



# **NXT ENERGY SOLUTIONS INC.**

## **Management's Discussion and Analysis**

**For the year ended  
December 31, 2019**

## Management's Discussion and Analysis

This 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 April 13, 2020 unless otherwise stated, has been approved by the Board of Directors of the Company (the "Board"), and should be reviewed in conjunction with the audited consolidated financial statements and related notes for the year ended December 31, 2019. This MD&A covers the unaudited three month and twelve month periods ended December 31, 2019, with comparative totals for the unaudited three month and twelve month periods ended December 31, 2018.

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

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

### Advisories

#### ***Forward-looking Information***

Certain statements in this MD&A constitute forward-looking information under applicable securities laws. These statements typically contain words such as "intends", "plans", "anticipates", "expects", "scheduled", "estimates", "believes", "forecasts" or other variations (including negative variations) of such words and phrases, or state that certain actions, events or results "may", "could", "would", "might" or "will" be taken, occur or be achieved and relate primarily to:

- the Nigerian SFD® Survey (as defined below), the Co-operation Agreement (as defined below) and the Loan Arrangement (as defined below), and the performance and satisfaction of the obligations thereunder (including with respect to amounts payable to NXT);
- estimates related to our future financial position and liquidity; and
- general business strategies and objectives.

This 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 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; and
- general business, economic and market conditions (including global commodity prices).

These forward-looking statements are based on current expectations and are subject to a wide range of known and unknown risks, uncertainties and other factors that may cause the actual results, performance or achievements of the Company to be materially different from any future results, performance or

achievements expressed or implied by such forward-looking statements. Known risks include, but are not limited to, risks related to:

- the ability of management to execute its business plan;
- health, safety and the environment (including risks related the novel coronavirus);
- the emergence of alternative competitive technologies;
- our ability to protect and maintain our intellectual property 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;
- changes in, or in the interpretation of, laws, regulations or policies; and
- general business, economic and market conditions (including global commodity prices).

Although the Company has attempted to identify important factors and risks that could cause actual actions, events or results to differ materially from those described in the forward-looking statements, there may be other factors that cause actions, events or results to differ from those anticipated, estimated or intended. 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.

For more information relating to risks, see the section titled "*Summary of Operating Results – Risks 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 law, NXT assumes no obligation to update forward-looking information should circumstances or the Company's estimates or opinions change. Accordingly, the reader is cautioned not to place undue reliance on forward-looking statements.

### ***Non-GAAP Measures***

NXT's accompanying consolidated financial statements are prepared in accordance with accounting principles generally accepted in the United States of America ("US GAAP"). This MD&A includes references to net working capital which does not have a standardized meanings prescribed by US GAAP and may not be comparable to similar measures be presented by other entities. Net working capital is the net result of the difference between current assets and current liabilities. Management of NXT uses this non-GAAP measure to improve its ability to assess liquidity at a point in time.

### ***Other Calculations***

Fair market values and market capitalizations referenced herein have been calculated in accordance with section 1.11(1) of National Instrument 62-104 *Take-over Bids and Issuer Bids* and section 1.1 of Multilateral Instrument 61-101 *Protection of Minority Security Holders in Special Transactions*, respectively.

## Description of the Business

NXT Energy Solutions Inc. is a Calgary-based technology company whose proprietary and patented Stress Field Detection ("SFD<sup>®</sup>") 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 exploration potential. The SFD<sup>®</sup> survey system enables NXT's clients to focus their hydrocarbon exploration decisions concerning land commitments, data acquisition expenditures and prospect prioritization on areas with the greatest potential. SFD<sup>®</sup> is environmentally friendly and unaffected by ground security issues or difficult terrain and is the registered trademark of NXT Energy Solutions Inc. NXT Energy Solutions Inc. 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 Q4-19 and YE-19 include are summarized below.

- In Q3-19 the Company completed its Nigerian SFD<sup>®</sup> survey for approximately US\$8.9 Million with PE Energy Limited ("PE"), a Nigerian oil and gas service company. PE had a contract with the Nigerian National Petroleum Company ("NNPC"), to provide 5,000-line kilometers of SFD<sup>®</sup> surveys in Nigeria.
- As of the date of this MD&A, the Company has received a total of US\$8.4 million payments in cash from PE for the SFD<sup>®</sup> survey in Nigeria, including US\$1.9 million in the Q4-19 and an additional US\$0.47 million in the first quarter of 2020. The final payment for contracted holdbacks amount to approximately \$0.5 million USD.
- NXT received confirmation of a patent granted from the European Patent Office. This brings the total number of countries granting the patent to 44. The final step is for the validation process of the SFD<sup>®</sup> technology patent in select European countries.
- In Q4-19 the Company completed the C\$1,250,000 targeted issuer bid, purchasing for cancellation 4,166,667 common shares in the capital of the Company representing approximately 6.08% of the total outstanding Common Shares as of November 14, 2019, at a price of C\$0.30 per Common Share.
- In February 2019, NXT entered into a Co-operative Agreement with Alberta Green Ventures Limited Partnership ("AGV"), for AGV to bring to proposal up to three SFD<sup>®</sup> surveys for cooperation with the Company within two years. The Co-operative Agreement is based on a cost-plus formula and a gross overriding royalty interest in oil and gas production arising on lands subject to the surveys. The Company received a US\$100,000 non-refundable deposit paid in connection with the Co-operative Agreement in Q2-19. Pursuant to the Co-operation Agreement, the deadline to complete at least one of three SFD<sup>®</sup> surveys is June 30, 2020.
- In Q3-2019, the Company advanced US\$250,000 (the "Principal Amount") to AGV for the purpose of furthering the shared objectives of NXT and AGV under the Co-operation Agreement (the "Loan Arrangement"). On April 13, 2020, NXT elected to receive and directed AGV to deliver US\$250,000 as repayment of the Principal Amount (the "Principal Repayment").
- Common share purchase warrants held by AGV have expired as of October 31, 2019.
- Cash and short-term investments at the end of the YE-19 were \$6.64 million.
- There was \$11.98 million of survey revenues recorded in YE-19.

- Net income of \$3.77 million was recorded for YE-19, including amortization expense of \$1.78 million.
- A net loss of \$1.78 million was recorded for Q4-19, including amortization expense of \$0.49 million.
- Operating activities provided \$4.08 million of cash during YE-19 and net cash used for financing activities was \$1.39 million.
- Operating activities provided \$1.29 million of cash during Q4-19 and net cash used for financing activities was \$1.35 million.
- Net income per common share for YE-19 was \$0.06 basic and \$0.06 fully diluted.
- Net loss per common share for Q4-19 was (\$0.03) basic and (0.03) fully diluted.
- General and administrative costs for YE-19 as compared to YE-18 have been reduced by \$0.50 million or 13% mostly due a reduction in business development costs, lower headcount and costs and certain expenditures being recognized as direct survey costs, offset by higher professional fees and information technology costs.
- General and administrative costs for Q4-19 as compared to Q4-18 have increased by \$0.05 million or 6%, mostly due to an increase in business development offset by a reduction in headcount.

