



NXT ENERGY SOLUTIONS INC.

Management's Discussion and Analysis

**For the three and nine months ended
September 30, 2023**

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 14, 2023 and unless otherwise stated, has been approved by the Board of Directors of the Company (the "Board"), and should be reviewed in conjunction with the unaudited consolidated interim financial statements and related notes for the period ended September 30, 2023 (the "unaudited condensed consolidated interim financial statements"). This MD&A covers the unaudited three- and nine-month periods ended September 30, 2023, with comparative amounts for the unaudited three- and nine-month periods ended September 30, 2022.

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:

- commencement and successful execution of the SFD® in Turkiye;
- receipt of additional funds from the November Debenture (as defined below.)
- payment of the Consideration (as defined below), 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;
- 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
- 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 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 intellectual property ("IP") and rights to our SFD® technology;
- our reliance on a limited number of key personnel;
- our reliance on a limited number of aircraft;
- our reliance on a limited number of clients;
- counterparty credit risk;
- foreign currency and interest rate fluctuations;
- the likelihood that the Company's ICFR (as defined below) will prevent or detect material misstatements in our unaudited condensed consolidated interim 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 "*Discussion of Operations – 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 outlooks are provided for the purpose of understanding the Company's accounting practices and liquidity position, and the information may not be appropriate for other purposes.

Non-GAAP Measures

NXT's accompanying unaudited condensed consolidated interim 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, and 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 Energy Solutions Inc. is a Calgary-based technology company whose proprietary and patented Stress Field Detection ("SFD[®]") survey system utilizes quantum-scale sensors to detect gravity field perturbations in an airborne survey method, which can be used both onshore and offshore to remotely identify traps and reservoirs with hydrocarbon and geothermal exploration potential. The SFD[®] survey system enables NXT's 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. NXT provides its clients with an effective and reliable method to reduce time, costs, and risks related to exploration.

Financial and Operational Highlights

Key financial and operational highlights for Q3-23 are summarized below:

- 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 Turkiye;
- the second tranche of the Convertible Debenture contributed US\$0.20 million (CDN\$0.27 million) of cash as defined and described below;
- cash at September 30, 2023 was \$0.37 million;
- net working capital was (\$3.47) million at September 30, 2023;
- the Company recorded SFD[®]-related revenues of \$nil;
- a net loss of \$1.70 million was recorded for Q3-23, including stock-based compensation expense ("SBCE") and amortization expense of \$0.48 million;
- a net loss of \$5.03 million was recorded for YTD 2023, including SBCE and amortization expense of \$1.50 million;
- net loss per common share for Q3-23 was \$0.02 basic and \$0.02 diluted;
- net loss per common share for YTD 2023 was \$0.07 basic and \$0.07 diluted;
- cash flow used in operating activities was \$0.95 million during Q3-23 and \$3.36 million YTD 2023; and
- general and administrative ("G&A") expenses decreased by \$0.12 million (13%) in Q3-23 as compared to Q3-22 and G&A expenses decreased by \$0.28 million (10%) in YTD 2023 as compared to YTD 2022.

Key financial and operational highlights occurring subsequent to Q3-23 are summarized below:

- mobilization of the SFD[®] survey in Turkiye is expected to commence in November 2023; and
- US\$1,000,000 (CDN\$1,379,000) of the November Debenture (as defined below) was received.

Discussion of Operations

SFD[®] Survey in Turkiye

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 Turkiye, which is strategically located at the junction of Eastern Europe, Central Asia and the Middle East. The Company has commenced planning for the mobilization for the Turkish SFD[®] survey, and NXT's interpretations and recommendations are expected to be delivered during the fourth quarter of 2023. The accounts receivable from this Turkish SFD[®] survey are insured by Export Development Canada.

Strategic Investment

On May 24, 2023 the Company entered into a ten-year strategic alliance and associated financing with Synergy E&P Technologies Limited ("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 Capital ("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.

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 application and related knowledge transfer.

Building upon a record of successful collaborations underpinned by the continued market demand in Africa, Ataraxia, executed a US\$2.3 million convertible debenture financing ("Convertible Debenture") of which it completed US\$1.4 million during the quarter leaving an as-yet unfunded balance of US\$900,000. Please see the section "*Liquidity and Capital Resources – Convertible Debenture*" for further information on the Convertible Debenture.

Acquisition of the Geothermal Right

The Company acquired the SFD[®] technology rights for geothermal resources ("Geothermal Right") from Mr. George Liszicasz, the former President and CEO of NXT on April 18, 2021. The consideration deliverable by the Company in connection with the acquisition of the Geothermal Right is set forth below (the "Consideration"):

1. US\$40,000 (CDN\$50,310) signature payment, which became due immediately and was paid on April 22, 2021;
2. CDN\$15,000 signature milestone payment paid in August 2021;
3. 300,000 common shares, which were issued in December 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, which will become due in the event that the Company executes and completes and receives full payment for a SFD® contract valued at US\$10,000,000 or greater, provided such contract is entered into and completed and payment of at least US\$5,000,000 is received by April 18, 2023. This milestone expired as of April 18, 2023.

