and
- general business strategies and objectives.

Such forward-looking information is based on a number of assumptions which may prove to be incorrect. Assumptions have been made with respect to the following matters, in addition to any other assumptions identified in this document:

- our ability to develop and market our SFD® technology and services to current and new customers;
- our ability to source personnel and equipment in a timely manner and at an acceptable cost;
- our ability to obtain all permits and approvals required;
- our ability to obtain financing on acceptable terms;
- our ability to obtain insurance to mitigate the risk of default on client billings;
- foreign currency exchange and interest rates;
- general business, economic, and market conditions (including global commodity prices and inflation); and
- approval of the next phase of the NRC IRAP project.

Although NXT believes that the expectations reflected in such forward-looking information are reasonable, undue reliance should not be placed on them as NXT can give no assurance that such expectations will prove to be correct. Forward-looking information is based on expectations, estimates, and projections that involve a number of risks and uncertainties, which could cause actual results to differ materially from those anticipated by NXT and are described in the forward-looking information. Material risks and uncertainties include, but are not limited to:

- the ability of management to execute its business plan, including their ability to secure additional new revenue contracts;
- health, safety, and the environment;
- our ability to develop and commercialize the geothermal technology;
- our ability to service existing debt;
- our ability to protect and maintain our IP and rights to our SFD® technology;

- our reliance on a limited number of key personnel;
- our reliance on a single aircraft;
- our reliance on a limited number of clients;
- counterparty credit risk;
- foreign currency and interest rate fluctuations;
- the likelihood that the Company's DCPs and ICFR (each as defined herein) will prevent or detect material misstatements in our audited consolidated financial statements;
- changes in, or in the interpretation of, laws, regulations, or policies; and
- general business, economic, and market conditions (including global commodity prices).

For more information relating to risks, see the section titled "*Risk and Uncertainties*" in this MD&A and the section titled "*Risk Factors*" in NXT's most recently filed Annual Information Form. Except as required by applicable securities law, NXT undertakes no obligation to update publicly or revise any forward-looking statements or information, whether as a result of new information, future events or otherwise. Accordingly, the reader is cautioned not to place undue reliance on forward-looking statements.

Financial Outlook

This MD&A contains future-oriented financial information and financial outlook information (collectively, "FOFI") about expectations regarding financial results which are subject to the same assumptions, risk factors, limitations and qualifications as set out under the heading "Forward-Looking Information". The actual financial results of the Company may vary from the amounts set out herein and such variation may be material. The Company and its management believe that the financial outlook has been prepared on a reasonable basis, reflecting management's best estimates and judgments, and the FOFI contained in this MD&A was approved by management as of the date hereof. However, because this information is subjective and subject to numerous risks, it should not be relied on as necessarily indicative of future results. Except as required by applicable securities laws, the Company undertakes no obligation to update such FOFI. FOFI contained in this MD&A was made as of the date hereof and was provided for the purpose of providing further information about the Company's anticipated future business operations. Readers are cautioned that the FOFI contained in this MD&A should not be used for purposes other than for which it is disclosed herein.

Non-GAAP Measures

NXT's accompanying unaudited condensed interim consolidated financial statements were prepared in accordance with accounting principles generally accepted in the United States of America ("US GAAP"). The Company has consistently used US GAAP for the eight most recently completed quarters.

This MD&A includes references to net working capital, which does not have a standardized meaning prescribed by US GAAP and may not be comparable to similar measures being presented by other entities. Net working capital is the net result of the difference between current assets and current liabilities. It is composed of cash and cash equivalents, accounts receivable, prepaid expenses and deposits, accounts payable and accrued liabilities, convertible debentures, the current portion of long-term debt and the current portion of the Company's lease obligations. Net working capital can be used by investors and management to assess liquidity at a particular point in time. See "*Liquidity and Capital Resources – Net Working Capital*" for further information.

Description of the Business

NXT is a Calgary-based technology company whose proprietary airborne SFD[®] survey system (“SFD[®]”), applied in numerous basins around the world, uses 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. The SFD[®] survey system enables our clients to focus their exploration decisions concerning land commitments, data acquisition expenditures and prospect prioritization on areas with the greatest potential. SFD[®] is environmentally friendly and unaffected by ground security issues or difficult terrain and is the registered trademark of NXT.

Financial and Operational Highlights

Key financial and operational highlights for Q3-24 are summarized below:

- On September 24, 2024 the Company announced that it entered into a contract with its Strategic Alliance Partner, Synergy E&P Technologies Limited (“Synergy”) to provide a repeat SFD[®] survey in Africa for an oil and gas exploration company;
- On August 21, 2024 the Company entered into a contract to provide a geothermal SFD[®] survey to Alberta Geothermal Resource Recovery Inc. (AGRRI);
- NXT received an advance payment of US\$175,000 for its upcoming Southeast Asia SFD[®] survey;
- cash and short-term investments at September 30, 2024 was approximately \$0.94 million;
- net working capital was approximately (\$2.94) million at September 30, 2024 versus approximately (\$1.85) million at December 31, 2023;
- the Company recorded SFD[®]-related revenues of approximately \$0.60 million YTD 2024, \$nil for Q3-24;
- a net loss of \$1.48 million was recorded for Q3-24, including stock-based compensation expense (“SBCE”), amortization expense and remeasurement gain, all totaling approximately \$0.04 million;
- a net loss of \$6.28 million was recorded for YTD 2024, including SBCE, amortization expense and remeasurement loss, all totaling approximately \$2.06 million;
- net loss per common share for Q3-24 was \$0.02 per share (basic) and \$0.02 per share (diluted);
- net loss per common share for YTD 2024 was \$0.08 per share (basic) and \$0.08 per share (diluted);
- cash flow used in operating activities was approximately \$1.32 million during Q3-24, compared to \$0.95 million used in Q3-23;
- cash flow used in operating activities was approximately \$2.58 million during YTD 2024, compared to \$3.36 million used in YTD 2023;
- general and administrative (“G&A”) expenses increased by approximately \$0.16 million (19%) in Q3-24 as compared to Q3-23; and
- G&A expenses increased by approximately \$0.34 million (13%) in YTD 2024 as compared to YTD 2023.

Key financial and operational highlights occurring subsequent to Q3-24 are summarized below:

- NXT was awarded an SFD[®] survey by AL-Haj Enterprises Private Limited in the Northern Suleiman Fold Belt, to commence in Q2-25;
- NXT’s SFD[®] awarded Best Exploration Technology at the 2024 Gulf Energy Information Excellence Awards; and

- On November 1, 2024 the Company announced it will receive US\$900,000 (approximately CDN\$1,252,080) for convertible debentures from Ataraxia Capital, an affiliate of Synergy (“Ataraxia”) under the same terms as the subscription agreement signed between Ataraxia and NXT in 2023, at a conversion price of US\$0.24 per common share. As of the date of this MD&A, the Company has received US\$500,000 (approximately CDN\$695,600).

Discussion of Operations

SFD® Survey in Africa

On September 24, 2024 the Company announced that it entered into a contract with its Strategic Alliance Partner, Synergy, to provide a repeat SFD® survey in Africa for an oil and gas exploration company in Africa. Data acquisition operations for this contract are expected to commence in the fourth quarter of 2024, and NXT’s interpretations and recommendations are expected to be delivered during the first quarter of 2025.

Geothermal SFD® Survey in Alberta, Canada

On August 21, 2024 the Company announced that it entered into a contract to provide a geothermal SFD® survey to Alberta Geothermal Resource Recovery Inc. (AGRRRI). The AGRRRI survey is an important milestone in NXT’s development of the geothermal application of our SFD® technology; our first geothermal survey for a client. The value to NXT is to demonstrate the commerciality of SFD® in the geothermal domain.

