

NXT REMINDS SHAREHOLDERS OF PREVIOUSLY ANNOUNCED RIGHTS OFFERING AND POTENTIAL ACCELERATED CUT OFF TIMES

CALGARY, AB, November 21, 2022 – NXT Energy Solutions Inc. ("NXT" or the "Company") (TSX: SFD; OTCQB: NSFDF) would like to remind its shareholders of the upcoming deadlines and essential details of its previously announced rights offering (the "Rights Offering") made to the holders of common shares of the Company ("Common Shares") of record at the close of business on November 7, 2022 (the "Record Date"). The rights ("Rights") will expire at 4:30 p.m. (Calgary time) on November 30, 2022 (the "Expiry Time"), after which time unexercised Rights will be void and of no value.

Accelerated Deadlines

It is important to note that intermediaries may have different cut off times prior to the Expiry Time, which could be as early as November 22, 2022. As such, the Company recommends that all eligible shareholders who own their Common Shares through an intermediary contact their broker or financial advisor about the Rights Offering to ensure that they can participate by the intermediary's cut off time for submitting subscriptions.

Rights Required to Purchase One Common Share

The Company has issued one Right for each Common Share held at the Record Date. 2.95 Rights entitle the holder to purchase one Common Shares at a price of \$0.18 Canadian Dollars ("C\$") per Common Share. Fractional shares will not be issued and any fractions will be rounded down to the nearest whole number. To illustrate: an eligible holder of 50,000 Common Shares as of the Record Date was issued 50,000 Rights, which entitle the holder to subscribe for 16,949 Common Shares (50,000 / 2.95), for an aggregate price of C\$3,050.82 (16,949 x C\$0.18).

Additional Subscription Privileges

Shareholders who fully exercise their Rights are entitled to subscribe pro rata for additional Common Shares, if available, that were not subscribed for initially on or before the Expiry Date.

A fully subscribed Offering will raise gross proceeds of approximately C\$4.0 million. The proceeds will be used to support the working capital requirements to commence SFD[®] surveys and for the related general and administrative costs required to transform the existing pipeline of opportunities into firm contracts.

The Offering was made in all of the provinces of Canada, in each state of the United States, except Arizona, Arkansas, California, Minnesota, Ohio, Utah and Wisconsin, and in all jurisdictions outside Canada and the United States where the Company is eligible to make such Offering. In certain states, including California, transferable Rights (defined below) may only be exercised by shareholders to which solicitations may be addressed without registration under the relevant state securities laws.

Further details of the Rights Offering are contained in the Rights Offering Circular dated October 31, 2022 can be obtained from NXT's profile on the SEDAR website at www.sedar.com, the Company's website at

www.nxtenergy.com, from your dealer representative, or by contacting the Chief Financial Officer at 403–206-0805 or by email at nxt_info@nxtenergy.com.

The Company has also registered the offer and sale of the Common Shares issuable on exercise of the Rights on a Form F-7 registration statement under the U.S. Securities Act of 1933, as amended. Shareholders in the United States should also review the Company's Registration Statement on Form F-7 which is filed with the United States Securities and Exchange Commission and can be found at www.sec.gov.

This news release shall not constitute an offer to sell or solicitation of an offer to buy the securities of the Company. There shall be no offer or sale of these securities in any jurisdiction in which such offer, solicitation or sale would be unlawful prior to the registration or qualification of such securities under the laws of any such jurisdiction.

Special Notice to Holders of Fidelity Brokerage Accounts

The third paragraph of the Rights Offering terms issued by Fidelity lists an incorrect subscription price of C\$0.061 per Common Share. This should be C\$0.18 per Common Share. The C\$0.061 is the exercise price per Right, NOT per Common Share.

About NXT Energy Solutions Inc.

NXT Energy Solutions Inc. is a Calgary-based technology company whose 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 hydrocarbon and geothermal exploration potential. The SFD[®] survey system enables our clients to focus their exploration decisions concerning land commitments, data acquisition expenditures and prospect prioritization on areas with the greatest potential. SFD[®] is environmentally friendly and unaffected by ground security issues or difficult terrain and is the registered trademark of NXT 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

Certain information provided in this press release may constitute forward-looking information within the meaning of applicable securities laws. Forward-looking information typically contains statements with words such as "anticipate", "believe", "estimate", "will", "expect", "plan", "schedule", "intend", "propose" or similar words suggesting future outcomes or an outlook. Forward-looking information in this press release includes, but is not

limited to, information regarding: the details or and funds to be raised under the Rights Offering, additional sources of required funding for the Company, the use of the funds raised under the Rights Offering, the intention of insiders to exercise their Rights, including the participation of our Chief Executive Officer, and the anticipated trading market which may or may not develop. 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 forwardlooking statements because the Company can give no assurance that they will prove to be correct. Since forwardlooking 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 and the Rights Offering are described in the Rights Offering Circular to be filed on www.sedar.com and as part of the Form F-7 registration statement to be filed with the U.S. Securities and Exchange Commission at www.sec.gov. Additional risk factors facing the Company are described in its most recent Annual Information Form for the year ended December 31, 2021 and MD&A for the three and nine month periods ended September 30, 2022, which have been filed electronically by means of the System for Electronic Document Analysis and Retrieval ("SEDAR") located at www.sedar.com. The forward-looking statements contained in this press release 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.