### Selected Annual Information

(\$M except per share)	YE-19	YE-18	YE-17
Total Assets	\$ 30,692,941	\$ 25,264,268	\$ 23,920,991
Long-term debt	2,691,217	510,661	741,408
Sales	11,976,149	-	-
Net earnings	3,772,908	(6,968,511)	(8,970,398)
Net earnings per share			
Basic	\$0.06	\$(0.11)	\$(0.16)
Diluted	\$0.06	\$(0.11)	\$(0.16)

## Discussion of Operations

### ***Co-operation Agreement***

In February 2019, NXT entered into the Co-operation Agreement with AGV, one of NXT's largest shareholders, to complete up to three SFD<sup>®</sup> surveys within two years. The compensation to be received by NXT for services rendered under the Co-operation Agreement is based on a cost plus formula and a gross overriding royalty interest in oil and gas production arising on lands surveyed, with US\$100,000 paid in advance as a non-refundable deposit.

Under the Co-operation Agreement, AGV committed to completing at least two SFD<sup>®</sup> surveys in North America and an additional SFD<sup>®</sup> survey internationally. The first SFD<sup>®</sup> survey was to be completed by August 31, 2019, with NXT and AGV agreeing to extend such deadline to December 31, 2019, and to further extend such deadline to June 30, 2020 (such further extension provided under the terms of the Targeted Issuer Bid). If the first SFD<sup>®</sup> survey is not completed by June 30, 2020, the US\$100,000 non-refundable deposit will be forfeited to NXT. AGV has also committed to completing an exploration drilling program on each of the lands subject to the SFD<sup>®</sup> surveys within two years of completion of the surveys.

### ***Nigerian SFD<sup>®</sup> Survey***

In March 2019, the Company signed an US\$8.9 million contract with PE to provide 5,000 line kilometers of SFD<sup>®</sup> surveys in Nigeria. As the Nigerian SFD<sup>®</sup> Survey was the Company's first project in Africa, the Company was required to deliver more than 10,000 pages of documents to NNPC and the Department of Petroleum Resources, a department under Nigeria's Ministry of Petroleum Resources, and complete a test flight as part of the qualification process which took seven months. Data acquisition operations were completed on May 1, 2019 and NXT's recommendations were delivered in Q3-19.

Prior to entering into the Nigerian SFD<sup>®</sup> Survey contract with PE, the Company conducted significant due diligence to ensure it understood the business environment in Nigeria and was in compliance with applicable laws in each of Canada, the United States of America and Nigeria. The Company also engaged Norton Rose Fulbright Canada LLP and Kreller Group as advisors to provide guidance and to ensure the integrity of its contract with PE, as well as PE's contract with NNPC.

The Company has received payments of US\$8.4 million for the Nigerian SFD<sup>®</sup> Survey as at the date hereof. The contracted holdback amount of approximately US\$0.5 million is expected to be paid to the Company upon the conclusion of negotiations for additional work under the current contract framework.

The Department of Petroleum Resources (the "DPR"), a department under the Federal Republic of Nigeria's Ministry of Petroleum Resources responsible for the sustainable development of Nigeria's oil and gas resources, provided written confirmation of their recommendation in favour of NXT's SFD<sup>®</sup> technology based on the recent survey results, noting specifically "in line with federal government aspiration to increase its Oil and Gas reserves base at a considerable reduced cost, risk and optimize exploration cycle, the Stress Field Detection SFD<sup>®</sup> technology is hereby adopted and recommended to be deployed as an independent data exploration tool for hydrocarbon exploration to identify and rank prospect-level leads to focus exploration efforts in the Nigerian Oil and Gas industry".

## **Patents**

As of the date of this MD&A, SFD<sup>®</sup> patents have been granted in Russia (January 2017), Japan (July 2017), Canada (August 2017), Europe (September 2017) and the United States (November 2017), and notices of allowance have been also received from Mexico (July 2017) and China (March 2018), which are areas of prime commercial focus for the Company. NXT has recently received confirmation of a patent granted from the European Patent Office. This brings the total number of countries granting the patent to 44. The final step is for the validation process of the SFD<sup>®</sup> technology patent in select European countries. This is expected to take several month to complete. The SFD<sup>®</sup> patents serve an important purpose beyond the protection they provide to the proprietary SFD<sup>®</sup> technology. Our patents also serve as an independent third-party verification of the scientific principles that form the basis of the SFD<sup>®</sup> process and its application.

## **Notes Receivable**

In September 2019, NXT entered into the Loan Arrangement with AGV and advanced to AGV the US\$250,000 Principal Amount, as evidenced by, and governed in accordance with the terms of, a promissory note dated September 6, 2019 (the "Notes Receivable"), for the purpose of providing AGV with additional funds necessary to continue advancing the common objectives of NXT and AGV under the Co-operation Agreement. Pursuant to the Notes Receivable, it was agreed and acknowledged, among other things, that:

- a) AGV was indebted to the Company and unconditionally promised to pay to, or to the order of, the Company on or before December 15, 2019 (the "Repayment Date"), the Principal Amount together with all interest payable at a rate of the greater of 2% and the rate prescribed under the *Income Tax Act* (Canada) from time to time in monthly arrears on the first day of each month commencing October 1, 2019 until the repayment of the Principal Amount in full (the "Interest");
- b) AGV had the right and privilege of prepaying the whole or any portion of the Principal Amount together with the Interest at any time or times without notice, bonus or penalty; and
- c) NXT, in its sole and absolute discretion, was entitled to elect to receive any payment made by AGV in accordance with the Notes Receivable by way of, in whole or in combination: (i) wire transfer or other immediately available funds ("Cash"), or (ii) delivery for cancellation to the Company of the equivalent number of Common Shares having a fair market value equal to the aggregate of such amounts, calculated using the volume weighted average price of the Common Shares as reported and traded on the Toronto Stock Exchange for the five trading days immediately preceding the repayment date (the "5-day VWAP").