SFD® Survey in Southeast Asia

On May 22, 2024 the Company announced that it entered into a contract to provide an SFD® survey to an independent oil and gas exploration company in Southeast Asia. Data acquisition operations for this contract are expected to commence in Q4-24, and NXT’s interpretations and recommendations are expected to be delivered during the fourth quarter of 2024. An advance for this SFD® survey was received on July 3, 2024. The SFD® survey originally expected to be flown in Q3-24, was delayed due to aircraft permitting delays.

SFD® Survey in Türkiye

On September 5, 2023, NXT announced that it has executed a contract to provide an SFD® survey to an independent oil and gas exploration company in Türkiye, which is strategically located at the junction of Eastern Europe, Central Asia and the Middle East (the “Turkish SFD® Survey”). NXT delivered the final SFD® survey results to its Turkish customer and performed the integration of SFD® data with the customers’ existing geological and geophysical data in March 2024. All flight operations related to the data acquisition survey phase were completed in January 2024. As part of NXT’s SFD® services, recommendations with rankings are provided to the customer identifying their highest value prospects for exploration. NXT has been fully paid for this survey and is actively pursuing additional SFD® survey opportunities in the Turkish region.

Strategic Investment

On May 24, 2023, the Company entered into a ten-year strategic alliance and associated financing with Synergy which grants Synergy an exclusive license to use, distribute, sub-license, market and sell NXT’s

SFD® solutions in Africa. In addition, on September 30, 2023, NXT extended the exclusive license to include Ataraxia, an affiliate of Synergy.

PE Energy Limited, an affiliate of Synergy and Ataraxia, has performed several commercial projects with NXT in Africa in the past, in addition to the upcoming African SFD® Survey.

Synergy and Ataraxia, with this new arrangement, will be advancing the SFD® technology to address energy security in and transition in the African continent for both oil and gas and geothermal sources. Synergy, Ataraxia and NXT will work closely together to train local technical teams and regulatory authorities on the patented SFD® technology.

Building upon a record of successful collaborations underpinned by the continued market demand in Africa, Ataraxia executed a subscription agreement pursuant to which Ataraxia agreed to subscribe for an aggregate of US\$2.3 million convertible debentures (collectively, the “Ataraxia Debentures”), with a subscription price to be advanced in instalments, of which it completed US\$1.4 million during Q3-23. On November 1, 2024 Ataraxia indicated to the Company it will now fund the remaining balance of US\$900,000 of which US\$0.5 was received at the date of the MD&A. Please see the section “*Liquidity and Capital Resources – Ataraxia Debentures*” for further information on the Ataraxia Debentures.

Geothermal Rights

The Company acquired the SFD® technology rights for geothermal resources (“Geothermal Right”) from the NXT’s former Chairman, President and Chief Executive Officer (the “Former CEO”) on April 18, 2021. One portion of the consideration deliverable by the Company in connection with the acquisition of the Geothermal Right is still outstanding. A US\$200,000 payment 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. The board has determined that it is not probable that the milestone will be achieved, and accordingly it has not been recognized in the financials.

Progress continues with respect to the development of the SFD-GT geothermal sensor technology. The Company’s first project related to such technology tested, identified, and analyzed the desired elements of the SFD® geothermal sensor response over known geothermal areas, with the ultimate goal of providing a green upstream geophysical service for advancing renewable power initiatives in Canada and abroad. The agreed project work was completed in November 2021 with total funding of \$50,000 from the National Research Council of Canada Industrial Research Assistance Program (“NRC IRAP”). During Q1-23, the Company submitted a proposal for up to approximately \$200,000 to NRC IRAP for a funding and research plan for the next phase to support the research and development of the SFD® technology for geothermal applications. As of the date of this MD&A, the Company funding for the next phase of research has not been finalized.

Patents

In Q1-22, NXT announced its patent application in Brazil has been allowed. As of the date of this MD&A, NXT has been granted SFD® patents on its SFD® technology in forty-seven jurisdictions, including Brazil (February 2022), India (July 2021), Russia (January 2017), Japan (July 2017), Canada (August 2017), Mexico (September 2017), the United States (two patents were granted in November 2017 and September 2018, respectively), China (April 2018), and Europe (January 2020). These patents protect our proprietary SFD® technology and serve as independent third-party recognition of our technological invention.

Summary of Operating Results

(Figures are given in "\$")	Q3-24	Q3-23	YTD 2024	YTD 2023
SFD [®] -related revenue	\$ -	\$ -	\$ 602,072	\$ -
Expenses:				
SFD [®] -related costs, net	338,786	348,169	1,322,886	968,199
General and administrative expenses	1,003,871	841,200	2,987,220	2,644,261
Amortization	482,157	439,868	1,404,855	1,319,604
	1,824,814	1,629,237	5,714,961	4,932,064
Other Expenses (income):				
Interest expense, net	223,214	48,954	525,982	82,361
Foreign exchange (gain) loss	(102,809)	21,489	7,195	(2,917)
Intellectual property and other	5,526	4,276	149,024	13,904
Loss (gain) on fair value remeasurement	(473,345)	-	482,123	-
	(347,414)	74,719	1,164,324	93,348
Loss before income taxes	(1,477,400)	(1,703,956)	(6,277,213)	(5,025,412)
Income tax expense	-	-	-	-
Net loss and comprehensive loss	(1,477,400)	(1,703,956)	(6,277,213)	(5,025,412)
Net loss per share – basic	\$ (0.02)	\$ (0.02)	\$ (0.08)	\$ (0.07)
Net loss per share – diluted	\$ (0.02)	\$ (0.02)	\$ (0.08)	\$ (0.07)

Quarterly operating results. Net loss for Q3-24 compared to Q3-23 decreased by \$226,556 and by \$0.00 per share-basic. There were no SFD[®] related-revenues in either quarter. SFD[®]-related costs, net, were \$9,383 lower due to the aircraft lease being converted to a finance lease and payments being applied to the lease liability, and not expensed. This was offset by required maintenance continued to be performed on the aircraft to get it prepared for the SFD[®] surveys scheduled for Q4-24. G&A expenses increased by \$162,671 or 19%, compared to Q3-23, due to commissions on SFD[®]-related revenue and retainers, and an increase in business development activity. Amortization expense increased \$42,289 due to the aircraft now being treated as a finance lease. Interest expense, net, increased by \$174,260 in Q3-24 versus Q3-23 due to the Debentures interest charges. Foreign exchange loss (gain) improved by \$124,298 as the CDN\$ strengthen at September 30, 2024 versus June 30, 2024 and weakened at September 30, 2023 versus June 30, 2023, with the Company having a net liability in US\$ in both periods. The Company recognized a gain of \$473,345 on the fair value remeasurement of the November Debentures and 2024 Debentures due to changes in the US\$/CDN\$ exchange rates and the Company's share price. Other expenses related mostly to SFD[®] patent activity. More detail on each line item is provided below.

Year-to-date operating results. Net loss for YTD 2024 compared to YTD 2023 increased by \$1,251,801 and by \$0.01 per share-basic. SFD[®] related-revenues increased \$602,072, and SFD[®]-related costs, net, were \$354,687 higher due to the Turkish SFD[®] Survey and from aircraft maintenance. G&A expenses increased by \$342,959, compared to YTD 2023, due to one additional headcount (Chief Executive Officer in YTD 2024), sales commissions and higher business development travel costs. Amortization expense increased \$85,251 due to the aircraft now being treated as a finance lease. Interest expense, net, increased by \$443,621 in YTD 2024 versus YTD 2023 due to the Debentures interest charges. Foreign exchange loss (gain) worsened \$10,112 as the CDN\$ weaken at September 30, 2024 versus December 31, 2023 and strengthened at September 30, 2023 versus December 31, 2022, with the Company having a net liability

in US\$ in both periods. The Company recognized a loss of \$482,123 on the fair value remeasurement of the November Debentures and the 2024 Debentures. Other expenses related mostly to loss on the write-off of leasehold improvements and lease modification. More detail on each line item is provided below.