As of September 30, 2023, the Company has recognized \$275,610 for the acquisition of the Geothermal Right, which is the combination of the US\$40,000 (CDN\$50,310) signature payment, the CDN\$15,000 signature milestone payment, 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 September 30, 2023 the remaining milestone is still deemed not probable of being achieved.

Geothermal Right Development Update

Progress continues with respect to the development of the SFD-GT geothermal sensor family. The objective of the first project was to test, identify, and analyze 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 in 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). In total, NXT has obtained SFD® patents or received patent allowances in 47 countries. These patents protect our proprietary SFD® technology and serve as independent third-party recognition of our technological invention in terms of practical applicability, conceptual novelty, and knowledge advancement.

Summary of Operating Results

	Q3-23	Q3-22	YTD 2023	YTD 2022
SFD®-related revenue	\$ -	\$ -	\$ -	\$ -
Expenses:				
SFD®-related costs, net	348,169	230,518	968,199	974,292
General and administrative expenses	841,200	963,433	2,644,261	2,922,660
Amortization	439,868	442,096	1,319,604	1,326,630
	1,629,237	1,636,047	4,932,064	5,223,582
Other Expenses (income):				
Interest expense, net	48,954	10,393	82,361	26,251
Foreign exchange loss (gain)	21,489	(3,085)	(2,917)	(14,175)
Intellectual property and other	4,276	4,633	13,904	27,869
	74,719	11,941	93,348	39,945
Loss before income taxes	(1,703,956)	(1,647,988)	(5,025,412)	(5,263,527)
Income tax expense	-	-	-	-
Net loss and comprehensive loss	(1,703,956)	(1,647,988)	(5,025,412)	(5,263,527)
Net loss per share – basic	\$ (0.02)	\$ (0.03)	\$ (0.07)	\$ (0.08)
Net loss per share – diluted	\$ (0.02)	\$ (0.03)	\$ (0.07)	\$ (0.08)

Quarterly operating results. Net loss for Q3-23 compared to Q3-22 increased by \$55,968, but decreased by \$0.01 per share-basic due to the larger share count at September 30, 2023 versus September 30, 2022. There were no SFD®-related revenues in either quarter. SFD®-related costs, net, were \$117,651 higher due to pilot certifications and maintenance fees for engine parts as the aircraft is being prepared for SFD® surveys. G&A expenses decreased by \$122,233, compared to Q3-22, due primarily to lower professional fees and travel costs. Interest expense, net, increased by \$38,561 in Q3-23 versus Q3-22 due to the Convertible Debenture interest charges. The CDN\$ to US\$ exchange weakened between June 30, 2023 and September 30, 2023 therefore causing the exchange loss in Q3-23 as the Company had a net US\$ liability. IP and other expenses related mostly to costs associated with maintaining and renewing certain SFD® patents.

Year-to-date operating results. Net loss for YTD 2023 compared to YTD 2022 decreased by \$238,115, or \$0.01 per share-basic. There were no SFD®-related revenues in either period. SFD®-related costs, net, were \$6,093 lower due to lower monthly lease rates offset by costs to prepare the aircraft for SFD® surveys. In Q1-22 the Phase V maintenance was performed on the aircraft to add 300 flight hours, which increased maintenance costs in YTD 2022. G&A expenses decreased by \$278,399, compared to YTD 2022, due primarily to one less headcount and lower professional fees. Interest expense, net, increased by \$56,110 in YTD 2023 versus YTD 2022 due to the Convertible Debenture. For YTD 2023 the exchange gain was the result of the stronger CDN\$ to US\$ rate between December 31, 2022 and September 30, 2023 and the Company having a net liability in US\$. At September 30, 2022, the CDN\$ to US\$ exchange rate was lower as compared to the CDN\$ to US\$ exchange rate at December 31, 2021 and the Company had a

net US\$ asset for most of the year-to-date, resulting in the corresponding foreign exchange gain for YTD 2022. Intellectual Property and other expenses related mostly to costs associated with maintaining and renewing certain SFD® patents.

