

NexGen Energy Ltd.: Form 6-K - Filed by newsfilecorp.com UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549 FORM 6-K REPORT OF FOREIGN PRIVATE ISSUER PURSUANT TO RULE 13a-16 OR 15d-16 UNDER THE SECURITIES EXCHANGE ACT OF 1934 For the month of June 2025 Commission File Number: 001-38072 NexGen Energy Ltd. (Translation of registrant's name into English) Suite 3150 - 1021 West Hastings Street, Vancouver, BC, V6E 0C3 (Address of principal executive offices) Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F. Form 20-F ☐ Form 40-F ☐

INCORPORATION BY REFERENCE Exhibit 99.1 to this Report on Form 6-K is hereby incorporated by reference as Exhibits to the Registration Statement on Form F-10 of NexGen Energy Ltd. (File No. 333.266575). SUBMITTED HERewith Exhibit A Description A 99.1 A News Release dated June 18, 2025 SIGNATURES Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized. A NEXGEN ENERGY LTD. A (Registrant) A A Date: June 18, 2025 By: /s/ Benjamin Salter A A Name: Benjamin Salter A A Title: Chief Financial Officer NexGen Energy Ltd.: Exhibit 99.1 - Filed by newsfilecorp.com NexGen Announces Voting Results for Election of Directors and Appoints Sharon Birkett to Its Board of Directors Vancouver, BC, June 18, 2025 - NexGen Energy Ltd. ("NexGen" or the "Company") (TSX: NXE) (NYSE: NXE) (ASX: NXG) is pleased to announce the voting results for the election of the Company's Board of Directors and the appointment of Sharon Birkett to the Company at its annual general and special meeting of shareholders held on June 17, 2025 (the "Meeting"). Election of Directors All nine nominees were elected to the NexGen Board of Directors at the Meeting. Each director will hold office until the Company's next annual meeting of shareholders, or until they resign or a successor is elected or appointed. The voting results were as follows: Nominee Votes For % For Votes Withheld % Withheld Leigh Curyer 340,185,606 99.40% 2,062,264 0.60% Christopher McFadden 328,587,888 96.01% 13,659,980 3.99% Richard Patricio 178,050,715 57.17% 133,393,362 42.83% Sharon Birkett 340,874,774 99.60% 1,373,096 0.40% Warren Gilman 278,012,002 81.29% 63,989,031 18.71% Sybil Veenman 289,918,984 84.71% 52,328,886 15.29% Karri Howlett 289,495,535 84.69% 52,331,283 15.31% Bradley Wall 294,660,088 86.15% 47,383,105 13.85% Ivan Mullany 223,720,847 65.53% 117,693,013 34.47%

Update on Director Nominees Ms. Birkett has extensive public and private equity experience, having served nearly two decades as Chief Financial Officer for Multi-Color/Collotype Labels, overseeing finance and accounting, corporate control functions, financial planning and analysis, board of directors reporting, compliance, and financial transactions. During her tenure, she completed 30 bolt-on acquisitions ranging from \$20 million to over \$1 billion, driving significant investor value. She is a qualified audit committee financial expert who advises and guides global organizations, boards of directors, and stakeholders on financial management, rapid business growth, risk, tax, treasury, audit, and compliance. Ms. Birkett previously served as Director of Finance for Avery Dennison Materials Pty Ltd, a subsidiary of Avery Dennison Corporation. She is a member of the Australian Society of Certified Practising Accountants and currently serves as an independent director and audit committee chair of ENVU, a private-equity owned global provider of professional herbicides, insecticides and pesticides for non-agricultural uses. Christopher McFadden, Chair of the Board of Directors, commented: "On behalf of the entire team at NexGen, I would like to warmly welcome Ms. Birkett to the Company's Board. Ms. Birkett brings to the Board strong expertise in strategic corporate governance and financial management. She has a proven track record in corporate leadership and business growth, having played a key role in the transformation of organizations into multi-billion dollar enterprises unlocking significant shareholder value. This skillset will serve NexGen well as the Company advances toward final approvals for the Rook I Project, securing financing, initiating construction and ultimately transitioning into production." Miss Birkett's appointment follows the retirement of long-serving Board member and Chair of the Audit Committee, Trevor Thiele, whom after 12 years of exemplary service to NexGen and its valued shareholders, has chosen not to stand for re-election. Ms. Birkett will assume the role of Chair of the Audit Committee effective immediately following Mr. Thiele's retirement. Mr. McFadden continued, "I would also like to take this opportunity to acknowledge the significant contribution from Mr. Thiele, who has demonstrated exemplary service to the NexGen Board of Directors and our valued shareholders over the past 12 years. With his extensive experience in senior finance roles, and his strong understanding of the global nuclear landscape, Mr. Thiele has played an instrumental leadership role in guiding the Company through exponential growth, while ensuring the integrity and effectiveness of NexGen's financial reporting and internal controls. On behalf of the Board and the entire NexGen team, we wish Mr. Thiele the very best and thank him for his outstanding service."