SFD[®]-Related Costs, Net

SFD[®]-Related Costs (Figures are given in "\$")	Q3-24	Q3-23	Net change	%
Aircraft lease costs	\$ -	\$ 90,078	\$ (90,078)	>(100)
Aircraft operations	334,467	233,768	100,699	43
Survey projects	4,319	24,323	(20,004)	(82)
Total SFD[®]-related costs, net	338,786	348,169	(9,383)	(3)

SFD[®]-Related Costs (Figures are given in "\$")	YTD 2024	YTD 2023	Net change	%
Aircraft lease costs	\$ 91,237	\$ 272,453	\$ (181,216)	(67)
Aircraft operations	1,071,740	670,409	401,331	60
Survey projects	159,909	25,337	134,572	>100
Total SFD[®]-related costs, net	1,322,886	968,199	354,687	37

SFD[®]-related costs include aircraft charter costs (net of charter hire reimbursements), lease expenses, and aircraft operation and maintenance costs.

In Q3-24, Aircraft lease costs were \$nil because as of March 22, 2024, the Company extended its aircraft lease for an additional three years and converted the lease to a finance lease. Please see the section "Contractual Obligations Leases". The Company will own the aircraft at the end of the lease term. Aircraft operations were \$100,699 (43%) higher as required maintenance continued to be performed on the aircraft to get it prepared for the SFD[®] surveys scheduled for Q4-24. Survey projects were \$20,004 (82%) lower versus Q3-23 the Company began to incur costs for the Turkish SFD[®] survey in Q3-23.

During YTD 2024, Aircraft operations were \$401,331 (60%) higher as required maintenance has been performed before the planned Q4-24 SFD[®] Surveys are mobilized. Survey projects were \$134,572 higher due to direct costs to complete the Turkish SFD[®] Survey in Q1-24.—Aircraft lease costs were 67% lower due to the conversion of the lease from an operation lease to a finance lease.

G&A Expenses

G&A Expenses (Figures are given in "\$")	Q3-24	Q3-23	Net change	%
Salaries, benefits and consulting charges	\$ 484,558	\$ 404,416	\$ 80,142	20
Board and professional fees, public company costs	226,524	170,590	55,934	33
Premises and administrative overhead	168,037	205,937	(37,900)	(18)
Business development	90,447	20,024	70,423	352
Stock-based compensation	34,305	40,233	(5,928)	(15)
Total G&A Expenses	1,003,871	841,200	162,671	19

G&A Expenses (Figures are given in "\$")	YTD 2024	YTD 2023	Net change	%
Salaries, benefits and consulting charges	\$ 1,409,606	\$ 1,168,466	\$ 241,140	21
Board and professional fees, public company costs	627,073	598,678	28,395	5
Premises and administrative overhead	591,952	619,122	(27,170)	(4)
Business development	187,069	79,652	107,417	135
Stock-based compensation	171,520	178,343	(6,823)	(4)
Total G&A Expenses	2,987,220	2,644,261	342,959	13

G&A expenses increased \$162,671, or 19%, in Q3-24 compared to Q3-23 for the following reasons:

- salaries, benefits, and consulting charges increased \$80,142 or 20%, due to commissions on SFD®-related revenue and retainers;
- board and professional fees and public company costs increased \$55,934 or 33%, due to professional fees related to the convertible debentures;
- premises and administrative overhead costs decreased \$37,900 or 18% due to the 30% space reduction as of May 1, 2024. This was offset by additional SFD® survey software expenditures as the Company prepares for its SFD® surveys;
- business development costs increased \$70,423 or 352%, due to increased travel related to finalizing SFD® survey contracts. In Q3-23 there was minimal travel as staff time was focused on planning for the Turkish SFD® survey; and
- SBCE's were lower in Q3-24 versus Q3-23 by \$5,928 or 15%, as-director fees were paid via SBCE during Q3-23, but not in Q3-24. This was offset by the ESP Plan expense increasing as employee contributions increased in Q3-24 as more employees participated and with increased contribution rates. The RSU expense increased in Q3-24 versus Q3-23 as the previous RSU grant from 2020 was fully vested as of August 2023. . Please see the next section "*Discussion of Operations– Stock-based Compensation Expenses*" for further information on the SBCE.

G&A expenses increased \$342,959 or 13%, in YTD 2024 compared to YTD 2023 for the following reasons:

- salaries, benefits, and consulting charges increased \$241,140 or 21%, due to commissions and retainers paid for SFD® Surveys and one additional headcount;
- board and professional fees and public company costs increased \$28,395 or 5%, as no board fees were taken as SBCE in YTD 2024;
- premises and administrative overhead costs decreased \$27,170 or 4%, due to the 30% space reduction as of May 1, 2024. This was offset by additional SFD® survey software expenditures as the Company prepares for its SFD® surveys;
- business development costs increased \$107,407 or 135% due to increased travel related to finalizing SFD® survey contracts.; and
- SBCE's were lower in YTD 2024 versus YTD 2023 by \$6,823 or 4%, as the Company paid some director fees via stock options during YTD 2023, but not during YTD 2024. This resulted in a lower

stock option expense for YTD 2024. Also, The RSU expense in YTD was lower due to a lower share price. These decreases were offset by the ESP Plan expense increasing as employee participation in the plan increased in YTD 2024. Also, services performed by the marketing consultant during Q1-24 were expensed, which is intended to be paid in shares only. Please see the next section “Discussion of Operations— Stock-based Compensation Expenses” for further information on the SBCE.

Stock-based Compensation Expenses

Stock-based Compensation Expenses (Figures are given in “\$”)	Q3-24	Q3-23	Net change	% change
Stock Option Expense	\$ 10,091	\$ 23,750	\$ (13,659)	(58)
DSUs	-	-	-	-
RSUs	10,227	6,789	3,438	51
ESP Plan	13,987	9,694	4,293	44
Consultant Compensation	-	-	-	-
Total SBCE	34,305	40,233	(5,928)	(15)

Stock-based Compensation Expenses (Figures are given in “\$”)	YTD 2024	YTD 2023	Net change	% change
Stock Option Expense	\$ 66,526	\$ 92,500	\$ (25,974)	(28)
DSUs	-	-	-	-
RSUs	41,701	62,441	(20,740)	(33)
ESP Plan	30,928	23,402	7,526	32
Consultant Compensation	32,366	-	32,366	100
Total SBCE	171,521	178,343	(6,822)	(4)

SBCE varies in any given quarter or year as it is a function of several factors, including the number of units of each type of stock-based compensation plan issued in the period and the amortization term based on the number of years for full vesting of the units.

SBCE is also a function of periodic changes in the inputs used in the Black-Scholes option valuation model, such as volatility in NXT’s trailing common share price. For cash-settled stock-based compensation awards variability will occur based on changes to observable prices.

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. On January 6, 2023 the Company granted 2,050,000 incentive stock options at a price of \$0.216 to employees, officers and directors (the “Incentive Options”). These Incentive Options will vest upon receipt of cash for SFD® services performed via the following vesting milestones: one-third upon collection of US\$6.5 million, one-third upon the collection of the next US\$7.0 million and the final one-third upon collection of an additional US\$7.5 million. In Q2-24 the Company has determined that reaching the first vesting milestone of collecting US\$6.5 million for the Incentive Options is probable, and therefore began to recognize the stock option expense related to the Incentive Options.

