

## Material Change Report

**Item 1            Name and Address of Company**

NXT Energy Solutions Inc. (the **Company**)  
302, 3320 17<sup>th</sup> Ave S.W.  
Calgary, Alberta Canada, T3E 0B4

**Item 2            Date of Material Change**

November 15, 2019

**Item 3            News Release**

A press release dated November 18, 2019 (the **Press Release**) was disseminated through Global Newswire, and subsequently filed on SEDAR. A copy of the Press Release is attached as Schedule "A" hereto.

**Item 4            Summary of Material Change**

On November 15, 2019 (the **Acquisition Date**), the Company entered into an agreement (the **TIB Agreement**) with Alberta Green Ventures Limited Partnership (**AGV**, and together with the Company, the **Parties**) pursuant to which the Company agreed to purchase, and AGV agreed to sell, up to 4,166,667 common shares in the capital of the Company (each, a **TIB Share**, and collectively, the **TIB Shares**) at a price of C\$0.30 per TIB Share for total gross proceeds of approximately C\$1,250,000.00 (the **Targeted Issuer Bid**). In addition, the TIB Agreement provided that all 3,421,648 common share purchase warrants (the **Warrants**) held by AGV at the Acquisition Date expired effective October 31, 2019, and that certain deadlines under the Co-operation Agreement (as defined below) would be extended.

The first tranche of the Targeted Issuer Bid was completed on November 15, 2019 at which time the Company purchased 2,230,000 TIB Shares (the **Tranche 1 TIB Shares**) for total gross proceeds of approximately C\$669,000.00 (**TIB Tranche 1**). Subject to receipt of all necessary regulatory approvals, including approval by the Alberta Securities Commission (the **ASC**) of the Company's application for exemptive relief (the **Requested Relief**) from the requirements in Part 2 of National Instrument 62-104 *Take-Over Bids and Issuer Bids (NI 62-104)*, the Company will acquire the remaining 1,936,667 TIB Shares (the **Tranche 2 TIB Shares**) for total gross proceeds of approximately C\$581,000.00 (**TIB Tranche 2**).

The Targeted Issuer Bid constitutes an "issuer bid" and a "related party transaction" under applicable securities laws.

**Item 5.1          Full Description of Material Change**

Description of Relevant Prior Transactions

*Private Placement*

Between February 16, 2018 and July 3, 2018, the Company issued to AGV, by way of private placement, an aggregate of 10,264,936 units (each, a **Unit**) at a price of C\$0.924 per Unit for total gross proceeds of approximately C\$9,484,810.00 (the **Private Placement**). Each Unit consisted of one common share in the capital of the Company (each, a **Common Share**, and collectively, the **Common Shares**) and one-third of one Warrant, such that, upon completion of the Private Placement, AGV acquired ownership of a total of 10,264,946 Common Shares and 3,421,648 Warrants, representing, on a fully diluted basis, approximately 20.0% of the 68,432,746 issued and outstanding Common Shares. Each whole Warrant entitled AGV to acquire one Common Share at a price of C\$1.20 until their expiry date of February 16, 2019.

#### *Co-operation Agreement, Sales Representative Agreement and Loan*

On February 18, 2019, the Parties entered into a co-operation agreement (the **Co-operation Agreement**) whereby, among other things, AGV committed to conduct up to three surveys in two years using the Company's SFD<sup>®</sup> surveying technology and the Company committed to seeking approval from its shareholders with respect to a 12-month extension of the expiry date of the Warrants.

On February 26, 2019, the Parties entered into a sales representative agreement (the **Sales Representative Agreement**) whereby, among other things, AGV became the Company's exclusive sales representative in nine jurisdictions in the Middle East and Latin America.

On June 25, 2019, a resolution was passed at the annual meeting of shareholders of the Company whereby the expiry date of the Warrants was extended to February 16, 2020.

On September 6, 2019, the Parties entered into a loan arrangement whereby the Company loaned US\$250,000.00 to AGV for the purpose of providing AGV with additional funds necessary to continue advancing the common objectives of the Parties under the Co-operation Agreement and the Sales Representative Agreement, with repayment of the loaned amount due on or before December 15, 2019 (the **Loan Arrangement**). The Loan Arrangement was evidenced by way of promissory note, pursuant to which the Company may, in its sole and absolute discretion, elect to receive payment(s) by way of (i) wire transfer or other immediately available funds, or (ii) delivery for cancellation of Common Shares (such number of Common Shares to be determined using the five-day volume weighted average price of the Common Shares at the date of repayment).

#### Description of the Targeted Issuer Bid

On the Acquisition Date, the Parties entered into the TIB Agreement pursuant to which the Company agreed to purchase, and AGV agreed to sell, the TIB Shares, representing approximately 6.08% of the 68,573,558 Common Shares issued and outstanding at the Acquisition Date, at a price of C\$0.30 per TIB Share, representing a discount of

approximately 22.9% relative to the market price of C\$0.389 per Common Share<sup>1</sup>, for total gross proceeds of approximately C\$1,250,000.00, representing approximately 6.1% of the Company's market capitalization of approximately C\$26,675,114.06<sup>2</sup>. In addition, the TIB Agreement provided that the Warrants held by AGV expired effective October 31, 2019, and that certain deadlines under the Co-operation Agreement would be extended.

