



NXT ANNOUNCES STRATEGIC ALLIANCE WITH SYNERGY E&P TECHNOLOGIES LIMITED AND A US\$2.3 MILLION CONVERTIBLE DEBENTURE FINANCING BY A SYNERGY AFFILIATE

CALGARY, AB, May 24, 2023 – NXT Energy Solutions Inc. ("NXT" or the "Company") (TSX: SFD; OTCQB: NSFDF) is pleased to announce a ten-year strategic alliance and associated financing with Synergy E&P Technologies Limited ("Synergy") which grants Synergy an exclusive license to use, distribute, sub-license, market and sell NXT's SFD® solutions in Africa.

PE Energy Limited, an affiliate of Synergy, has performed several commercial projects with NXT in Africa in the past.

Synergy, with this new arrangement, will be advancing the SFD® technology to address energy security in and transition in the African continent for both oil and gas and geothermal sources. Synergy and NXT will work closely together to train local technical teams and regulatory authorities on the patented SFD® technology application and related knowledge transfer.

Building upon a record of successful collaborations underpinned by the continued market demand in Africa, an affiliate of Synergy has agreed to participate in a US\$2.3 million convertible debenture financing. The terms of the Convertible Debenture include an interest rate of 10%, paid quarterly, a fixed conversion price of CAD\$0.194 (US\$0.143) per common share, and the right to appoint a board member. The Company has made an application to the Toronto Stock Exchange for conditional approval of this Convertible Debenture financing.

The proceeds from the Convertible Debenture will fund general and administrative costs including business development and marketing activities to convert NXT's existing opportunity pipeline into firm contracts.

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 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.

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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 amount, details and use of funds to be raised under the Convertible Debenture, approval of the terms of the Convertible Debenture by the Toronto Stock Exchange, and market demand in Africa for the oil and gas and geothermal uses of SFD[®]. 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 Annual Information Form for the year ended December 31, 2022 and MD&A for the three month period ended March 31, 2023, 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.