The deferred share unit (“DSUs”) plan (the “DSU Plan”) is a long-term incentive plan that permits the grant of DSUs to qualified directors. DSUs granted under the DSU Plan are to be settled at the retirement,

resignation, or death of the Board member holding the DSUs. No DSUs were granted in either YTD 2024 or YTD 2023. Currently 37,354 DSUs are outstanding.

Restricted Share 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 RSUs 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. The Company has settled the RSU vesting with common shares and cash. On February 21, 2024 the Company granted 1,035,000 RSUs to employees and officers which will vest over a three-year period. At September 30, 2024, 915,000 RSUs are outstanding, after forfeitures.

The 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 2023 and to date in 2024 the Company has elected to issue common shares from treasury.

On October 1, 2023, the Company entered into a five-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 under such agreement is subject to prior approval from the TSX. If the TSX does not approve the share issuance, the marketing consultant will be paid in cash. As of September 30, 2024, 634,439 common shares (or equivalent of US\$80,000), less any withholding taxes, per the agreement, are due to the marketing consultant.

SBCE in Q3-24 was higher compared to Q3-23 by \$5,928 or 15% as the Company began to recognize the expense for the first milestone of the Incentive Options. Offsetting this increase were director fees that were paid via SBCE during Q3-23, but not in Q3-24. Also, the ESP Plan expense increased as employee contributions increased in Q3-24. The RSU expense increased in Q3-24 versus Q3-23 as the previous RSU grant from 2020 was fully vested as of August 2023.

SBCE in YTD 2024 was lower compared to YTD 2023 by \$6,822 or 4%. Though the Company began to recognize the expense for the first milestone of the Incentive Options, director fees were paid via SBCE during 2023, but not during YTD 2024. This resulted in a lower stock option expense for YTD 2024. Also, the ESP Plan expense increased as employee participation in the plan increased in YTD 2024. The RSU expense decreased YTD due to share price volatility. Also, services performed by the marketing consultant during Q1-24 were expensed which is intended to be paid in shares only.

Amortization

Amortization (Figures are given in “\$”)	Q3-24	Q3-23	Net change	%
Property and equipment	\$ 57,529	\$ 15,240	\$ 42,289	277
Intellectual property	424,628	424,628	-	0
Total Amortization	482,157	439,868	42,289	10

Amortization (Figures are given in "\$")	YTD 2024	YTD 2023	Net change	%
Property and equipment	\$ 130,970	\$ 45,719	\$ 85,251	186
Intellectual property	1,273,885	1,273,885	-	0
Total Amortization Expenses	1,404,855	1,319,604	85,251	6

Property and equipment and related depreciation expense. Property and equipment depreciation was higher in Q3-24 compared to Q3-23 and YTD 2024 versus YTD 2023 the Company converted its airplane lease to a finance lease, and as a result began to record the amortization of the aircraft as depreciation expense over the estimated remaining useful life of the aircraft.as the Company acquired new SFD Survey assets between the periods.

Intellectual property and related amortization expense. NXT acquired specific rights to utilize the proprietary SFD® technology in global hydrocarbon exploration applications from the inventor of the SFD® technology, the Former CEO, on August 31, 2015. The value attributed to the acquired IP assets was \$25.3 million. The IP assets are being amortized on a straight-line basis over a fifteen-year period (future amortization expense of \$1,685,000 per year).

The Company acquired the SFD® technology for the Geothermal Rights from the Former CEO on April 18, 2021. 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 five-year aggregate total of \$68,902.

IP is subject to ongoing assessment of potential indicators of impairment of the recorded net book value. No impairments were recognized in YTD 2024 or YE-23.

Other Expenses (Income)

Other Expenses (Figures are given in "\$")	Q3-24	Q3-23	Net change	%
Interest expense, net	\$ 223,214	\$ 48,954	\$ 174,260	>100
Foreign exchange loss (gain)	(102,809)	21,489	(124,298)	>(100)
Intellectual property and other	5,526	4,276	1,250	29
Gain of fair value remeasurement	(473,345)	-	(473,345)	>(100)
Loss on disposal of assets, lease modifications	-	-	-	-
Total Other Expenses, net	(347,414)	74,719	(422,133)	>(100)

Other Expenses (Figures are given in "\$")	YTD 2024	YTD 2023	Net change	%
Interest expense, net	\$ 525,982	\$ 82,361	\$ 443,621	>100
Foreign exchange loss (gain)	7,195	(2,917)	10,112	>100
Intellectual property and other	13,539	13,904	(365)	(3)
Loss of fair value remeasurement	482,123	-	482,123	>100
Loss on disposal of assets & lease modifications	135,485	-	135,485	100
Total Other Expenses, net	1,164,324	93,348	1,070,976	>100

Interest expense, net. This category of other expenses includes interest expense from long-term debt, the Debentures netted by interest income earned on guaranteed investment certificates.

Interest expense increased in Q3-24 versus Q3-23, and YTD 2024 versus YTD 2023 due to the Company issuing the Debentures during 2023 and YTD 2024.

Foreign exchange loss (gain). This category includes losses and gains caused by changes in the relative currency exchange values of US\$ and CDN\$. The Company held a net US\$ liability at both September 30, 2024 and September 30, 2023 which included accounts receivable, cash and cash equivalents, accrued liabilities, deferred revenue, convertible debentures, US\$ lease obligations, and the security deposit for the aircraft, all of which have an effect on the unrealized foreign exchange gain and loss. For Q3-24 the exchange gain was the result of (i) the 1.4% stronger CDN\$ to US\$ between September 30, 2024 and June 30, 2024 and (ii) the Company having a significant net liability in US\$. For Q3-23 the exchange gain was the result of the weaker CDN\$ to US\$ exchange rate between September 30, 2023 and June 30, 2023 and the Company having a net liability in US\$.

For YTD 2024 the exchange loss was the result of (i) the 2.1% weaker CDN\$ to US\$ between September 30, 2024 and December 31, 2023 and (ii) the Company having a net liability in US\$. For YTD 2023 the exchange gain was the result of the stronger CDN\$ to US\$ exchange rate of 0.5% between December 31, 2022 and September 30, 2023, and the Company having a net liability in US\$.

The Company does not currently enter into hedging contracts, but does, however, use alternative strategies to reduce the volatility of US dollar liabilities including holding excess US dollars before converting to CDN dollars.

IP and other. This category of other expenses primarily includes costs related to IP filings and research & development activity related to the SFD® technology-

In Q3-24 and Q3-23 and YTD 2024 and YTD 2023, the Company's IP and other expenses were associated with periodic patent maintenance and renewal fees required during these time periods.

Loss on fair value remeasurement. The Company recognized a loss of \$482,123 YTD 2024 on the fair value remeasurement of the November Debentures and 2024 Debentures due to changes in the US\$/CDN\$ exchange rates and the Company's share price.

Loss on disposal of assets & lease modifications. During Q2-24 the Company reduced its office space by approximately 31% and extended its office lease until September 2030. In Q1-24, the Company extended its Aircraft lease for three years, until March 28, 2027. As a result of the office space reduction and the extensions of the aircraft and office leases, the Company recognized the following losses YTD 2024:

Aircraft lease extension	\$ 31,686
Office lease extension	1,214
Write-off of leasehold improvements	101,006
Write-off of office furniture and equipment	1,549
Total	135,455

Income Tax Expense

There was no income tax expense in YTD 2024 or YTD 2023.

Competition

NXT's SFD® airborne survey service is based upon a proprietary technology, which is capable of remotely identifying, from a survey aircraft, subsurface anomalies associated with potential hydrocarbon traps with a resolution that it believes is technically superior to other airborne survey systems. To the Company's knowledge, there is no other company employing technology comparable to its SFD® survey system for oil and natural gas and geothermal exploration.

