



NXT Announces Receipt of Final Tranche of Convertible Debenture Offering

CALGARY, AB, November 12, 2024 – NXT Energy Solutions Inc. (“NXT” or the “Company”) (TSX: SFD; OTCQB: NSFDF) is pleased to announce it has completed the final tranche of a planned private placement of an aggregate principal amount of US\$900,000 (approximately CDN\$1,252,170) of convertible debentures (the “2024 Debentures”) to Ataraxia Capital (“Ataraxia”), in the amount of US\$400,000, (approximately CDN\$556,520), pursuant to the terms of the subscription agreement signed between Ataraxia and NXT in 2023 (the “2024 Debenture Placement”). The Toronto Stock Exchange (the “TSX”) has provided conditional approval of the final phase of this 2023 agreement. For additional information regarding the 2024 Debenture Placement, please refer to NXT’s issuer profile on www.sedarplus.ca.

The 2024 Debentures bear interest at 10.0% per annum, paid quarterly in arrears, and are due and payable two years after the issue date. The 2024 Debentures are convertible into common shares of NXT (the “Common Shares”) at a conversion price of US\$0.24 (approximately CDN\$0.324) per Common Share, which provides Ataraxia with the right to obtain up to 3,750,000 Common Shares of NXT. The 2024 Debentures may also be converted into voting preferred shares of NXT (the “Preferred Shares”) with an annual dividend rate of 10% paid quarterly in arrears. The Preferred Shares are not transferable, but may be converted on a one-to-one basis into Common Shares. The 2024 Debentures are payable on demand and are secured by a general security agreement, subordinate to the Business Development Bank of Canada’s Highly Affected Sectors Credit Availability Program loan.

After completing the 2024 Debenture Placement, Ataraxia owns an aggregate of US\$2,300,000 2023 and 2024 Debentures (collectively, the “Ataraxia Debentures”), representing the right to own, after conversion of the Ataraxia Debentures, up to 13,540,209 Common Shares, representing approximately 14.7% of the issued and outstanding Common Shares (after giving effect to the conversion of the full amount of the Ataraxia Debentures).

The proceeds from the 2024 Debenture Placement will be used to support the working capital needs of the upcoming SFD® surveys in Africa and Southeast Asia, 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.

Commenting on the 2024 Debenture Placement, Bruce G. Wilcox, CEO of NXT said, “We are very pleased and grateful that our strategic alliance partner, Ataraxia Capital, has now totally fulfilled its debenture funding commitment made last year.”

In accordance with MI 61-101 – *Protection of Minority Security Holders in Special Transactions* (“MI 61-101”), the Company’s issuance of the Debentures to Ataraxia constitutes a “related party transaction”.

The Company has relied on exemptions from the formal valuation and minority shareholder approval requirements of MI 61–101 contained in sections 5.5(a) and 5.7(1)(a) of MI 61–101 in respect to the

issuance of the Debentures to Ataraxia as the fair market value of the Debentures is below 25% of the Company's market capitalization (in each case as determined in accordance with MI 61-101).

Please note that 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 "will", "may", "can", "enable" 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 conversion of any issued and outstanding Ataraxia Debentures into Common Shares or Preferred Shares, as applicable, the shareholdings of Ataraxia following conversion of its issued and outstanding Ataraxia Debentures, and the anticipated use of the proceeds raised through the issuance of the 2024 Debentures. 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, 2023 and MD&A for the three and nine months ended September 30, 2024, 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.