On December 13, 2019, the last business and trading day before the Repayment Date, the Company elected to receive and directed AGV to:

- a) in respect of the Principal Amount, deliver to the Company for cancellation 543,673 Common Shares, calculated as the product of US\$250,000 being the Principal Amount owing on the last business day before the Repayment Date, and 1.3183, being the daily average US\$/CDN\$ exchange rate as quoted on the Bank of Canada's website for December 13, 2019, the last business day for which a daily average exchange rate was published before the Repayment Date, divided by \$0.6062, being the 5-

day VWAP, the delivery of such Common Shares to occur subject to and only upon receipt of confirmation from the Company that all necessary regulatory approvals had been received; and

b) in respect of the Interest, pay US\$1,366.12 by way of Cash. AGV paid this amount.

On April 13, 2020, NXT issued a Direction to Pay to AGV in which NXT has revoked the previous Direction to Pay dated December 13, 2019, and has now directed AGV to deliver US\$250,000 as repayment on the Principle Amount. Interest will begin to accrue until the date on which payment in full of all amounts owing pursuant to the Principle Amount are received by NXT.

The Company may change its election if it so decides, in its sole and absolute discretion to receive the Principal Repayment by way of Common Shares by application to the Alberta Securities Commission.

### ***Targeted Issuer Bid***

Between November 15, 2019 (the "TIB Commencement Date") and December 9, 2019 (the "TIB Completion Date"), NXT purchased for cancellation an aggregate of 4,166,667 Common Shares, representing approximately 6.08% of the 68,573,558 Common Shares outstanding as at the TIB Commencement Date. The purchase price of \$0.30 per Common Share represented a discount of approximately 22.9% relative to the market price of \$0.389 per Common Share as at the TIB Commencement Date. Gross proceeds received by AGV totaled approximately \$1,250,000.00, representing approximately 6.1% of the Company's market capitalization of approximately \$26,675,114.062 as at the TIB Commencement Date.

The terms of the Targeted Issuer Bid also provided that the 3,421,648 Warrants expired effective October 31, 2019, and that certain deadlines under the Co-operation Agreement be extended. AGV's registered ownership in the Company was reduced from 10,264,946 Common Shares and 3,421,648 Warrants, representing, on a fully diluted basis, approximately 20.0% of the 68,573,558 issued and outstanding Common Shares as at the TIB Commencement Date, to 6,098,279 Common Shares and nil Warrants, representing approximately 9.5% of the 64,406,891 issued and outstanding Common Shares as at the TIB Completion Date.

By strategically acquiring its Common Shares for cancellation in a private transaction at a discount to the then current market price, the Company improved the equity position of its other shareholders and provided AGV with additional funds necessary to continue advancing the common objectives of the parties under the Co-operation Agreement, while also avoiding a substantial decrease in the market price and liquidity of the Common Shares reasonably expected if AGV were to sell a substantial portion of its equity position into the open market.

The Targeted Issuer Bid was exempt from the formal valuation and disinterested shareholder approval requirements typically applicable to related party transactions under applicable securities laws as neither the fair market value of the Common Shares (approximately \$1,620,833.46) nor the consideration received by AGV for the Common Shares (approximately \$1,250,000.00) exceeded 25% of the Company's market capitalization at the TIB Commencement Date (approximately \$26,675,114.06).

## Summary of Operating Results

	Q4-19	Q4-18	YE-19	YE-18
Survey revenue	\$ -	\$ -	\$ 11,976,149	\$ -
Expenses:				
Survey	308,374	315,175	2,611,086	1,103,946
General and administrative	926,919	875,705	3,497,785	3,999,089
Stock-based compensation	(28,724)	(173,367)	43,809	386,154
Amortization of property and equipment	449,015	447,942	1,781,181	1,790,267
	1,655,584	1,465,455	7,933,861	7,279,456
Other Expenses (income):				
Interest income, net	(18,452)	(21,626)	(20,684)	(62,004)
Foreign exchange (gain) loss	99,136	(20,330)	233,231	(19,852)
Other expense (recovery)	39,019	(30,783)	56,833	(229,089)
	119,703	(72,739)	269,380	(310,945)
Income (loss) before income taxes	(1,775,287)	(1,392,716)	3,772,908	(6,968,511)
Income tax expense	-	-	-	-
Net Income (loss) for the period	\$ (1,775,287)	\$ (1,392,716)	3,772,908	(6,968,511)
Net Income (loss) per share – basic	\$ (0.03)	\$ (0.02)	\$ 0.06	\$ (0.11)
Net Income (loss) per share – diluted	\$ (0.03)	\$ (0.02)	\$ 0.06	\$ (0.11)

**Annual operating results.** Net income for YE-19 compared to YE-18 increased by \$10,741,419, or \$0.17 per share basic. \$11,976,149 of revenue was recorded in YE-19 for the Nigerian SFD® Survey. Survey costs were higher by \$1,507,140 due to the Nigerian SFD® Survey. G&A expenses were reduced by \$501,304, or 13%, in YE-19 compared to YE-18 due primarily to a reduction in business development costs, lower headcount and costs and certain expenditures being recognized as direct survey costs. This was offset by higher professional fees and information technology costs. SBCE were lower in YE-19 as most outstanding options were vested before 2019 and therefore were fully expensed. Foreign exchange rates were unfavorable in YE-19 compared to YE-18 resulting in a \$253,084 loss as the Company held significant balances in US\$ in YE-19 and US\$ increased in value compared to CDN\$. US\$ balances held by NXT were significantly lower in YE-18. In YE-18, the Company determined that liabilities it had recorded before 2005 were no longer payable and, as a result, a gain of \$185,661 was recorded in other income on the extinguishment of the liability.

**Quarterly operating results.** Net loss for Q4-19 compared to Q4-18 increased by \$382,571 or \$0.01 per share-basic. No revenue was recorded in Q4-19. Survey costs were lower by \$6,801 due to the major phase 5 maintenance in Q4-18. G&A expenses were increased by \$51,214, or 6%, as compared to Q4-18, due primarily to increased business development travel offset by a reduction in headcount and favorable headcount cost mix. Stock-based compensation expense ("SBCE") was negative in both Q4-19 and Q4-18. In Q4-19, restricted stock unit ("RSU") expense from the previous quarter was derecognized as the expected granting of RSUs to employees was not formalized. In Q4-18, 333,333 vested options were

forfeited resulting in the negative expense. Amortization expense was \$1,073 higher in Q4-19 because the Company acquired transponder technology known as Automatic Dependent Surveillance – Broadcast ("ADS-B") during the year. Foreign exchange rates were unfavorable in Q4-19 compared to Q4-18 resulting in a \$119,467 loss as the Company held significant balances in US\$ in Q4-19 and US\$ increased in value compared to CDN\$. US\$ balances held by NXT were lower in Q4-18. For Q4-19 and YE-19, the Company's intellectual property ("IP"), research and development ("R&D") and asset retirement obligation ("ARO") expenses were mostly for costs to begin the validation process for certain European SFD® patents. In YE-18, R&D expenses were negative as the Company incurred less costs from a provider of R&D services than originally estimated.