Seismic is the standard technology used by the oil and gas industry to image subsurface structures. It is our view that the SFD® survey system is highly complementary to seismic analysis. NXT's system may reduce the need for seismic in wide-area reconnaissance but will not replace the role of seismic in verifying structure, closure, and selecting drilling locations. The seismic industry is competitive with many international and regional service providers.

The SFD® system can be used as a focusing tool for seismic. With an SFD® survey, a large tract (that is, a tract over 5,000 square kilometers) of land can be evaluated quickly to identify locations with indications of reservoir potential. Seismic surveys, although effective in identifying these locations, are much more expensive, require significantly more time, and impose a much greater negative impact on local communities and the environment. An SFD® survey deployed first can provide necessary information to target a seismic program over a limited area of locations selected by SFD®. This approach can result in a more effective seismic program and reduce the overall cost, time, community resistance, and environmental impact required to locate and qualify a prospect.

The energy industry uses other technologies for wide area oil and natural gas reconnaissance exploration, such as aeromagnetic and gravity surveys. These systems can provide regional geological information, such as basement depth, sedimentary thickness and major faulting, and structural development.

Risk and Uncertainties

Hydrocarbon and geothermal exploration operations involve a number of risks and uncertainties that may affect the consolidated financial statements and are reasonably likely to affect them in the future. These risks and uncertainties are discussed in detail in the NXT Annual Information Form ("AIF") for the Year Ended December 31, 2023, "Section 5 Risk Factors", dated March 27, 2024 and available as an electronic copy on NXT's website at www.nxtenergy.com and on SEDAR+ at www.sedarplus.ca.

We caution that the factors referred to in the AIF and those referred to as part of particular forward-looking statements may not be exhaustive and that new risk factors emerge from time to time in the rapidly changing business environment.

Summary of Quarterly Results

A summary of operating results for each of the trailing eight quarters (including a comparison of certain key categories to each respective prior quarter) follows:

(Figures are given in "\$")	Q3-24	Q2-24	Q1-24	Q4-23
SFD [®] -related revenue	\$ -	\$ -	\$ 602,072	\$ 2,145,716
Net loss	(1,477,400)	(3,013,213)	(1,786,600)	(425,701)
Loss per share – basic	\$ (0.02)	\$ (0.04)	\$ (0.02)	\$ (0.01)
Loss per share – diluted	\$ (0.02)	\$ (0.04)	\$ (0.02)	\$ (0.01)

(Figures are given in "\$")	Q3-23	Q2-23	Q1-23	Q4-22
SFD [®] -related revenue	\$ -	\$ -	\$ -	\$ -
Net loss	(1,703,956)	(1,706,809)	(1,614,647)	(1,469,549)
Loss per share – basic	\$ (0.02)	\$ (0.02)	\$ (0.02)	\$ (0.02)
Loss per share – diluted	\$ (0.02)	\$ (0.02)	\$ (0.02)	\$ (0.02)

In Q3-24, the Company incurred additional G&A costs in anticipation of increased commercial activity, recognized a gain for the fair value remeasurement of the convertible debentures, and unrealized foreign exchange loss (gain) improved due to a strengthening CDN\$. In Q2-24, the Company wrote off leasehold improvements due to the 31% office space reduction, recognized a loss for the fair value remeasurement of the convertible debentures, related increased interest expense, and unrealized foreign exchange loss increased due to the net US\$ liabilities held by the Company. In Q1-24, SFD[®] related-revenues were from the Turkish SFD[®] survey. Net loss reflected higher SFD[®]-related costs, net due to the Turkish SFD[®] Survey an additional headcount, sales commissions and higher business development travel costs as well as interest expense due to the Debentures issued during 2023 and YTD 2024. In Q4-23 the Company earned SFD[®]-related revenue and incurred SFD[®]-related costs due to the Turkish SFD[®] Survey, which reduced its net loss versus the previous six quarters. During Q3-23 the Company decreased G&A spending due to less professional fees as there was minimal incremental financing during the quarter. This was offset by costs incurred to plan for the upcoming Turkish SFD[®] Survey and foreign exchange losses due to the weakening CDN\$. In Q2-23 the Company incurred G&A costs due to increased business development activity and professional fees related to the Ataraxia Debentures. In Q1-23 the Company incurred lower SFD[®]-related costs as there was no unplanned maintenance on the aircraft, and lower G&A as the Company reduced its headcount by one. During Q4-22 costs were reduced primarily due to lower vacation accruals due to vacation timing, and SBCE. In each quarter between Q4-22 and Q3-24, the Company incurred net losses due to incurred SFD[®]-related costs related to aircraft lease and aircraft maintenance costs, G&A expenses, and non-cash items such as SBCE, which can be a significant expense in any given quarter. More details are provided below:

- in Q3-24, the Company incurred additional G&A costs in anticipation of increased commercial activity, recognized a gain for the fair value remeasurement of the convertible debentures, and unrealized foreign exchange loss (gain) improved due to a strengthening CDN\$;
- in Q2-24, the Company wrote off leasehold improvements due to the 31% office space reduction, interest expense increased and fair value remeasurement due to the addition of the 2024

Debenture, and with the strengthening US\$ versus the CDN\$ unrealized foreign exchange loss increased due to the net US\$ liabilities;

- in Q1-24, SFD[®]-related revenue and SFD[®]-related costs increased due to the Turkish SFD[®] Survey. G&A increased due to an additional headcount and business development costs. Interest expense increased due to the issuance of the November Debentures;
- in Q4-23, SFD[®]-related revenue and SFD[®]-related costs increased due to the Turkish SFD[®] Survey and therefore reduced the Q4-23 loss versus the previous five quarters. Interest expense increased due to the issuance of the November Debentures;
- in Q3-23, costs decreased as G&A spending due to less professional fees, offset by costs incurred to plan for the Turkish SFD[®] Survey and increased foreign exchange losses due to the weakening CDN\$;
- in Q2-23, costs increased primarily due to higher professional fees and business development activity;
- in Q1-23, costs were reduced primarily due to lower headcount and maintenance costs; and
- in Q4-22, costs were reduced primarily due to lower vacation and SBCE.

Liquidity and Capital Resources

Going Concern

The unaudited condensed consolidated interim financial statements for Q3-24 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 the audited 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 the unaudited condensed consolidated interim 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 to date in 2024 the Company completed private placements which resulted in raising an additional net proceeds of \$8,551,690 and completed an SFD[®] survey which generated operating funds. In addition, on November 1, 2024 the Company announced that Ataraxia will fund the final US\$900,000 of the 2023 agreement between Ataraxia and the Company. 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.

The Company continues to develop its pipeline of opportunities to secure additional revenue contracts. The Company's longer-term success remains dependent upon its ability to convert these revenue 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 Company's unaudited condensed consolidated interim 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 the audited 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's cash and cash equivalents and short-term deposits at September 30, 2024 totaled \$0.94 million. Net working capital totaled \$(2.94) million. See the information in the section "*Liquidity and Capital Resources – Net Working Capital*" for further information.

Risks related to having sufficient ongoing net working capital to execute survey project contracts are mitigated through NXT's normal practice of obtaining advance payments and progress payments from customers throughout the course of the projects, which often span three to four months. In addition, where possible, risk of default on client billings has been mitigated through the use of export insurance programs offered by Export Development Canada.

The Company does not have provisions in its leases, contracts, or other arrangements that would trigger additional funding requirements or early payments except that if the Company were to default on its office lease, the current month rent, plus the next three months, become immediately due. If the Company were to default on the aircraft lease, the Company would be required to deliver the aircraft back to the Lessor.