#### *TIB Tranche 1*

TIB Tranche 1 was completed on November 15, 2019 at which time the Company purchased the Tranche 1 TIB Shares, representing approximately 3.3% of the Common Shares issued and outstanding at the Acquisition Date, for total gross proceeds of approximately C\$669,000.00. Upon completion of TIB Tranche 1, AGV's beneficial 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, to 8,034,946 Common Shares, representing, on a fully diluted basis, approximately 12.1% of the 66,343,558 issued and outstanding Common Shares.

#### *TIB Tranche 2*

Subject to receipt of all necessary regulatory approvals, including approval by the ASC of the Company's application for the Requested Relief, the Company will acquire the Tranche 2 TIB Shares for total gross proceeds of C\$581,000.00, thereby further reducing AGV's beneficial ownership in the Company to 6,098,279 Common Shares, representing approximately 9.5% of the 64,406,891 issued and outstanding Common Shares.

#### Purpose and Anticipated Effect

The Targeted Issued Bid enables the Company to make a strategic acquisition of its Common Shares for cancellation at a discount to the current market price and outside of the market, improving the equity position of all NXT shareholders. Furthermore, it provides AGV with additional funds necessary to continue advancing the common objectives of the Parties under the Co-operation Agreement and the Sales Representative Agreement, and avoids the 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.

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<sup>1</sup> Market price, calculated in accordance with section 1.11(1)(a) of NI 62-104, is equal to the simple average of the closing price of the Common Shares for each business day on which there was a closing price in the 20 business days preceding November 15, 2019.

<sup>2</sup> Market capitalization, calculated in accordance with the definition of "market capitalization" in section 1.1 of MI 61-101 (as defined herein), is equal to the product of: (a) 68,573,558, being the number of Common Shares outstanding as of the close of business on October 31, 2019, the last business day of the month preceding the month in which the Targeted Issuer Bid was agreed to, and (b) C\$0.389, being the market price (see footnote 1).

### Approval Process

Upon receiving confirmation that there were no reasonable grounds to believe that the Company was, or would after accounting for the payment of the TIB Shares be, unable to pay its liabilities as they become due, or that the realizable value of the Company's assets would after the payment be less than the aggregate of its liabilities and stated capital of all classes, the Targeted Issuer Bid was approved unanimously by the board of directors of the Company (none of the directors being related to AGV).

The Targeted Issuer Bid is exempt pursuant to sections 5.5(a) and 5.7(a) of Multilateral Instrument 61-101 *Protection of Minority Security Holders in Special Transactions (MI 61-101)* from the formal valuation and disinterested shareholder approval requirements typically applicable to related party transactions under sections 5.4 and 5.6 of MI 61-101, respectively, as the fair market value of, and consideration to be received by AGV for, the TIB Shares (of approximately C\$1,620,833.46 and C\$1,250,000.00, respectively) did not exceed 25% of the Company's market capitalization (of approximately C\$26,675,114.06) at the Acquisition Date.

If the Requested Relief is not granted, the Company will not acquire more than 1,198,667 TIB Tranche 2 Shares within twelve months of the Acquisition Date, and will elect to receive repayment under the Loan Arrangement by way of wire transfer or other immediately available funds rather than by way of Common Shares.

**Item 5.2 Disclosure for Restructuring Transactions**

Not applicable.

**Item 6 Reliance on subsection 7.1(2) of National Instrument 51-102**

Not applicable.

**Item 7 Omitted Information**

Not applicable.

**Item 8 Executive Officer**

Eugene Woychyshyn, Vice President – Finance and Chief Financial Officer

Telephone: (403) 206-0805

**Item 9 Date of Report**

November 25, 2019

### **Forward-Looking Statements**

*Certain information provided in this material change report may constitute forward-looking statements within the meaning of applicable securities laws. Forward-looking statements in this material change report include, but are not limited to: the Targeted Issuer Bid, including the number and price of the*

*securities acquired thereunder, the impact thereof on AGV's ownership and the Company's other shareholders, the ability of NXT to rely on and obtain all necessary and required regulatory approvals and exemptions in connection therewith and to obtain such approvals and exemptions in a timely and efficient manner, the associated benefits and the ability of the Company to capitalize on such benefits, and the associated risks of not making the Targeted Issuer Bid including the expected decrease in the market price and liquidity of the Common Shares if AGV were to sell its position into the open market. Although the Company believes that the expectations and assumptions on which the forward-looking statements are based are reasonable, undue reliance should not be placed on the forward-looking statements because the Company can give no assurance that they will prove to be correct. Since forward-looking statements address future events and conditions, by their very nature they involve inherent risks and uncertainties. Actual results could differ materially from those currently anticipated due to a number of factors and risks. Risk factors facing the Company are described in its most recent management discussion and analysis for the three and nine month periods ended September 30, 2019, which has been filed electronically by means of the System for Electronic Document Analysis and Retrieval (SEDAR) located at [www.sedar.com](http://www.sedar.com). The forward-looking statements contained in this material change report are made as of the date hereof, and except as may be required by applicable securities laws, the Company assumes no obligation to update publicly or revise any forward-looking statements made herein or otherwise, whether as a result of new information, future events or otherwise.*