SFD®-Related Costs, Net

SFD®-Related Costs	Q3-23	Q3-22	Net change
Aircraft lease costs	\$ 90,078	\$ 86,385	\$ 3,693
Aircraft operations	233,768	143,327	90,441
Survey projects	24,323	806	23,517
Total SFD®-related costs, net	348,169	230,518	117,651

SFD®-Related Costs	YTD 2023	YTD 2022	Net change
Aircraft lease costs	\$ 272,453	\$ 314,979	\$ (42,526)
Aircraft operations	670,409	657,386	13,023
Survey projects	25,337	1,927	23,410
Total SFD®-related costs, net	968,199	974,292	(6,093)

SFD®-related costs include aircraft charter costs (net of charter hire reimbursements), lease expenses, and aircraft operation and maintenance costs. In Q3-23, Aircraft operations and Survey projects, together were \$113,958 due to pilot certifications and maintenance fees for engine parts as the aircraft is being prepared for SFD® surveys. The monthly lease rate was higher in Q3-23 due to the weaker CDN\$ versus the US\$.

In YTD 2023, aircraft lease costs were lower compared to YTD 2022 by \$42,526 due to lower monthly lease rates in the lease extension agreement. Aircraft operations and survey projects, together were \$36,433 higher due to pilot certifications and maintenance fees for engine parts as the aircraft is being prepared for SFD® surveys offset by the Phase V maintenance done on the aircraft in Q1-22 to add 300 flight hours.

The aircraft is available for charter to third parties through our aircraft manager when it is not being used by NXT. Any charter hire reimbursements received are used to offset aircraft costs. There were no charter hire reimbursements during YTD 2023 or YTD 2022.

The Company extended the term of its aircraft leasing agreement effective in Q2-22 for a period of 24 months with payments of approximately US\$22,500 (CDN\$28,675) per month, or US\$270,000 (CDN\$344,099) per year.

Should NXT want to repurchase the aircraft at the end of the extended term, the purchase price will be US\$1.21 million.

General and Administrative Expenses

G&A Expenses	Q3-23	Q3-22	Net change	%
Salaries, benefits and consulting charges	\$ 404,416	\$ 414,934	\$ (10,518)	(3)
Board and professional fees, public company costs	170,590	208,940	(38,350)	(18)
Premises and administrative overhead	205,937	204,788	1,149	(1)
Business development	20,024	111,380	(91,356)	(82)
Stock-based compensation	40,233	23,391	16,842	72
Total G&A Expenses	841,200	963,433	(122,233)	(13)

G&A Expenses	YTD 2023	YTD 2022	Net change	%
Salaries, benefits and consulting charges	\$ 1,168,466	\$ 1,307,644	\$ (139,178)	(11)
Board and professional fees, public company costs	598,678	648,539	(49,861)	(8)
Premises and administrative overhead	619,122	629,569	(10,447)	(2)
Business development	79,652	148,816	(69,164)	(46)
Stock-based compensation	178,343	188,092	(9,749)	(5)
Total G&A Expenses	2,644,261	2,922,660	(278,399)	(10)

G&A expenses decreased \$122,233, or 13%, in Q3-23 compared to Q3-22 for the following reasons:

- salaries, benefits, and consulting charges decreased \$10,518 or 3%, as the Company's CEO compensations was less than in Q2-23;
- board and professional fees and public company costs decreased \$38,350, or 18%, as more director fees were reimbursed in options in Q3-23 versus Q3-22, lower estimated audit fees due to the change of auditor;
- premises and administrative overhead costs increased \$1,149, or 1%, due to spending for survey planning;
- business development costs decreased 91,356 or 82%. In Q3-22 there was travel to the middle east and Asia to pursue opportunities; and
- SBCE's were lower in Q3-23 vs Q3-22 by \$16,842 or 72% as stock option expense was higher, as options were granted in lieu of cash payments to certain directors. Please see the next section "Discussion of Operations – General and Administrative Expenses – Stock-based Compensation Expenses" for further information on the SBCE.

G&A expenses decreased \$278,399, or 10%, in YTD 2023 compared to YTD 2022 for the following reasons:

- salaries, benefits, and consulting charges decreased \$139,178, or 11%, as the Company had one less headcount for the first half of 2023 and the new CEO's compensation was less than the CEO compensation paid in Q3-22;

- board and professional fees and public company costs decreased \$49,861, or 8%, as more director fees were reimbursed in options in YTD 2023 versus YTD 2022 and lower estimated audit fees. This was offset by increased professional fees due to the Convertible Debenture financing;
- premises and administrative overhead costs decreased \$10,447, or 2%, as the Company surrendered office space at the end of Q1-22 thereby lowering rent costs. This was partially offset by costs incurred for survey planning;
- business development costs decreased 69,164 or 46% due to less travel expenses during YTD 2023 vs YTD 2022 as survey planning was done virtually; and
- SBCE's were lower in YTD 2023 vs YTD 2022 by \$9,749 or 5% as the RSU expense was lower as the Company's share price at the vesting date of September 20, 2023 was lower versus the share price at September 30, 2022 and the 2022 vesting date. This was offset as the Stock Option expense was higher, as options were granted in lieu of cash payments to certain directors. Please see the next section "*Discussion of Operations – General and Administrative Expenses – Stock-based Compensation Expenses*" for further information on the SBCE.