Net Working Capital (Non-GAAP Measure)

Net Working Capital (Figures are given in "\$")	September 30, 2024	December 31, 2023	Net Change	%
Current assets (current liabilities)				
Cash and cash equivalents	\$ 942,515	\$ 401,713	\$540,802	135
Accounts receivable	101,989	1,828,523	(1,726,534)	(94)
Prepaid expenses and deposits	75,340	53,673	21,667	40
Accounts payable and accrued liabilities	(1,176,790)	(1,836,741)	659,951	36
Unearned revenue	(236,748)	-	(236,748)	>(100)
Current portion of Convertible debentures	(1,891,260)	(1,842,566)	(48,694)	(3)
Current portion of long-term debt	(111,111)	(111,111)	-	-
Current portion of lease obligation	(639,662)	(343,513)	(296,149)	(86)
Total Net Working Capital	(2,935,727)	(1,850,022)	(1,085,705)	(59)

NXT had net working capital of \$(2,935,727) as at September 30, 2024.

Net working capital at September 30, 2024 compared to December 31, 2023 decreased by \$1,085,705, or 59%. Funds were received from the 2024 Debenture and payments on Turkish and Southeast Asia SFD® surveys' accounts receivable. The increase from these funds was used for the settling of accounts payable, accrued liabilities and lease obligations.—Please see "*Advisories – Non-GAAP measures*" for further information.

Accounts Payable and Accrued Liabilities

(Figures are given in "\$")	September 30, 2024	December 31, 2023	Net Change	%
Trade accounts payable	\$ (213,729)	\$ (386,194)	\$ 172,465	45
Deferred advisory board payable	(25,329)	(24,805)	(524)	(2)
Accrued liabilities	(268,453)	(633,850)	365,397	58
Accrued interest	(83,615)	(38,222)	(45,393)	119
Accrued directors' fees payable	(162,468)	(228,199)	65,731	29
Salaries payable	(274,284)	(444,857)	170,573	38
Vacation pay accrued	(81,774)	(78,246)	(3,528)	(5)
RSU and ESP Plan liability	(67,138)	(2,368)	(64,770)	>(100)
Total accounts payable	(1,176,790)	(1,836,741)	659,951	36

Accounts payable and accrued liabilities decreased by \$659,951 or 36%, as at September 30, 2024 compared to December 31, 2023 for the following reasons:

- trade accounts payable decreased by \$172,465, or 45%, as the Company cleared SFD[®] survey related accounts payables payment of working capital requirements from the Turkish SFD[®] Survey with funds received from accounts receivable payments;
- accrued liabilities decreased by \$365,397, or 58%, as due to the payment of working capital requirements from the Turkish SFD[®] Survey with funds received from the 2024 Debenture;
- accrued interest increased \$45,393, or 119% due to the issuance of the November Debentures and the 2024 Debentures;
- accrued directors' fees payable decreased by \$65,731, or 29%, as most directors' fees payable at December 31, 2023 were converted into the November Debentures;
- salaries payable decreased by \$170,573 or 38%, as the Company paid a portion of the deferred salary that was outstanding at December 31, 2023;
- vacation pay accrued increased by \$3,528, or 5%, due to the timing of vacations; and
- RSU and ESP Plan liability increased 64,770 or >100% due to the issuance of RSUs to employees during the Q1-24.

Cash Flow

Cash Flow-from/(used in) (Figures are given in "\$")	Q3-24	Q3-23	YTD 2024	YTD 2023
Operating activities	\$(1,320,888)	\$(953,051)	\$(2,580,785)	\$(3,363,362)
Financing activities	(156,678)	253,114	3,159,687	3,469,891
Investing activity	-	-	(95,446)	-
Effect of foreign exchange changes on cash	(12,905)	18,921	(10,198)	(558)
Net source (use) of cash	(1,490,471)	(681,016)	473,258	105,971
Cash and cash equivalents, start of period	2,365,442	1,050,424	401,713	263,437
Cash and cash equivalents, end of period	874,971	369,408	874,971	369,408
Short-term investments, end of period	67,544	-	67,544	-
Total cash and short-term investments, end of the period	942,515	369,408	942,515	369,408

The overall net changes in cash balances in each of the periods noted above is a function of several factors including any inflows (outflows) due to changes in net working capital balances, funds from and repayment of financings and property, plant and equipment investments. Further information on the net changes in cash, by each of the operating, financing, and investing activities, is as follows:

Operating Activities (Figures are given in "\$")	Q3-24	Q3-23	YTD 2024	YTD 2023
Net loss for the period	\$(1,477,400)	\$(1,703,956)	\$(6,277,213)	\$(5,025,412)
Total non-cash expense and lease items	(63,912)	492,914	2,242,394	1,433,473
Operating activities before change in non-cash working capital balances	(1,541,312)	(1,211,042)	(4,034,819)	(3,591,939)
Change in non-cash working capital balances	220,424	257,991	1,454,034	228,577
Total cash used in operating activities	(1,320,888)	(953,051)	(2,580,785)	(3,363,362)

Operating cash flow decreased by \$367,837 in Q3-24 as compared to Q3-23 due to increased G&A expenditures (Please see "G&A Expenses" for further information) and debenture interest expense.

Operating cash flow increased by \$782,577 in YTD 2024 as compared to YTD 2023 due to payment of outstanding accounts receivable from the Turkish SFD® Surveys, net of accounts payable and accrued liability payments related to the Turkish SFD® Survey and G&A expenditures.

Financing Activities (Figures are given in "\$")	Q3-24	Q3-23	YTD 2024	YTD 2023
Repayment of long-term debt	\$ (27,777)	\$ (27,778)	\$ (83,333)	\$ (83,333)
Proceeds from stock compensation plans	13,985	15,332	30,927	33,653
Net proceeds from Private Placement	-	-	-	1,622,057
Proceeds from Convertible Debentures	(21,615)	265,560	3,450,463	1,897,514
Repayment of financial liability and lease obligations	(121,271)	-	(238,370)	-
Total cash from (used in) financing activities	(156,678)	253,114	3,159,687	3,469,891

Proceeds were received from employee contributions under the ESP Plan. Proceeds from the convertible debentures were from the last tranche of the November debentures in Q1-24 and the 2024 Debenture in Q2-24. Please see the section "November Debentures" and "2024 Debentures". In Q2-23 proceeds were received from the Ataraxia Debenture. Please see the section "Ataraxia Debenture".

In Q1-23 net proceeds from the Private Placement (as defined herein) was \$1,622,057. Please see the section "Private Placement".

Beginning in Q2-24, the Company began payment on the revised Aircraft Lease which as of Q2-24 is a finance lease. Please see the section "Contractual Obligations Leases"

Investing Activity (Figures are given in "\$")	Q3-24	Q3-23	YTD 2024	YTD 2023
Purchase of property, plant & equipment	\$ -	\$ -	\$ (27,029)	\$ -
Proceeds from short-term investments	-	-	(68,417)	-
Total Cash used in Investing Activity	-	-	(95,446)	-

The Company upgraded certain SFD® equipment in YTD 2024 to enhance the data acquisition phase of the SFD® Survey and invested excess funds in guaranteed investment certificates.

Contractual Obligations

Leases

Office lease. On May 1, 2024, the Company surrendered approximately 3,207 square feet of its office lease to the landlord and extended its lease for an additional five years until September 30, 2030. Additional terms of the lease extension include an implied interest rate of 10%, and monthly payments of \$19,771. The lease will continue to be treated as an operating lease.

Aircraft Lease. On March 22, 2024 the Company extended its aircraft lease for three years, until March 28, 2027. The Company will own the aircraft at the end of the lease term. Terms of the lease extension include 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. The lease is being treated as a finance lease.