### **Survey Expenses**

Survey Expenses	Q4-19	Q4-18	Net change
Aircraft lease costs	\$ 101,860	\$ 154,397	\$ (52,537)
Amortization of deferred gain	-	(38,826)	38,826
Aircraft operations	154,527	199,342	(44,815)
Survey projects	51,987	262	51,725
Total survey expenses, net	308,374	315,175	(6,801)

Survey Expenses	YE-19	YE-18	Net change
Aircraft lease costs	\$ 400,847	\$ 610,029	\$ (209,182)
Amortization of deferred gain	-	(155,301)	155,301
Aircraft operations	846,498	648,783	197,715
Survey projects	1,363,741	435	1,363,306
Total survey expenses, net	2,611,086	1,103,946	1,507,140

Survey expenses relate entirely to the direct survey costs and aircraft handling and maintenance costs, net of charter hire revenue. In Q4-19, survey expenses included incremental travel related costs to present results for the Nigerian SFD® Survey. Fixed aircraft costs were lower in Q4-19 versus Q4-18 as scheduled maintenance was performed on the aircraft in Q4-18.

In YE-19, survey expenses included direct incremental survey costs for the Nigerian SFD® Survey incurred which include aircraft and hanger operating costs, staff costs to support the survey, and mobilization/demobilization costs. Also these costs include staff costs to interpret and integrate the survey, and their travel costs. Aircraft operations costs in YE-19 were higher than YE-18 as additional scheduled maintenance was required after the Nigerian SFD® Survey, net of charter hire revenue.

The aircraft is available for charter to third parties through our aircraft manager when it is not being used by NXT. Any charter fees received are used to offset aircraft costs.

In April 2017, NXT completed a sale and leaseback agreement of its aircraft with a Calgary-based international aircraft services organization (the "Lessor"). NXT has leased the aircraft over an initial term of 60 months and retains all existing operating rights and obligations. NXT is required to make monthly payments to the Lessor of approximately US\$39,500. NXT has the option to extend the term of the lease by an additional two years. Should NXT want to repurchase the aircraft at the end of the initial lease term,

the purchase price will be US\$1.45 million. Under the new lease accounting standard, the amortization of the deferred gain is now classified within "lease and lease interest costs".

### **General and Administrative Expenses**

<b>G&amp;A Expenses</b>	<b>Q4-19</b>	<b>Q4-18</b>	<b>Net change</b>	<b>%</b>
Salaries, benefits and consulting charges	\$ 406,300	\$ 510,491	\$(104,191)	(20)
Board and professional fees, public company costs	205,942	139,039	66,903	48
Premises and administrative overhead	193,661	191,277	2,384	1
Business development	121,016	38,463	82,553	215
Bolivian overhead	-	(3,565)	3,565	(100)
<b>Total G&amp;A Expenses</b>	<b>926,919</b>	<b>875,705</b>	<b>51,214</b>	<b>6</b>

<b>G&amp;A Expenses</b>	<b>YE-19</b>	<b>YE-18</b>	<b>Net change</b>	<b>%</b>
Salaries, benefits and consulting charges	\$ 1,599,247	\$2,046,886	\$(447,639)	(22)
Board and professional fees, public company costs	857,556	781,330	76,226	10
Premises and administrative overhead	800,626	753,380	47,246	6
Business development	240,356	382,146	(141,790)	(37)
Bolivian overhead	-	35,347	(35,347)	(100)
<b>Total G&amp;A Expenses</b>	<b>3,497,785</b>	<b>3,999,089</b>	<b>(501,304)</b>	<b>(13)</b>

G&A expenses increased \$51,214, or 6%, in Q4-19 compared to Q4-18 for the following reasons:

- salaries, benefits and consulting charges decreased \$104,191, or 20%, due primarily to a change to a lower cost mix in corporate staff and two less headcount;
- board and professional fees and public company costs increased \$66,903, or 48%, due primarily to higher professional fees given the increase in business activity and the addition of one board member;
- premises and administrative overhead costs increased \$2,384, or 1%, due primarily to increased costs related to the improvement of the Company's information systems security (partially offset by the lower headcount and the related overhead costs);
- business development costs increased by \$82,553, or 215%, as the Company's resources were again focused on business development activities in Q4-19 vs Q4-18 where resources were focused on closing the Nigerian SFD® Survey; and
- Bolivian overhead costs decreased by \$3,565, or 100%, as the Company officially closed its offices and ceased operations in that country in Q4-18.

G&A expenses decreased by \$501,304, or 13%, in YE-19 compared to YE-18 for the following reasons:

- salaries, benefits and consulting charges decreased \$447,639, or 22%, due primarily to a change to a lower cost mix in corporate staff, two less headcount and allocation of direct salary costs to survey costs;

- board and professional fees and public company costs increased \$76,226, or 10%, due primarily to higher professional fees paid in connection with the Nigerian SFD® Survey and higher insurance costs given the increased business activity (partially offset by termination costs to suspend the Advisory Board in YE-18);
- premises and administrative overhead increased \$47,246, or 6%, due primarily to increased costs related to the improvement of the Company's information systems security;
- business development costs decreased \$141,790, or 37%, due primarily to increased costs related to the negotiation and implementation of the Nigerian SFD® Survey; and
- Bolivian overhead costs decreased by \$35,347, or 100%, as the Company officially closed its offices and ceased operations in that country in Q4-18.

### **Stock-based Compensation Expenses**

SBCE varies in any given quarter or year as it is a function of several factors including the number of stock options issued in the period and the period of amortization (based on the term of the contract and/or number of years for full vesting of the options, which is normally three years) of the resultant expense. Also, SBCE is a function of periodic changes in the inputs used in the Black-Scholes option valuation model, such as volatility in NXT's trailing share price.

SBCE in Q4-19 was higher compared to Q4-18 by \$144,643. In Q4-18, significant unvested stock options were forfeited by a former employee which resulted in a credit to the expense. In Q4-19, the Company's SBCE represented costs for the part of the remaining unvested options and a reversal of the RSU expense in Q3-19 as the expected granting of RSUs to employees was not formalized.

SBCE in YE-19 was lower compared to YE-18 by \$342,345. In Q1-18, 333,333 options vested resulting in substantial SBCE. In YE-19, most options previously issued by the Company had vested resulting in minimal SBCE, partially offset by 100,000 options awarded to a consultant.