Stock-based Compensation Expenses

Stock-based Compensation Expenses	Q3-23	Q3-22	Net change	% change
Stock Option Expense	\$ 23,750	\$ -	\$ 23,750	>100%
Deferred Share Units	-	-	-	0
Restricted Stock Units	6,789	14,409	(7,620)	(53)
ESP Plan	9,694	8,982	712	8
Total SBCE	40,233	23,391	16,842	72

Stock-based Compensation Expenses	YTD 2023	YTD 2022	Net change	% change
Stock Option Expense	\$ 92,500	\$ 15,052	\$ 77,448	>100%
Deferred Share Units	-	-	-	-
Restricted Stock Units	62,441	141,062	(78,621)	(56)
ESP Plan	23,402	31,978	(8,576)	(27)
Total SBCE	178,343	188,092	(9,749)	(5)

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 of Directors. On January 6, 2023 the Company granted 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.

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.

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. As at September 30, 2023 there are no RSUs outstanding.

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 Toronto Stock Exchange. During 2022 and 2023 the Company has elected to issue common shares from treasury.

SBCE in Q3-23 was higher compared to Q3-22 by \$16,842 or 72%. Stock Option expense was higher, as options were granted in lieu of cash payments to certain directors. This was offset by a lower RSU expense as the Company's share price at the vesting date of September 20, 2023 was lower versus the share price at September 30, 2022, resulting in a lower expense.

SBCE in YTD 2023 was lower compared to YTD 2022 by \$9,749 or 5%. The RSU expense was lower as the Company's share price at the vesting date of September 20, 2023 was lower versus the share price at September 30, 2022 and the 2022 vesting date. In addition, there was lower ESP plan participation during YTD 2023 due to two less participants. This was offset as the Stock Option expense was higher, as options were granted in lieu of cash payments to certain directors.

Amortization

Amortization	Q3-23	Q3-22	Net change	%
Property and equipment	\$ 15,240	\$ 17,468	\$ (2,228)	(13)
Intellectual property	424,628	424,628	-	0
Total Amortization	439,868	442,096	(2,228)	(1)

Amortization	YTD 2023	YTD 2022	Net change	%
Property and equipment	\$ 45,719	\$ 52,745	\$ (7,026)	(13)
Intellectual property	1,273,885	1,273,885	-	0
Total Amortization Expenses	1,319,604	1,326,630	(7,026)	(1)

Property and equipment and related depreciation expense. Property and equipment depreciation was lower in Q3-23 compared to Q3-22 and YTD 2023 compared to YTD 2022 as the Company did not acquire new assets in the periods. Depreciation also decreases each year as the Company uses the declining balance method of depreciation, thereby having the effect of lowering depreciation each year on existing assets.

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, NXT's former Chairman, President and 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 15-year period (future amortization expense of \$1,685,000 per year) and are also being subject to ongoing assessment of potential indicators of impairment of the recorded net book value. No impairments were recognized in 2023 or 2022.

As discussed in the section "*Discussion of Operations – Acquisition of the Geothermal Right*," the Company acquired the SFD® technology for the Geothermal Right from NXT's former Chairman, President and 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.

Other Expenses (Income)

Other Expenses	Q3-23	Q3-22	Net change	%
Interest expense, net	\$ 48,954	\$ 10,393	\$ 38,561	371
Foreign exchange loss (gain)	21,489	(3,085)	24,574	(797)
Intellectual property and other	4,276	4,633	(357)	(8)
Total Other Expenses, net	74,719	11,941	62,778	(526)

Other Expenses	YTD 2023	YTD 2022	Net change	%
Interest expense, net	\$ 82,361	\$ 26,251	\$ 56,110	214
Foreign exchange (gain)	(2,917)	(14,175)	11,258	79
Intellectual property and other	13,904	15,947	(2,043)	(13)
Loss on disposal of assets & lease modifications	-	11,922	(11,922)	(100)
Total Other Expenses, net	93,348	39,945	53,403	134

Interest expense, net. This category of other expenses includes interest income earned on short-term investments netted, by interest expense from the financial liability related to the aircraft lease (up to February 2022), long-term debt and the Convertible Debenture. Interest expense increased in Q3-23 versus Q3-22 and YTD 2023 versus YTD 2022 due to less short-term investments during 2023 and the Company entering into the Convertible Debenture with Ataraxia in May 2023.

Foreign exchange loss (gain). This category of other expenses 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 September 30, 2023 and a very small US\$ liability at September 30, 2022, which included accounts receivable, cash and cash equivalents, short-term investments, 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 Q3-23 the exchange loss was the result of the 1.8% stronger US\$ to CDN\$ between June 30, 2023 and September 30, 2023 and the Company having a significant net liability in US\$. In Q3-22 the net liability in US\$ was US\$24,665 and resulted in the \$3,085 exchange gain.