The estimated minimum annual commitments for the Company's lease components as at September 30, 2024 are listed in the following table:

Lease payments ¹	Office	Operating Costs	Aircraft ²	Printer	Total
2024	\$ 59,313	\$ 40,850	\$ 162,874	\$ 856	\$ 263,893
2025	237,252	163,401	651,496	3,424	1,055,573
2026	237,252	163,401	651,496	3,139	1,055,288
2027	237,252	163,401	109,538	-	510,191
2028	237,252	163,401	-	-	400,653
2029-2030	415,191	286,312	-	-	701,503
Total	1,423,512	980,766	1,575,404	7,419	3,987,101

1. Figures are given in "Canadian \$"
2. US\$ payments have been converted to CDN\$ at a rate of 1.3509.

Debentures

Repayment of principal and interest (US\$) as of September 30, 2024	US\$	CDN\$ ¹
2024	\$ 131,800	\$ 178,048
2025	3,012,200	4,069,181
2026	2,840,050	3,836,624
Total principal and interest payments	5,984,050	8,083,853
Less interest	(712,050)	(961,908)
Less Debt issuance costs	(42,193)	(56,998)
Net principal remaining	5,229,807	7,064,947
Change in fair value of convertible debentures	356,890	482,123
Current portion of convertible debentures	1,400,000	1,891,260
Non-current portion of convertible debentures	4,186,697	5,655,810

1. US\$ payments have been converted to CDN\$ at a rate of 1.3509.

2024 Debentures

On May 31, 2024 the Company issued convertible debentures (the “2024 Debentures”) to MCAPM LP for the principal amount of US\$2,000,000, being approximately CDN\$2,773,660. The 2024 Debentures bear interest at 10.0% per annum, paid quarterly in arrears, and are due and payable on May 31, 2026. The 2024 Debentures are convertible into common shares at a conversion price of US\$0.25 (approximately CDN\$0.3428) per Common Share which provides MCAPM LP with the right to obtain up to 8,000,000 common shares of the Company.

The proceeds from the Debenture are being used to support the working capital needs of the upcoming SFD® survey in Southeast Asia, and other general and administrative costs which include business development and marketing activities required to transform the existing pipeline of SFD® opportunities into firm contracts.

November Debentures

On November 8, 2023 the Company issued the first tranche of a multi-tranche unsecured 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). During 2023, the Company issued the first two tranches of the November Debentures for US\$1,150,000 (approximately CDN\$1,577,600).

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 include MCAPM, LP and Michael P. Mork (“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 has the right to own, after conversion of all of their 2024 Debentures and November Debentures, 30,526,321 common shares. This represents approximately 32.5% of the issued and outstanding common shares as of the date of the financial statements (after giving effect to the conversion of the full amount of their 2024 Debentures and the November Debentures).

Ataraxia Debentures

On May 24, 2023 the Company announced a multi-tranche a two-year term US\$2.3 million convertible debenture financing with Ataraxia. The terms of the subscription agreement with Ataraxia include an annual interest rate of 10%, paid quarterly, a fixed conversion price of US\$0.143 per common share, and the right to appoint a board member. On May 31, 2023, the Company received US\$1,200,000 (CDN\$1,631,954) of the subscription price for the Ataraxia Debentures. The Company received an additional US\$200,000 (CDN\$265,560) tranche of the Ataraxia Debenture subscription price on July 10, 2023 for a total amount of US\$1,400,000 (CDN\$1,897,514). On November 1, 2024 Ataraxia indicated to the Company it will now fund the remaining balance of US\$900,000 (approximately CDN\$1,252,080) of which US\$500,000 (approximately CDN\$695,600) was received at the date of the MD&A. Once Ataraxia has completed the tranches of its US\$900,000 investment, Ataraxia will own an aggregate of US\$2,300,000 Debentures. The proceeds from the Debentures will be used to support the working capital needs of the upcoming SFD® surveys in Africa and Southeast Asia, and other general and administrative

costs which include business development and marketing activities required to transform the existing pipeline of SFD[®] opportunities into firm contracts.

With the acquisition of the Debentures, Ataraxia will have the right to own, after conversion of the Ataraxia Debentures, up to 13,540,209 Common Shares, representing approximately 14.7% of the issued and outstanding Common Shares (after giving effect to the conversion of the full amount of the Ataraxia Debentures).

The Ataraxia Debentures 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 Ataraxia Debentures are payable on demand and is secured by a general security agreement, subordinate to the long-term debt. As of the date of this MD&A no preferred or common shares have been issued pursuant to the conversion of the Ataraxia Debentures.

On May 31, 2023, the Company and Ataraxia entered into an Investor Rights Agreement (the “Investor Rights Agreement”) pursuant to which Ataraxia has been granted the right: (i) to nominate one person for election or appointment as a director of the Company; (ii) to have one representative of Ataraxia attend the Company’s Board meetings as an observer (except any portion of a board of director meeting where the Company’s relationship with Ataraxia is to be a subject of discussion); (iii) to purchase up to its pro rata portion (calculated on a fully diluted basis) of any securities offered by the Company, subject to certain limitations set forth in the Investor Rights Agreement; and (iv) receive certain information regarding the Company, including annual and quarterly financial statements, annual budgets, the capitalization tables, and access to its premises upon reasonable notification. In each case Ataraxia will retain the rights set forth in the Investor Rights Agreement for so long as Ataraxia holds (i) any principal amount of the Ataraxia Debentures or (ii) common shares or Preferred Shares (as applicable), representing at least 5% of the outstanding common shares of the Company (on an as-converted basis, if Ataraxia holds Preferred Shares).

Both the Ataraxia subscription agreement, and the Investor Rights Agreement, are publicly available under the Company’s profile on SEDAR+ at www.sedarplus.ca.

Private Placement

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.

Long-term Debt (HASCAP Loan)

On May 26, 2021, the Company received \$1,000,000 from the BDC’s HASCAP Loan. 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.

Repayment of long-term debt principal and interest: (Figures are given in "\$")	
2024	\$ 35,093
2025	137,593
2026	133,148
2027	128,704
2028	124,259
2029 to 2031	281,944
Total principal and interest payments	840,741
Less interest	(100,000)
Total principal remaining	740,741
Current portion of long-term debt	111,111
Non-current portion of long-term debt	629,630

Off-Balance Sheet Arrangements

The Company has no off-balance sheet arrangements as of the date of this MD&A other than office premise non-lease operating costs as per the office lease agreement with its landlord. If the Company were to default on its office lease, the current month rent including operation costs plus the next three months become immediately due. Operating cost amounts are disclosed in the section "*Liquidity and Capital Resources – Contractual Obligations.*"

NXT pays an estimated operating cost during the current year but has the obligation to pay the actual operating costs incurred as defined in the office lease in the first quarter of the following year if the estimate was low. Conversely, it will receive a refund if the estimate was too high. Currently, the Company believes that the operating cost estimate is reasonable and is consistent with discussions with the landlord under the Company's office lease.

Transactions with Related Parties

Related party fees incurred were as follows:

(Figures are given in "\$")	Q3-24	Q3-23	YTD 2024	YTD 2023
Legal fees	\$ 60,572	\$ 17,469	\$ 127,627	\$ 116,128
Interest Expense ¹	\$ 149,225	\$ 46,362	\$ 252,863	\$ 60,138
Board of director fees	\$ 51,250	\$ 38,750	\$ 128,750	\$ 119,449
Management compensation	\$ 100,000	\$ 100,000	\$ 300,000	\$ 196,769

1. US\$108,968 for Q3-24 and US\$185,549 YTD-2024. Includes interest expense for both Ataraxia, MCAPM LP, Michael P. Mork and Board members.

One of the members of the Board is a partner in a law firm which provides legal advice to NXT. Accounts payable and accrued liabilities include a total of \$77,328 (\$36,938 as at December 31, 2023) payable to this law firm.

