



NXT ANNOUNCES CLOSING OF PRIVATE PLACEMENT OF CONVERTIBLE DEBENTURES

CALGARY, AB, January 12, 2024 – NXT Energy Solutions Inc. ("NXT" or the "Company") (TSX: SFD; OTCQB: NSFDF) is pleased to announce the closing of the private placement of convertible debentures that was previously announced on November 9, 2023 (the "Debentures") for a total of US\$1,872,000 (approximately CAD\$2,542,000). The Debentures are convertible into common shares in the capital of NXT (the "Common Shares") at a conversion price of US\$0.1808 (approximately CAD\$0.25) per Common Share, which provides the subscribers with the right to obtain an aggregate of up to 10,353,982 Common Shares. Any Common Shares issued upon the conversion of the respective Debentures will be subject to a hold period of four months plus a day from the date of issuance of the Debenture being so converted.

Insiders were issued Debentures valued, in the aggregate principal amount, at US\$1,522,000 (Approximately CAD\$2,075,000) Debentures or (81.3%) of the value of the total Debentures issued. The Company has issued an aggregate principal amount of US\$1,375,000 (approximately CAD\$1,882,000) of the Debentures to MCAPM, LP and Michael P. Mork ("Mork Capital"). Mork Capital will now have the right to obtain an additional 7,605,088 Common Shares upon the conversion of their Debentures. However, due to the current shareholdings of Mork Capital in NXT, no conversion of Mork Capital's Debentures can occur until approval of NXT's shareholders is obtained. Mork Capital currently own an aggregate of 14,921,233 Common Shares, representing 19.12% of the currently issued and outstanding Common Shares of NXT. With the acquisition of the Debentures, Mork Capital will have the right to own, after conversion of their Debentures, 22,526,321 Common Shares, representing approximately 26.3% of the issued and outstanding Common Shares. The Company has agreed to appoint a representative from Mork Capital to its board of directors in the near future. In addition, all six current directors of NXT participated in the private placement by converting their outstanding director fees payable as at December 31, 2023 into Debentures valued, in the aggregate principal amount, at US\$147,000 (approximately CAD\$194,000). In connection with this issuance, the current directors have the right to obtain, in the aggregate, up to 813,053 Common Shares.

The proceeds from the private placement of Debentures have been used to support the working capital needs of the SFD® survey in Turkiye, and other general and administrative costs which include business development and marketing activities required to transform the existing pipeline of SFD® opportunities into firm contracts. The data acquisition phase of the Turkiye contract has been completed and NXT is actively pursuing other prospects in the country and region.

The securities described herein have not been, and will not be, registered under the United States Securities Act of 1933, as amended (the "1933 Act"), or any state securities laws, and accordingly, may

not be offered or sold within the United States except in compliance with the registration requirements of the 1933 Act and applicable state securities requirements or pursuant to exemptions therefrom. This news release shall not constitute an offer to sell or the solicitation of an offer to buy nor shall there be any sale of the securities in the United States or in any other jurisdiction in which such offer, solicitation or sale would be unlawful.

About NXT Energy Solutions Inc.

NXT Energy Solutions Inc. is a Calgary-based technology company whose proprietary airborne SFD® survey system, applied in numerous basins around the world, uses the principles of quantum mechanics to infer stress anomalies of exploration interest. The method can be used both onshore and offshore to remotely identify areas conducive to fluid entrapment in order to recommend areas with commercial hydrocarbon and/or geothermal 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:

Eugene Woychyshyn
Vice President of Finance & CFO
302, 3320 – 17th AVE SW
Calgary, AB, T3E 0B4
+1 403 206 0805
nxt_info@nxtenergy.com
www.nxtenergy.com

Michael Baker
Investor Relations
302, 3320 – 17th AVE SW
Calgary, AB, T3E 0B4
+1 403 264 7020
nxt_info@nxtenergy.com
www.nxtenergy.com

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 private placement of Debentures, expectations regarding the conversion of the Debentures, expectations regarding shareholder approval of the conversion of the Mork Capital Debenture, plans to appoint further a representative of Mork Capital to the board of directors of NXT and potential future business prospects of NXT in Turkiye and the surrounding region. 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 and the private placement of Debentures are described in its most recent Annual Information Form for the year ended December 31, 2022 and the Company's management, discussion & analysis for the three and nine month periods ended September 30, 2023, which have been filed electronically by means of the System for Electronic Document Analysis and Retrieval ("SEDAR+") located at www.sedarplus.ca. 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.