For YTD 2023 the exchange gain was the result of the 1.8% stronger CDN\$ to US\$ rate between December 31, 2022 and September 30, 2023 and the Company having a net liability in US\$. At September 30, 2022, the CDN\$ to US\$ exchange rate was 6.8% lower as compared to the CDN\$ to US\$ exchange rate at December 31, 2021 and the Company had a net US\$ asset for most of the year-to-date, resulting in the corresponding foreign exchange gain for YTD 2022.

The Company does not currently enter into hedging contracts, but does however use alternative strategies to reduce the volatility of US dollar assets including converting excess US dollars 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 YTD 2023 and YTD 2022, the Company's IP and other expenses were associated with periodic patent maintenance and renewal fees required during these time periods.

Loss on disposal of assets & lease modifications. In Q1-22, the Company surrendered 826 square feet of office space. As a result of the space surrender, the Company recorded a loss on disposal of leasehold improvement assets and lease modifications.

Income Tax Expense

There was no income tax expense in YTD 2023 or YTD 2022.

Competition

Our 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 we believe is technically superior to other airborne survey systems. To our knowledge, there is no other company employing technology comparable to our 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. Our 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 very competitive with many international and regional service providers.

The SFD® system can be used as a focusing tool for seismic. With a SFD® survey, a large tract (i.e., 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. A 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 have affected our unaudited condensed consolidated interim financial statements and are reasonably likely to affect them in the future. These risks and uncertainties are discussed further below.

Development, Commercialization, and Protection of the Geothermal Right

With the acquisition of the Geothermal Right, the Company will continue to refine and develop the SFD® survey system to commercialize the Geothermal Right. This development requires substantial time and resources, and continued government assistance is not guaranteed. Furthermore, even if resources are available, there can be no assurance that the Company will be commercially or technically successful in enhancing the technology. If we are unable to develop and commercialize the geothermal applications of SFD® technologies, or adapt to evolving industry standards and demands, these could have a material adverse effect on our business, financial condition, and results of operations.

Debt Service

NXT may finance a significant portion of its operations through debt. Amounts paid in respect of interest and principal on debt incurred by NXT may impair NXT's ability to satisfy its other obligations. Variations in interest rates and scheduled principal repayments could result in significant changes in the amount required to be applied to debt service before payment by NXT of its debt obligations. Lenders may be provided with security over substantially all of the assets of NXT. If NXT becomes unable to pay its debt service charges or otherwise commits an event of default, a lender can foreclose on or sell the assets of NXT.

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 September 30, 2023, cash and cash equivalents included balances in bank accounts placed with financial institutions with investment grade credit ratings. 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, convertible debentures, 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 September 30, 2023, the Company held net U.S. dollar liabilities totaling US\$1,287,153. Accordingly, a hypothetical 10% change in the value of one United States dollar expressed in Canadian dollars as at September 30, 2023 would have had an approximately \$173,650 effect on the unrealized foreign exchange gain or loss for the period. As at September 30, 2022, the

Company held net U.S. dollar liabilities totaling US\$24,665. Accordingly, a hypothetical 10% change in the value of one United States dollar expressed in Canadian dollars as at September 30, 2022 would have had an approximately \$3,373 effect on the unrealized foreign exchange gain or loss for the period.

Interest Rates

We periodically invest available cash in short-term investments that generate interest income that will be affected by any change in interest rates. Our Convertible Debenture and long-term debt interest rates are currently fixed, but any additional debt financing may be affected by a change interest rates.

Tax Rates

Changes in tax rates in the jurisdictions that we operate in would impact the amount of current taxes that we pay. In addition, changes to substantively enacted tax rates would impact the carrying balance of deferred tax assets and liabilities, potentially resulting in a deferred tax recovery or incremental deferred tax expense.

In addition to the above, we are exposed to risk factors that may impact the Company and our business. For further information on these risk factors, please refer to our Annual Information Form, available on NXT's website at www.nxtenergy.com and on SEDAR at www.sedarplus.ca.