**SCHEDULE "A"**

**PRESS RELEASE**

**[ATTACHED]**



## **NXT ENERGY SOLUTIONS INC. MAKES A TARGETED ISSUER BID FOR COMMON SHARES OWNED BY ALBERTA GREEN VENTURES LIMITED PARTNERSHIP**

CALGARY, AB, November 18, 2019 / GLOBE NEWSWIRE / – NXT Energy Solutions Inc. (**NXT** or the **Company**) (TSX:SFD; OTC QB:NSFDF) is pleased to announce that it has entered into an agreement with Alberta Green Ventures Limited Partnership (**AGV**) whereby NXT will purchase from AGV up to 4,166,667 common shares in the capital of the Company (the **Targeted Issuer Bid Shares**) at a price of C\$0.30 per Targeted Issuer Bid Share for total gross proceeds of approximately C\$1,250,000.00 (the **Targeted Issuer Bid**) providing cash to AGV and ultimately reducing its fully diluted holding to approximately 9.47% of the issued and outstanding common shares in the capital of the Company (the **Common Shares**), such that AGV would no longer be an “insider” of the Company. NXT is making the Targeted Issuer Bid at a time when NXT has cash from the recent completion of its contract in Nigeria, contract prospects, and the Common Shares are trading at a low multiple of year-to-date earnings as reported in the company’s financials on November 14, 2019.

In addition to the Targeted Issuer Bid, NXT and AGV have agreed that: (i) all 3,421,648 common share purchase warrants (the **Warrants**) previously acquired by AGV expired as of October 31, 2019; and (ii) the deadline under the previously disclosed Co-operation Agreement to complete at least one of three SFD® surveys will be extended from December 31, 2019 to June 30, 2020. For more information on the Co-operation Agreement, please refer to the Company's press release dated February 20, 2019.

On November 15, 2019, NXT purchased from AGV 2,230,000 of the Targeted Issuer Bid Shares for total gross proceeds of C\$669,000. Subject to receipt of all necessary regulatory approvals including approval by the Toronto Stock Exchange (the **TSX**) and acceptance by the Alberta Securities Commission (the **ASC**) of the Company's application for exemptive relief as discussed below, NXT will acquire the remaining 1,936,667 Targeted Issuer Bid Shares for total gross proceeds of C\$581,000.

As at market close on November 14, 2019: (i) the 4,166,667 Targeted Issuer Bid Shares represented approximately 6.08% of the outstanding Common Shares; (ii) the purchase price of C\$0.30 per Targeted Issuer Bid Share represents a discount of approximately 25.0% to the market price of the Common Shares, being approximately C\$0.40; and (iii) the total gross proceeds of approximately C\$1,250,000 represent approximately 4.7% of the Company's market capitalization of approximately C\$27.4 million.

The Targeted Issuer Bid constitutes an "issuer bid" and a "related party transaction" under applicable securities laws, and the acquisition of the remaining 1,936,667 Targeted Issuer Bid Shares is conditional upon NXT being exempted from typically applicable requirements. An application for exemptive relief has been submitted to the ASC and is currently pending, and an application for approval will be submitted to the TSX.

The Targeted Issued Bid, enables the Company to make a strategic acquisition of its Common Shares for cancellation at a discount to market price and outside of the market, improving the equity position of all NXT shareholders.

Eugene Woychyshyn, Vice President of Finance & CFO of NXT, commented, "AGV made 4,166,667 NXT Common Shares available and the Company decided that this was a good time to step in and purchase these Common Shares for cancellation based on our current financial state and potential future contract

opportunities. This transaction also included the cancellation of AGV's 3,421,648 Warrants. The position of the Board of Directors and management is that this transaction will benefit our shareholders. AGV continues to be a significant partner to NXT, first as one of its largest shareholders and second, as we together continue exploring SFD® opportunities in several regions in the world in furtherance of our two previously disclosed commercial agreements. We look forward to our continued cooperation."

### **About NXT Energy Solutions Inc.**

NXT Energy Solutions Inc. is a Calgary-based technology company with its principal office at Suite 302, 3320 – 17<sup>th</sup> Avenue SW, Calgary, Alberta, Canada. NXT's proprietary 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 exploration potential. The SFD® survey system enables our clients to focus their hydrocarbon 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 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.

### **Contact Information**

For investor and media inquiries please contact:

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### **Forward-Looking Statements**

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