### **Other Expenses**

<b>Other Expenses</b>	<b>Q4-19</b>	<b>Q4-18</b>	<b>Net change</b>	<b>%</b>
Interest (income) expense, net	\$ (18,452)	\$ (21,626)	\$ 3,174	(15)
Foreign exchange loss (gain)	99,137	(20,330)	119,467	(588)
IP and other	39,019	(30,783)	69,802	(216)
<b>Total Other Expenses, net</b>	<b>119,704</b>	<b>(72,739)</b>	<b>192,443</b>	<b>(265)</b>

<b>Other Expenses</b>	<b>YE-19</b>	<b>YE-18</b>	<b>Net change</b>	<b>%</b>
Interest (income) expense, net	\$ (20,684)	\$ (62,004)	\$ 41,320	(67)
Foreign exchange loss (gain)	233,232	(19,852)	253,084	(1275)
IP, and other	56,833	(43,428)	100,261	(231)
Gain on extinguishment of liability	-	(185,661)	185,661	(100)
<b>Total Other Expenses, net</b>	<b>269,381</b>	<b>(310,945)</b>	<b>580,326</b>	<b>(187)</b>

*Interest (income) expense, net.* This category of other expenses includes interest income earned on short-term investments netted by interest expense from financial lease obligations. Since January 1, 2019 interest on finance leases is included in this account under the new lease accounting standard. Q4-19 interest (income) expense net was \$3,174 less than Q4-18, and YE-19 interest (income) expense net was \$41,320 less than YE-18, as lease interest expense has offset income earned on guaranteed investment certificates.

*Foreign exchange loss (gain).* This category of other expenses includes losses and gains caused by changes in the relative currency exchange values of US dollars and CDN dollars. The Company held significant assets in US dollars at December 31, 2019, including accounts receivable, cash and cash equivalents, short-term investments and the security deposit for the aircraft, all of which have an effect on the unrealized foreign exchange gain and loss. At December 31, 2019, the CDN dollar strengthened as compared to the US dollar and as compared to the end of Q3-19 resulting in an unrealized foreign exchange loss for the quarter. At December 31, 2019, the Company had a significant foreign exchange loss which was the result of the CDN dollar strengthening compared to May 2019 when several of the US dollar assets were initially recorded. The Company does not currently have the ability to enter hedging contracts, but uses 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, R&D activity related to the SFD® technology and ARO costs for certain non-recurring "project" activities.

In Q4-19 and YE-19, the Company's IP, R&D and ARO expenses related mostly to costs associated with the validation process for certain European SFD® patents. In YE-18, these costs were negative as the Company renegotiated fees from a provider of R&D services.

*Gain on extinguishment of liability.* In Q3-18, the Company determined that liabilities it had recorded before 2005 were no longer payable. As a result, a gain of \$185,661 was recorded in other income on the extinguishment of the liability. No cash was paid to settle the liability.

Amortization Expenses	Q4-19	Q4-18	Net change	%
Property and equipment	\$ 27,832	\$ 26,759	\$ 1,073	4
Intellectual property	421,183	421,183	-	-
Total Amortization Expenses	449,015	447,942	1,073	-

Amortization Expenses	YE-19	YE-18	Net change	%
Property and equipment	\$ 96,448	\$ 105,534	\$ (9,086)	(9)
Intellectual property	1,684,733	1,684,733	-	-
Total Amortization Expenses	1,781,181	1,790,267	(9,086)	(1)

*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 Chairman, President and Chief Executive Officer, 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 tests of potential impairment of the recorded net book value. No impairments were recognized in Q4-19 or Q4-18.

Property and equipment and related amortization expense. Property and equipment amortization was higher in YE-19 compared to YE-18 due to the Company acquiring and installing in its aircraft a new transponder technology known as ADS-B. The U.S. Federal Aviation Administration (the "FAA") and European Aviation Safety Agency have mandated that all aircraft flying in designated controlled airspaces must be equipped with ADS-B by January 1, 2020 (US airspace) and June 7, 2020 (European airspace). Total costs for installing the ADS-B was approximately \$208,000. This amortization was partially offset as the Company uses the declining balance method of depreciation, thereby having the effect of lowering amortization each year on existing assets.

Income tax expense. There was no income tax expense in YE-19 or YE-18.

### **Competition**

Our SFD<sup>®</sup> 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<sup>®</sup> survey system for oil and natural gas exploration.

Seismic is the standard technology used by the oil & gas industry to image subsurface structures. It is our view that the SFD<sup>®</sup> 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<sup>®</sup> system can be used as a focusing tool for seismic. With a SFD<sup>®</sup> 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<sup>®</sup> survey deployed first can provide necessary information to target a seismic program over a limited area of locations selected by SFD<sup>®</sup>. 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 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 exploration operations involve a number of risks and uncertainties that have affected our financial statements and are reasonably likely to affect them in the future. These risks and uncertainties are discussed further below.

Exchange Rates. Revenues and costs incurred in currencies other than Canadian dollars expose us to exchange rate fluctuations between the Canadian dollar and foreign currencies. In addition, exchange rate

changes impact the Canadian equivalent carrying balances for our assets and liabilities, and for foreign currency denominated monetary assets (such as cash and cash equivalents), the impact of changes in exchange rates is recorded in net earnings as a foreign exchange gain or loss.

*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.

*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](http://www.nxtenergy.com) and on SEDAR at [www.sedar.com](http://www.sedar.com)

## 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.

	Q4-19	Q3-19	Q2-19	Q1-19
Survey revenue	\$ -	\$ 1,021,532	\$10,954,617	\$ -
Net income (loss)	(1,775,287)	(774,373)	8,085,888	(1,763,320)
Income (loss) per share – basic	\$ (0.03)	\$ (0.01)	\$ 0.12	\$ (0.03)
Income (loss) per share – diluted	\$ (0.03)	\$ (0.01)	\$ 0.11	\$ (0.03)

	Q4-18	Q3-18	Q2-18	Q1-18
Survey revenue	\$ -	\$ -	\$ -	\$ -
Net income (loss)	(1,392,716)	(1,660,031)	(1,961,114)	(1,954,650)
Income (loss) per share – basic	\$ (0.02)	\$ (0.02)	\$ (0.03)	\$ (0.03)
Income (loss) per share – diluted	\$ (0.02)	\$ (0.02)	\$ (0.03)	\$ (0.03)