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:

	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)

	Q3-22	Q2-22	Q1-22	Q4-21
SFD®-related revenue	\$ -	\$ -	\$ -	\$ (10,123)
Net loss	(1,647,988)	(1,774,671)	(1,840,868)	(1,573,587)
Loss per share – basic	\$ (0.03)	\$ (0.03)	\$ (0.03)	\$ (0.02)
Loss per share – diluted	\$ (0.03)	\$ (0.03)	\$ (0.03)	\$ (0.02)

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 SFD® survey and foreign exchange losses due to the weakening CDN\$. In Q2-23 the Company incurred G&A costs as due to increased business development activity and professional fees related to the Convertible Debenture. In Q1-23 the Company incurred lower SFD®-related costs as there was no unplanned maintenance on the aircraft and had one less headcount. During Q4-22 costs were reduced primarily due to lower vacation and SBCE. In Q3-22 the Company incurred lower SFD®-related costs as the aircraft had

early completed its required maintenance. In Q2-22 the Company recorded unrealized foreign exchange gains as the CDN\$ weakened versus the US\$. In Q1-22, the Company incurred maintenance fees on its aircraft to have it available for up to 300 flight hours. In Q4-21, the CEWS and the CERS programs were ended therefore increasing G&A expenses. In each quarter, the Company incurred net losses primarily due to incurred SFD[®]-related costs related to aircraft lease and aircraft maintenance costs, G&A expenses, and non-cash items like SBCE, which can be a significant expense in any given quarter. More specific details are provided below:

- in Q3-23, costs decreased as G&A spending due to less professional fees, offset by costs incurred to plan for the upcoming 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;
- in Q4-22, costs were reduced primarily due to lower vacation and SBCE;
- in Q3-22, costs were reduced primarily due to lower SFD[®]-related costs offset partially by higher business development costs;
- in Q2-22, the Company recorded unrealized foreign exchange gains as the CDN\$ weakened versus the US\$;
- in Q1-22, the Company incurred maintenance fees on the leased aircraft to have it available for up to 300 flight hours; and
- in Q4-21, the Company received grants from the CEWS and CERS for only one month due to the termination of these programs.

Liquidity and Capital Resources

Going Concern

The unaudited condensed consolidated interim financial statements for Q3-23 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 unaudited condensed consolidated interim 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 unaudited condensed consolidated interim financial statements have been issued.

The Company has deferred payment of operating costs, including payroll and other general and administrative costs. Subsequent to September 30, 2023, the Company closed the first tranche of a US\$2,500,000 convertible debenture (defined below) which resulted in raising additional net proceeds of US\$1,000,000 (CDN\$1,379,000). 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 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 unaudited condensed consolidated interim 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 at September 30, 2023 totaled \$0.37 million. Net working capital totaled \$(3.47) 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 our 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.

The Convertible Debenture is for a term of two years, but is payable on demand. It is secured by a general security agreement, subordinate to the long-term debt.

Net Working Capital (Non-GAAP Measure)

Net Working Capital	September 30, 2023	December 31, 2022	Net Change	%
Current assets (current liabilities)				
Cash and cash equivalents	\$ 369,408	\$ 263,437	\$ 105,971	40
Accounts receivable	58,286	57,065	1,221	2
Prepaid expenses and deposits	63,447	36,157	27,290	75
Accounts payable and accrued liabilities	(1,197,193)	(1,276,236)	79,043	6
Deferred Revenue	(337,274)	-	(337,274)	(100)
Convertible debenture	(1,888,740)	-	(1,888,740)	(100)
Current portion of long-term debt	(111,111)	(111,111)	-	-
Current portion of lease obligation	(425,723)	(650,315)	224,592	35
Total Net Working Capital	(3,468,900)	(1,681,003)	(1,787,897)	(106)

NXT had net working capital of \$(3,468,900) as at September 30, 2023.

Net working capital at September 30, 2023 compared to December 31, 2022 decreased by \$1,787,897, or 106%, due to the issuance of the Convertible Debenture and contract prepayments received for the upcoming SFD® survey, offset by a lower lease obligation as the aircraft lease will expire in less than one year.

Accounts Payable and Accrued Liabilities

	September 30, 2023	December 31, 2022	Net Change	%
Trade accounts payable	\$ (174,911)	\$ (270,956)	\$ 96,045	35
Deferred advisory board payable	(25,296)	(25,410)	114	0
Accrued liabilities	(288,093)	(356,950)	68,857	19
Accrued interest	(60,595)	(507)	(60,088)	>(100)
Accrued directors' fees payable	(189,449)	(162,500)	(26,949)	(17)
Salaries payable	(378,323)	(363,594)	(14,729)	(4)
Vacation pay accrued	(77,241)	(62,413)	(14,828)	(24)
RSU and ESP Plan liability	(3,285)	(33,906)	30,621	90
Total accounts payable	(1,197,193)	(1,276,236)	79,043	6

Accounts payable and accrued liabilities decreased by \$79,043 or 6%, as at September 30, 2023 compared to December 31, 2022 for the following reasons:

- trade accounts payable decreased by \$96,045, or 35%, due to the Company paying previously deferred payables;
- accrued liabilities decreased by \$68,857, or 19%, due to the Company paying deferred professional fees during YTD 2023;
- accrued directors' fees payable increased by \$26,949, or 17%, as cash payment of directors' fees were deferred, but offset partially by some directors taking their fees in the form of stock options;
- salaries payable increased by \$14,729 or 4%, as the Company continued its salary deferral program until May 2023, but paid 25% of the deferred salary to employees in Q3-23;
- vacation pay accrued increased by \$14,828, or 24%, timing of vacations; and
- RSU and ESP Plan liability decreased 30,621 or 90% due to the RSU becoming fully vested in Q3-23.

