

MATERIAL CHANGE REPORT

Item 1 Name and Address of Company

NXT Energy Solutions Inc. ("NXT" or the "Company")
Suite 1400, 505 3rd Street, S.W.,
Calgary, Alberta, Canada T2P 3E6

Item 2 Date of Material Change

May 22, 2013

Item 3 News Release

A news release disclosing the material change was issued on May 27, 2013 (see also news release of April 24, 2013 regarding initial notice of conversion).

Item 4 Summary of Material Change

On May 22, 2013, George Liszicasz, the President & CEO and a director of NXT, exercised a right to convert a total of 2,000,000 Preferred shares, Series 1 (the "Preferred shares") of the Company into 2,000,000 NXT common shares (the "Conversion"). Following the Conversion, Mr. Liszicasz will hold a total of 7,196,490 (or 17.3%) of NXT's 41,554,959 outstanding common shares.

Item 5.1 Full Description of Material Change

Mr. George Liszicasz, NXT's President & CEO and a director of NXT, was issued a total of 10,000,000 Preferred shares effective December 31, 2006 pursuant to a Technology Transfer Agreement ("TTA") under which NXT acquired certain rights to utilize the SFD® (Stress Field Detection) technology for hydrocarbon exploration. The Preferred shares are non-voting, are convertible into NXT common shares on a 1 for 1 basis, and mature on December 31, 2015 (the "Maturity").

A total of 2,000,000 of the Preferred shares became immediately convertible upon issue in 2006, with the remaining balance of 8,000,000 contingently convertible before the Maturity based upon NXT achieving certain milestones based on cumulative revenues.

Effective May 22, 2013, Mr. Liszicasz exercised his right to convert the initial 2,000,000 of the Preferred shares into 2,000,000 common shares, following which he will hold a total of 7,196,490 (or 17.3%) of NXT's 41,554,959 outstanding common shares. If the remaining 8,000,000 Preferred shares were to be converted, Mr. Liszicasz would hold a total of 15,196,490 (or 31.7%) of the 49,554,959 common shares which would then be outstanding.

The remaining 8,000,000 Preferred shares can be converted before Maturity in four separate increments of 2,000,000 Preferred shares each, should NXT achieve specified cumulative revenue thresholds of US \$50 million, US \$100 million, US \$250 million and US \$500 million. In the event that the final cumulative revenue threshold of US \$500 million is not achieved by December 31, 2015, NXT has the option to either redeem any remaining unconverted Preferred shares for a price of \$0.001 per share and forfeit its rights to the SFD® technology, or elect to retain the ownership of the SFD® technology by converting all of the remaining Preferred shares into NXT common shares.

An additional 1,000,000 NXT common shares are issuable to Mr. Liszicasz in the event that cumulative revenues exceed US \$500 million by December 31, 2015.

Item 5.2 Disclosure of 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

Greg Leavens, Vice President Finance and Chief Financial Officer of NXT, is knowledgeable about the material change described herein and may be reached at (403) 206-0805

Item 9 Date of Report

May 28, 2013