In Q4-19, survey costs were higher as final integration costs from the Nigerian SFD<sup>®</sup> Survey were incurred. SBCE was lower as most outstanding options were fully vested. In Q3-19, NXT recognized \$1,021,532 of revenue for services rendered in connection with the Nigerian SFD<sup>®</sup> Survey, compared to \$10,954,617 in Q2-19. There were no revenues in the previous five quarters, rather, the Company incurred net losses in each due primarily to survey 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, as detailed more specifically below:

- in Q1-19, survey costs were higher due to scheduled maintenance on the aircraft and significant legal and contract negotiation costs in preparing for the Nigerian SFD<sup>®</sup> Survey;
- in Q4-18, SBCE was lower by \$283,811 as unvested options were forfeited. In addition, G&A expenses decreased \$156,271 for two reasons: (i) business development decreased as most of the business development work was centered in Calgary supporting the Nigerian SFD<sup>®</sup> Survey negotiations; and (ii) there was a decrease in public company costs as the previous quarter had significant costs related to reviewing equity financing options (offsetting the decreases in SBCE and G&A expenses was an increase of \$44,010 in survey expenses as NXT's aircraft incurred a scheduled major maintenance in December 2018);
- in Q3-18, a gain of \$185,661 was recognized on the extinguishment of a liability from 2005 that was no longer payable, and interest income of \$26,171 was earned on cash received from equity financings; and
- in Q1-18, G&A expenses were lower as NXT began to recognize the full extent of cost reductions started in the prior quarter.

## Liquidity and Capital Resources

### ***Going Concern***

The consolidated financial statements for YE-19 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.

NXT's financial statements for YE-18 included disclosure related to the use of the "going concern" basis of presentation. In YE-19, NXT has had positive cash flow from operations which has resulted in a significant strengthening of the Company's liquidity and working capital position. As a consequence, management is of the view that removal of the "going concern" disclosure in respect of its YE-19 disclosure is warranted on the basis that the Company currently has sufficient funds to maintain operations for the next 12 months as of the date of these financial statements.

In the preparation of the YE-19 financial statements, management determined that there are no existing conditions or reasonably foreseeable events that raise substantial doubt about the Company's ability to continue as a going concern. However, NXT's future financial results and its longer term success remains dependent upon the ability to continue to attract and execute client projects to build its revenue base. 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 and to continue to attract new client projects and expand the revenue base to a level sufficient to exceed fixed operating costs and continue to generate positive cash flow from operations. The occurrence and timing of these events cannot be predicted with certainty.

NXT's cash and cash equivalents plus short-term investments at December 31, 2019 totaled \$6.64 million. Net working capital totaled \$7.13 million.

As NXT is operating on a going concern basis, NXT's short-term ability to generate sufficient cash depends on the success of signing contracts and receiving advance payments pursuant to the terms of such agreements. NXT's longer-term success remains dependent upon our ability to continue to attract new client projects and expand the revenue base to a level sufficient to exceed G&A expenses and generate excess net cash flow from operations. Proceeds from past equity financings have been used to provide NXT with funds to pursue, close and implement commercial transactions currently in negotiation, develop additional revenue streams including multi-client data sales and strategic partnerships and for general corporate and net working capital purposes.

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.

In YE-19, NXT continued to make progress in strengthening its liquidity and net working capital by completing the Nigerian SFD<sup>®</sup> Survey and reducing corporate costs by reducing the number of staff and by implementing new human resource policies to reduce staffing costs. Please see the discussion under

"Summary of Operating Results – General and Administrative Expenses" for the results of these cost reductions.

As of the date of this MD&A, NXT has sufficient funds to maintain its operations for more than 12 months.

The Company does not have provisions in its leases, contracts, or other arrangements that would trigger additional funding requirements or early payments.

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**

<b>Net Working Capital</b>	<b>YE-19</b>	<b>YE-18</b>	<b>Net Change</b>	<b>%</b>
Current assets (current liabilities)				
Cash, cash equivalents and short-term investments	\$6,639,757	\$ 4,239,532	\$2,400,225	57
Accounts receivable	1,384,315	61,279	1,323,036	2,159
Note receivable	324,700	-	324,700	100
Prepaid expenses and deposits	97,132	65,159	31,973	49
Accounts payable and accrued liabilities	(448,928)	(499,535)	50,607	(10)
Contract obligations	(131,386)	-	(131,386)	(100)
Current portion of lease obligation	(736,408)	(42,603)	(693,805)	1,629
<b>Total Net Working Capital</b>	<b>7,129,182</b>	<b>3,823,832</b>	<b>3,305,350</b>	<b>86</b>

NXT had no secured debt and had net working capital of \$7,129,182 as at December 31, 2019.

The increase in net working capital in YE-19 was due to recognizing accounts receivable, cash from the Nigerian SFD<sup>®</sup> Survey and the note receivable in respect of the Loan Arrangement. This increase was offset due to the recognition of the current portion of lease obligations under ASC Topic 842 ("Topic 842") and contract obligations (deposit) received from AGV for the Co-operation Agreement.

### **Accounts Payable**

<b>Accounts Payable</b>	<b>YE-19</b>	<b>YE-18</b>	<b>Net Change</b>	<b>%</b>
Trade accounts payable	\$ (181,790)	\$ (138,509)	\$ (43,281)	31
Deferred gain on sale of aircraft	-	(155,301)	155,301	(100)
Deferred director and advisor payable	(24,352)	(48,079)	23,727	(49)
Accrued liabilities	(136,257)	(110,375)	(25,882)	23
Vacation pay accrued	(106,529)	(47,271)	(59,258)	125
<b>Total Accounts Payable</b>	<b>(448,928)</b>	<b>(499,535)</b>	<b>50,607</b>	<b>(10)</b>

Accounts payable increased by \$50,607, or 10%, in YE-19 compared to YE-18 for the following reasons:

- trade accounts payable increased by \$43,281, or 31%, due primarily to increased professional fees payable in connection with the Targeted Issuer Bid (payables are considered current at December 31, 2019 other than minor disputed items);

- the deferred gain on sale of aircraft was reclassified under current lease obligations;
- deferred director and advisor fees decreased by \$23,727, or 49%, as director fees have been fully paid (the remaining payable is for advisor fees from prior to YE-18 which are in the process of being settled);
- accrued liabilities increased by \$25,882, or 23%, due to timing of invoice receipts, which is consistent with the decrease in accounts payable; and
- vacation pay accrued increased by \$59,258, or 125%, as employees vacations were deferred to complete the Nigerian SFD® Survey.