Another member of Board is a board member of Pana Holdings Mauritius, the parent company of Ataraxia Capital, which holds convertible debentures. Accounts payable and accrued liabilities include a total of \$19,562 (US\$14,481), (\$19,699 or US\$14,890, as at December 31, 2023) to Ataraxia Capital for accrued interest.

A third member of Board is an employee of MCAPM LP, which holds convertible debentures. Accounts payable and accrued liabilities include a total of \$41,893 (US\$31,011) to MCAPM LP and Michael P. Mork for accrued interest.

All members of the Board elected to have most of their Board fees payable at December 31, 2023 converted into the November Debentures, for a total of US\$147,000 (CDN\$196,686). Accounts payable and accrued liabilities include a total of \$4,407 (US\$3,262), (\$nil as at December 31, 2023) to Board members for accrued interest.

Accounts payable and accrued liabilities include \$162,468 (\$228,199 as at December 31, 2023) for Board fees and \$35,250 (\$98,708 as at December 31, 2023) for management compensation.

Critical Accounting Estimates

In preparing the unaudited condensed consolidated interim 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, the Q3-24 unaudited condensed consolidated interim 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 September 30, 2024 unaudited condensed consolidated interim 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 2024 and 2023, the estimates and judgments included the assessment of impairment indicators of IP and recognition of SFD[®] related revenue.

The Company reviews IP 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 IP, 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 IP.

Changes in Accounting Policies

The unaudited condensed consolidated interim financial statements of NXT for Q3-24 have been prepared by management in accordance with US GAAP. The Company has consistently used US GAAP for the eight most recently completed quarters. The accounting policies applied are consistent with those outlined in

NXT's annual audited consolidated financial statements for the year ended December 31, 2023, available on NXT's website at www.nxtenergy.com and on SEDAR+ at www.sedarplus.ca.

Financial Instruments and Other Instruments

The Company's non-derivative financial instruments consist of cash and cash equivalents, accounts receivable, accounts payable and accrued liabilities, deferred revenue, long-term debt and convertible debentures. The carrying value of these financial instruments approximates their fair values due to their short terms to maturity. NXT is not exposed to significant interest rate fluctuations arising from these financial instruments, but is exposed to significant credit risk with accounts receivable. For accounts receivable, where possible, NXT requests advance payments and utilizes risk mitigation products offered by entities such as Export Development Canada including, for example, insurance coverage of contract accounts receivable, guarantee support for contract performance bonds, and wrongful call insurance for such bonds.

NXT is exposed to foreign exchange risk as a result of holding foreign denominated financial instruments. Any unrealized foreign exchange gains and losses arising on such holdings are reflected in earnings at the end of each period.

As at September 30, 2024 and December 31, 2023, the Company held no derivative financial instruments. For more information relating to risks, see the section titled "*Liquidity and Capital Resources – Net Working Capital*".

Outstanding Share Capital

	November 7, 2024	September 30, 2024	December 31, 2023
Common shares	78,454,739	78,389,422	78,025,237
Dilutive securities:			
Ataraxia Debentures converted at US\$0.1430	9,790,209	9,790,209	9,790,209
November Debentures converted at US\$0.1808	10,353,982	10,353,982	6,360,619
2024 Debentures-at US\$0.2500	8,000,000	8,000,000	-
Ataraxia Debentures at US\$0.2400	2,083,333	-	-
Stock Options	2,647,820	2,647,820	2,927,820
DSUs	37,354	37,354	37,354
RSUs	915,000	915,000	-
Total share capital and dilutive securities	112,282,437	110,133,787	97,141,239

The dilutive securities in the above table reflect the number of common shares that would be issued if the dilutive securities were fully converted or exercised by the holder of the dilutive security. The above table does not include estimated share compensation payable to the marketing consultant at September 30, 2024 and November 7, 2024 of 634,439 common shares, (December 31, 2023 – 360,139), as TSX approval has not been obtained at the date of this MD&A.

Current Director & Officer Common Share Holdings

	November 7, 2024	September 30, 2024	December 31, 2023
Peter Mork ^{1,3}	380,237	380,237	-
Charles Selby ¹	408,161	408,161	408,161
Gerry Sheehan ¹	77,000	77,000	77,000
John Tilson ¹	6,887,490	6,887,490	6,887,490
Bruce G. Wilcox ^{1,2}	734,000	734,000	500,005
Eugene Woychyshyn ^{1,2,3}	938,744	911,328	730,176
Total Director and Officer Share Capital	9,425,632	9,398,216	8,602,832

¹ Director of NXT

² Officer of NXT

³ Elected directors as of July 15, 2024

Disclosure Controls and Procedures (“DCPs”) and Internal Controls over Financial Reporting (“ICFR”)

NXT’s Chief Executive Officer and Chief Financial Officer (the “CFO”) (together the “Responsible Officers”) are responsible for establishing and maintaining DCPs, or causing them to be designed under their supervision, for NXT to provide reasonable assurance that material information relating to the Company is made known to the Responsible Officers by others within the organization, particularly during the period in which the Company’s year-end consolidated financial statements and MD&A are being prepared.

DCPs and other procedures are designed to ensure that information required to be disclosed in reports that are filed is recorded, summarized, and reported within the time periods specified by the relevant securities regulatory authorities in either Canada or the United States of America. DCPs include controls and procedures designed to ensure that information required to be disclosed in our reports is communicated to management, including our Responsible Officers, to allow timely decisions regarding required disclosure.

The Company has established and maintains ICFR using the criteria that were set forth by the Committee of Sponsoring Organizations of the Treadway Commission in Internal Control – Integrated Framework (2013). The control framework was designed or caused to be designed under the supervision of the Responsible Officers to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with US GAAP.

In evaluating the effectiveness of the Company’s DCPs, as defined under the rules adopted by the Canadian securities regulatory authorities and by the United States Securities and Exchange Commission, the Company’s Responsible Officers concluded that there are material weaknesses in the Company’s ICFR that have a direct impact on the Company’s DCPs:

- due to the limited number of staff, it is not feasible to achieve adequate segregation of incompatible duties. NXT partially mitigates this deficiency by adding management and Audit Committee review procedures over the areas where inadequate segregation of duties is of the greatest concern; and

- NXT does not have a sufficient level of staff with specialized expertise to adequately conduct separate preparation and a subsequent independent review of certain complex or highly judgmental accounting issues. NXT partially mitigates this deficiency by preparing financial statements with their best judgments and estimates of the complex accounting matters, and relies on reviews by management, external consultants, and the Audit Committee.

From time to time, to reduce these risks and to supplement a small corporate finance function, the Company engages various outside experts and advisors to assist with various accounting, controls, and tax issues in the normal course.

Given the small size of the Company's finance team, management has established a practice of increased engagement of external consultants, legal counsel, the Company's Disclosure Committee and Audit Committee in reviewing the public disclosure.

The Responsible Officers concluded that, as at September 30, 2024, its ICFR is not effective and as a result, its DCPs are not effective. NXT reached this conclusion based upon its assessment that there is a more than remote likelihood that its ICFR will not prevent or detect material misstatements if they should exist in the Company's audited consolidated financial statements. The Responsible Officers continue to take certain actions to mitigate these material weaknesses including:

- the implementation of controls with regards to the review procedures surrounding its disclosure; and
- engagement of third-party experts used above.

In addition, the CFO engages subject matter consultants as the need arises.

There were no changes to the Company's ICFR in Q3-24.

It should be noted that a control system, including the Company's DCPs and ICFR, no matter how well conceived, can provide only reasonable, but not absolute, assurance that the objectives of the control system will be met, and it should not be expected that the DCPs and ICFR will prevent all errors or fraud.

Additional Information

Additional information related to the Company, including the Company's Annual Information Form is available on NXT's website at www.nxtenergy.com and on SEDAR+ at www.sedarplus.ca.