Cash Flow

Cash Flow - from / (used in)	Q3-23	Q3-22	YTD 2023	YTD 2022
Operating activities	(953,051)	\$ (533,787)	\$(3,363,362)	\$(2,229,816)
Financing activities	253,114	(25,694)	3,469,891	(24,573)
Investing activity	-	500,000	-	550,000
Effect of foreign exchange changes on cash	18,921	16,481	(558)	20,376
Net source (use) of cash	(681,016)	(43,000)	105,971	(1,684,013)
Cash and cash equivalents, start of period	1,050,424	616,842	263,437	2,257,855
Cash and cash equivalents, end of period	369,408	573,842	369,408	573,842
Cash and cash equivalents, end of period	369,408	573,842	369,408	573,842
Short-term investments, end of period	-	-	-	-
Total cash and short-term investments, end of the period	369,408	573,842	369,408	573,842

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 and net of any cash transferred into/out of short-term investments. Further information on the net changes in cash, by each of the operating, financing, and investing activities, is as follows:

Operating Activities	Q3-23	Q3-22	YTD 2023	YTD 2022
Net loss for the period	\$(1,703,956)	\$(1,647,988)	\$(5,025,412)	\$(5,263,527)
Total non-cash expense, lease and other items	492,914	470,038	1,433,473	1,533,800
Operating activities before change in non-cash working capital balances	(1,211,042)	(1,177,950)	(3,591,939)	(3,729,727)
Change in non-cash working capital balances	257,991	644,163	228,577	1,499,911
Total cash used in operating activities	(953,051)	(533,787)	(3,363,362)	(2,229,816)

Operating cash flow decreased by \$419,264 in Q3-23 as compared to Q3-22 due to the company paying deferred costs during Q2-23 offset by prepayments on the Q4-23 SFD[®] survey, versus deferring significant costs in all of Q2-22.

Operating cash flow decreased by \$1,133,546 in YTD 2023 as compared to YTD 2022 due to payments of several deferred costs in YTD 2023, offset by US\$250,000 survey prepayment in YTD 2023. In Q1-22 the Company received of payments for outstanding accounts receivable in US\$200,000 (CDN\$252,415) and deferred significant costs through YTD 2022.

Financing Activities	Q3-23	Q3-22	YTD 2023	YTD 2022
Repayment of long-term debt	\$ (27,778)	\$ (37,037)	\$ (83,333)	\$ (37,037)
Proceeds from stock compensation plans	15,332	11,343	33,653	40,414
Net proceeds from Private Placement	-	-	1,622,057	-
Proceeds from Convertible Debenture	265,560	-	1,897,514	-
Repayment of finance liability	-	-	-	(27,950)
Total cash from (used in) financing activities	253,114	(25,694)	3,469,891	(24,573)

The Company began to repay its HASCAP Loan (as defined below) (long-term debt) at the beginning of Q3-22. Proceeds were received from employee contributions under the ESP Plan and RSU. The repayment of financial liability was for the sales and leaseback agreement on NXT's aircraft which ended in Q1-22. Proceeds from the Convertible Debenture were \$1,897,514 (US\$1,400,000). Please see the section "Convertible Debenture".

In YTD 2023 net proceeds from the private placement was \$1,622,057. Please see the section "Private Placement".

Investing Activity	Q3-23	Q3-22	YTD 2023	YTD 2022
Proceeds from short-term investments	\$ -	\$ 500,000	\$ -	\$ 550,000
Total Cash used in Investing Activity	-	500,000	-	550,000

Changes in short-term investments were for investments in guaranteed investment certificates to fund operations and investing of excess short-term cash.

Contractual Obligations

Leases

The estimated minimum annual commitments for the Company's lease components as at September 30, 2023 are listed in the following table:

Lease payment obligations:	Total	2023	2024	2025	2026
Office	\$ 682,944	\$ 85,368	\$ 341,472	\$ 256,104	\$ -
Office operating costs	450,510	56,314	225,255	168,941	-
Aircraft lease ¹	128,839	91,064	37,775	-	-
Office equipment	10,843	856	3,424	3,424	3,139
Total	1,273,136	233,602	607,926	428,469	3,139

1. US\$ payments have been converted to CDN\$ at a rate of 1.3491.

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:	
2023	36,203
2024	142,037
2025	137,593
2026	133,148
2027	128,704
2028 to 2031	406,204
Total principal and interest payments	983,889
Less interest	(132,037)
Total principal remaining	851,852
Current portion of long-term debt	111,111
Non-current portion of long-term debt	740,741

Convertible Debenture

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 Convertible Debenture 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 Convertible Debenture from Ataraxia. The Company received an additional US\$200,000 (CDN\$265,560) tranche of the Convertible Debenture on July 10, 2023 for a total amount of US\$1,400,000 (CDN\$1,897,514).