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:

### Cash Flow

Cash Flow - from / (used in)	Q4-19	Q4-18	YE-19	YE-18
Operating activities	\$1,289,465	\$(1,162,392)	\$ 4,078,427	\$(6,043,919)
Financing activities	(1,354,121)	(12,187)	(1,385,787)	9,176,839
Investing activities	257,236	1,100,000	(173,927)	(2,960,006)
Net source (use) of cash	192,580	(74,579)	2,518,713	172,914
Cash and cash equivalents, start of period	2,665,665	414,111	339,532	166,618
Cash and cash equivalents, end of period	2,858,245	339,532	2,858,245	339,532
Cash and cash equivalents	2,858,245	339,532	2,858,245	339,532
Short-term investments	3,781,512	3,900,000	3,781,512	3,900,000
Total Cash and Short-Term Investments	6,639,757	4,239,532	6,639,757	4,239,532

Operating Activities	Q4-19	Q4-18	YE-19	YE-18
Net income (loss) for the period	\$(1,775,287)	\$(1,392,716)	\$ 3,772,908	\$(6,968,511)
Total non-cash expense items	383,794	184,362	1,777,580	1,782,762
	(1,391,493)	(1,208,354)	5,550,488	(5,185,749)
Change in non-cash working capital balances	2,680,958	45,962	(1,472,061)	(858,170)
Total Cash from (used in) Operating Activities	1,289,465	(1,162,392)	4,078,427	(6,043,919)

Operating cash flow increased by \$2,451,858 in Q4-19 as compared to Q4-18 and by \$10,122,347 in YE-19 as compared to YE-18 because of payments received from the Nigerian SFD® Survey net of payments for survey costs.

Financing Activities	Q4-19	Q4-18	YE-19	YE-18
Net funds used-in targeted issuer bid	\$(1,343,184)	\$ -	\$(1,343,184)	\$ -
Proceeds from exercise of stock options	-	-	-	5,067
Net proceeds from equity financings	-	(2,033)	-	9,211,351
Repayment of capital lease obligation	(10,937)	(10,154)	(42,603)	(39,579)
Total Cash from (used in) Financing Activities	(1,354,121)	(12,187)	(1,385,787)	9,176,839

During Q4-19 the Company completed the TIB for \$1,250,000 plus costs of \$93,184 to repurchase 4,166,667 TIB Common Shares, at a price of \$0.30 per.

NXT recorded a net cash financing outflow of \$10,937 in Q4-19 and \$42,603 in YE-19 on payments for its finance leases. The YE-18 inflows were received in connection with equity financings.

Investing Activities	Q4-19	Q4-18	YE-19	YE-18
Purchase of property and equipment	\$ -	\$ -	\$ (216,691)	\$ (10,006)
Decrease (increase) in short-term investments	257,236	1,100,000	42,764	(2,950,000)
Total Cash from (used in) Investing Activities	257,236	1,100,000	(173,927)	(2,960,006)

Short-term investments in Q4-19 and YE-19 increased as the Company invested excess funds from operations into Guaranteed Investment Certificates. The decrease in short-term investments in Q4-18 was for cash to finance operating costs. The increase in short-term investments in YE-18 was from the cash received from equity financings.

### **Contractual Commitments**

Associated with the adoption of Topic 842, all operating leases were recognized on the Consolidated Balance Sheet. Accordingly, operating leases are not included in the commitments table below. The table below is the non-lease operating cost components associated with the building lease.

The estimated minimum annual commitments for these leases are as follows, as at December 31, 2019:

For the period ended December 31	Office Premises
2020	\$ 222,069
2021	222,501
2022	222,501
2023	222,501
2024	222,501
	1,112,073
2025	166,876
	1,278,949

### 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 Interloq Capital (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 under the heading "*Liquidity and Capital Resources – Contractual Commitments*". 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 constant with discussions with the Landlord.

### Transactions with Related Parties

In addition to the related party transactions discussed elsewhere herein (i.e. the Co-operation Agreement, the Loan Arrangement and the Targeted Issuer Bid), one of the members of NXT's Board, Thomas Valentine, is a partner in the law firm Norton Rose Fulbright Canada LLP which provides legal advice to NXT. Legal fees incurred with Norton Rose Fulbright Canada LLP were as follows:

	Q4-19	Q4-18	YE-19	YE-18
Legal Fees	\$ 111,562	\$ 7,796	\$ 276,261	\$ 249,218

Accounts payable and accrued liabilities includes a total of \$146,197 (\$5,999 as at December 31, 2018) payable to Norton Rose Fulbright Canada LLP. Interest of \$1,809 was received from AGV during the year.

## Critical Accounting Estimates

The key elements and assumptions are substantially unchanged from those described in NXT's annual audited consolidated financial statements as at and for the year-ended December 31, 2018 other than as described below.

### **Revenue**

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

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

### **IP Assets**

The value attributed to the IP assets acquired in 2015 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 subject to ongoing tests of potential impairment of the recorded net book value. No impairments were recognized in Q4-19 and Q4-18. Any adverse change in competition, patent protection and the oil and gas market could substantially change the useful life of the IP asset.

## Changes in Accounting Policies

### **Leases**

On January 1, 2019, NXT adopted Topic 842, Leases and related amendments, using the modified retrospective approach recognizing a cumulative effect adjustment at the beginning of the reporting period in which Topic 842 was applied. Results for reporting periods beginning after January 1, 2019, are presented in accordance with Topic 842, while prior periods have not been restated and are reported in accordance with Topic 840. On transition, NXT elected certain practical expedients permitted under Topic 842 which include:

- a) no reassessment of the classification of leases previously assessed under Topic 840; and
- b) the use of hindsight in determining the lease term where the contract contains terms to extend or terminate the lease.

In accordance with Topic 842, NXT recognized a Right Of Use ("ROU") asset and corresponding lease liability for all operating leases on the Consolidated Balance Sheet. Prior to the adoption of Topic 842, operating leases were not recognized on the Consolidated Balance Sheet. There was no impact to finance leases on transition to Topic 842. The impact from recognizing operating leases on NXT's Consolidated Balance Sheet is as follows:

Account	Notes	As reported December 31, 2018	Adjustments	Balance on Adoption as at January 1, 2019
Property and equipment	i	\$683,157	\$(139,725)	\$543,432
Right of Use	ii	-	3,535,919	3,535,919
<b>Total Assets</b>		<b>\$25,264,268</b>	<b>\$3,396,194</b>	<b>\$28,660,462</b>
Accounts payable and accrued liabilities	iii	\$499,535	\$(155,301)	\$344,234
Current portion of capital lease obligations	i	42,603	(42,603)	-
Current portion of lease obligations	iv	-	672,087	672,087
Capital lease obligations	i	42,515	(42,515)	-
Long-term lease obligations	ii	-	3,405,894	3,405,894
Other liabilities	iv	362,368	(362,368)	-
Deferred charges	v	79,000	(79,000)	-
<b>Total Liabilities and Shareholders' Equity</b>		<b>\$25,264,268</b>	<b>\$3,396,194</b>	<b>\$28,660,462</b>

Notes:

- i) Reclassify previously recognized finance leases: Leases accounted for as finance leases were reclassified to ROU assets and lease liabilities from property, plant and equipment and capital lease obligations, respectively.
- ii) Right of use: Right of use assets have been recognized for the building lease, aircraft lease and office equipment. Upon transition the building and aircraft right of use assets were calculated on the net present value of future lease payments less deferred charges for the building. The office equipment lease was previously recorded as a finance lease. The unamortized portion of the leased asset was reclassified to right of use assets.

- iii) Lease liabilities: The Company recognized lease liabilities in relation to leases which had previously been classified as operating. Under the principles of the new standard these leases have been measured at the present value of the remaining lease payments, discounted using the Company's estimated incremental borrowing rates or implied interest rate in the lease contract. Rates varied between 7.4% and 15.7%. Total lease liabilities of \$4,077,981 were recorded as at January 1, 2019, of which \$672,087 was the current portion.
- iv) Account payable and other accrued liabilities, Other liabilities: The deferred gain on sale of the aircraft was reclassified from Accounts payable and other accrued liabilities, and Other liabilities to Current portion of lease obligations and Long-term lease obligations.
- v) Deferred charges: The Deferred charges for the office lease have been reclassified to ROU assets and are being amortized on a straight line basis over the remaining period of the lease.

Although Topic 842 does not have a material impact on the Consolidated Statements of Income (loss) and Comprehensive Income (Loss) or Cash Flows, the change in the accounting of the aircraft lease now has interest expense of \$15,095 and \$69,776 for the three and twelve months ended December 31, 2019 being recorded, whereas under Topic 840 that amount was recorded under survey costs. In the Consolidated Statements of Cash Flows under Operating Activities, amortization of deferred gain on sale of aircraft and deferred charges are now presented as Non-cash lease and interest expense, under Topic 842.

Leases entered into for the use of an asset are classified as either operating or finance, which is determined at contract inception. Upon commencement of the lease, a ROU asset and corresponding lease liability are recognized on the Consolidated Balance Sheet for all operating and finance leases. NXT has elected the short-term lease exemption, which does not require a ROU asset or lease liability to be recognized on the Consolidated Balance Sheet when the lease term is 12 months or less and does not include an option to purchase the underlying asset that the lessee is reasonably certain to exercise.

Upon commencement of the lease, ROU assets are measured at the initial measurement of the lease liability adjusted for any lease payments made before commencement date of the lease, less any lease incentives received and include any initial direct costs incurred. Lease liabilities are initially measured at the present value of future minimum lease payments over the lease term. The discount rate used to determine the present value is the rate implicit in the lease unless that rate cannot be determined, in which case NXT's incremental borrowing rate is used.

Operating lease ROU assets and liabilities are subsequently measured at the present value of the lease payments not yet paid and discounted at the initial discount rate at commencement of the lease, less any impairments to the ROU asset. Operating lease expense and revenue from any subleases are recognized in the Consolidated Statement of Income (Loss) and Comprehensive Income (Loss) on a straight line basis over the lease term. Finance lease ROU assets are amortized over the estimated useful life of the asset if the lessee is reasonably certain to exercise a purchase option or ownership of the leased asset transfers at the end of the lease term, otherwise the leased assets are amortized over the lease term. Operating leases include office building, aircraft and printer. Finance leases include office equipment. Currently, there are no subleases.

NXT's lease contracts include rights to extend leases after the initial term. Rights to extend or terminate a lease are included in the lease term when there is reasonable certainty the right will be exercised. Factors used to assess reasonable certainty of rights to extend or terminate a lease include current and forecasted survey plans, anticipated changes in strategies, historical practice in extending similar contracts and current market conditions.

## Financial Instruments

The Company's non-derivative financial instruments consist of cash and cash equivalents, short-term investments, accounts receivable, notes receivable, accounts payable and accrued liabilities and leases. 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 and notes 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. For the notes receivable, NXT has secured the note receivable against assets of AGV's affiliates.

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 December 31, 2019 and December 31, 2018, 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

	April 13, 2020	December 31, 2019	December 31, 2018
Common Shares	64,406,891	64,406,891	68,573,558
Stock options	932,600	1,169,500	1,297,000
Warrants	-	-	3,421,646
Total Share Capital and Dilutive Securities	65,339,491	65,576,391	73,292,204

All 3,421,648 Warrants issued in 2018 expired as of October 31, 2019, pursuant to the terms of the Targeted Issuer Bid.

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

NXT's Chief Executive Officer and Chief Financial Officer (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 quarterly and 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 security authority 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 an evaluation of 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 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 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 for quality assurance.

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.

The small size of the Company's finance team has resulted in control deficiencies in maintaining DCPs and ICFR that in turn have led to a recurrence of previously identified deficient disclosure. Given the small size of the Companies finance team and in order to improve ICFR moving forward, management has established a practice of increased engagement of the Company's Disclosure Committee and Audit Committee in reviewing the public disclosure and has increased engagement of external consultants and legal counsel as well.

NXT's efforts to mitigate the risks associated with the above-mentioned deficiencies has resulted in continuous improvements in its DCPs. The Responsible Officers concluded that, as at December 31, 2019, the Company's ICFR have improved, but are still not effective and as a result its DCPs are still not sufficiently 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 consolidated financial statements. NXT continues a process of continuous improvement in financial reporting and disclosure policies and responsibilities from which the Company expects to see continued benefits in 2020. The Responsible Officers continue to take certain actions to remediate these material weaknesses including: (i) the implementation of new controls with regards to the review procedures surrounding its disclosure; and (ii) engagement of third-party specialists. In addition, the Company has appointed its Corporate Controller as the new Chief Financial Officer as of August 1, 2019. The Chief Financial Officer engages subject matter consultants as the need arises.

The new controls over financial reporting and disclosure policies and responsibilities have been performed over seven quarterly periods. Material weaknesses cannot be considered remediated until the remedial controls operate for a sufficient period of time and Responsible Officers have concluded through testing that these controls are operating effectively.

It should be noted that a control system, including the Company's DCPs and ICFR procedures, 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](http://www.nxtenergy.com) and on SEDAR at [www.sedar.com](http://www.sedar.com).