The Convertible 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.

The proceeds from the Convertible Debenture were used to fund general and administrative costs including working capital, business development and marketing activities to convert NXT's existing opportunity pipeline into firm contracts.

Repayment of principal and interest (US\$) as of September 30, 2023:	
2023	\$ 65,493
2024	140,329
2025	1,474,836
Total principal and interest payments	1,680,658
Less interest	(280,658)
Total principal remaining	1,400,000

November Debenture

Subsequent to September 30, 2023, the Company received conditional approval from the Toronto Stock Exchange (the "TSX") to offer a multi-tranche convertible debenture (the "November Debenture") under which the subscribers will be able to purchase a principal amount of up to US\$2,500,000 (approximately CDN\$3,447,500.) 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 Debenture. The November Debentures are convertible into common shares at a conversion price of US\$0.1808 (CDN\$0.25) per common share which provides the subscribers with the right to obtain up to 13,827,433 common shares.

On November 8, 2023 the Company issued the first tranche of the November Debentures for US\$1,000,000 (approximately CDN\$1,379,000) to MCAPM, LP and Michael P. Mork ("Mork Capital"). Mork Capital will now have the right to obtain an additional 5,530,973 Common Shares upon the conversion of the November Debentures upon shareholder approval. With the acquisition of the November Debentures, Mork Capital will have the right to own, after conversion of the first tranche of the November Debentures, 20,452,206 Common Shares, representing approximately 24.48% of the issued and outstanding common shares (after giving effect to the conversion of the full amount of November Debentures). In addition, the Company has agreed to appoint a representative from Mork Capital to its board of directors in the near future.

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.

The proceeds from Private Placement were used for G&A expenses.

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 with the 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 with the Landlord early in the first quarter of the preceding year if the estimate was low, or will receive a refund if the estimate was too high. Currently, the Company believes that the current operating cost estimate is reasonable and is consistent with discussions with the Landlord.

Transactions with Related Parties

Related party fees incurred were as follows:

	Q3-23	Q3-22	YTD 2023	YTD 2022
Legal fees	\$ 17,469	\$ 15,344	\$ 116,128	\$ 45,800
Interest Expense	\$ 46,362	\$ -	\$ 60,138	\$ -

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 \$55,555 (\$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 Ataraxia which holds the Convertible Debenture. Accounts payable and accrued liabilities includes a total of \$60,691 (\$nil as at December 31, 2022) to Ataraxia.

Accounts payable and accrued liabilities includes \$189,449 (\$162,500 as at December 31, 2022) for Board of Director's fees.

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 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 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 2023 and 2022, the estimates and judgments included the assessment of impairment indicators of intellectual property.

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.

Changes in Accounting Policies

The unaudited condensed consolidated interim financial statements of NXT for September 30, 2023 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, 2022, available on NXT's website at www.nxtenergy.com and on SEDAR at www.sedarplus.ca other than the addition of convertible debentures.

Convertible debentures are recorded as a current liability as the Company has an obligation to deliver cash to the holder on demand on or before the maturity date. If the convertible debentures are converted to either voting preferred or common shares, the preferred or common shares will be classified as equity. Interest on the convertible debenture is accrued. Dividends on preferred shares will only be accrued on dividends declared by the Board of Directors of the Company.

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, convertible debentures, and lease obligations. 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 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, 2023 and September 30, 2022, 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 14, 2023	September 30, 2023	December 31, 2022
Common Shares	78,001,066	77,958,928	68,949,109
Convertible Debentures converted at US\$0.143	9,790,209	9,790,209	-
Convertible Debentures converted at US\$0.1803	5,530,973	-	-
Options	3,077,820	3,077,820	461,320
Deferred Share Units	37,354	37,354	37,354
Restricted Share Units	-	-	348,334
Total share capital and dilutive securities	96,437,422	90,864,311	69,796,117

Current Director & Officer Share Capital

	November 14, 2023	September 30, 2023	December 31, 2022
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}	500,005	500,005	500,005
Eugene Woychyshyn ²	714,871	688,187	514,937
Total Director and Officer Share Capital	8,587,527	8,560,843	8,387,593

¹ Director of NXT

² Officer of NXT

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

NXT's CEO and Chief Financial Officer ("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 are 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, 2023, 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 unaudited condensed consolidated interim 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 Q3-23.

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.