Following the mailing of the Management Information Circular, Ms. Susannah Pierce informed the Company that she would not be standing for re-election at the Meeting due to other professional commitments. As a result, she is not included among the nominees listed above. The Company and its Board of Directors thank Ms. Pierce for her valuable contributions and dedicated service during her tenure. About NexGen NexGen Energy is a Canadian company focused on delivering clean energy fuel for the future. The Company's flagship Rook I Project is being optimally developed into the largest low cost producing uranium mine globally, incorporating the most elite standards in environmental and social governance. The Rook I Project is supported by a NI 43-101 compliant Feasibility Study which outlines the elite environmental performance and industry leading economics. NexGen is led by a team of experienced uranium and mining industry professionals with expertise across the entire mining life cycle, including exploration, financing, project engineering and construction, operations and closure. NexGen is leveraging its proven experience to deliver a Project that leads the entire mining industry socially, technically and environmentally. The Project and prospective portfolio in northern Saskatchewan will provide generational long-term economic, environmental, and social benefits for Saskatchewan, Canada, and the world. NexGen is listed on the Toronto Stock Exchange, the New York Stock Exchange under the ticker symbol "NXE" and on the Australian Securities Exchange under the ticker symbol "NXG" providing access to global investors to participate in NexGen's mission of solving three major global challenges in decarbonization, energy security and access to power. The Company is headquartered in Vancouver, British Columbia, with its primary operations office in Saskatoon, Saskatchewan. Contact Information Leigh Curyer Chief Executive Officer NexGen Energy Ltd. +1 604 428 4112 lcuryer@nexgenenergy.ca www.nexgenenergy.ca Travis McPherson Chief Commercial Officer NexGen Energy Ltd. +1 604 428 4112 tmcpherson@nexgenenergy.ca http://www.nexgenenergy.ca Monica Kras VP, Corporate Development +44 7307 191933 mkras@nxe-energy.ca http://www.nexgenenergy.ca Forward-Looking Information The information contained herein contains "forward-looking statements" within the meaning of applicable United States securities laws and regulations and "forward-looking information" within the meaning of applicable Canadian securities legislation. "Forward-looking information" includes, but is not limited to, statements with respect to the delivery of clean energy fuel for the future, the development of the largest low cost producing uranium mine globally and incorporating elite

standards in environmental and social governance, delivering a project that leads the entire mining industry socially, technically and environmentally, providing generational long-term economic, environmental and social benefits for Saskatchewan, Canada and the world, planned exploration and development activities and budgets, the interpretation of drill results and other geological information, mineral reserve and resource estimates (to the extent they involve estimates of the mineralization that will be encountered if a project is developed), requirements for additional capital, capital costs, operating costs, cash flow estimates, production estimates, the future price of uranium and similar statements relating to the economics of a project, including the Rook I Project. Generally, forward-looking information and statements can be identified by the use of forward-looking terminology such as "plans", "expects", "is expected", "budget", "scheduled", "estimates", "forecasts", "intends", "anticipates", or "believes" or the negative connotation thereof or variations of such words and phrases or state that certain actions, events or results "may", "could", "would", "might" or "will be taken", "occur" or "be achieved" or the negative connotation thereof. Forward-looking information and statements are based on NexGen's current expectations, beliefs, assumptions, estimates and forecasts about its business and the industry and markets in which it operates. Forward-looking information and statements are made based upon numerous assumptions, including, among others, that, the results of planned exploration and development activities will be as anticipated and on time; the price of uranium; the cost of planned exploration and development activities; that, as plans continue to be refined for the development of the Rook I Project, there will be no changes in costs, engineering details or specifications that would materially adversely affect its viability; that financing will be available if and when needed and on reasonable terms; that third-party contractors, equipment, supplies and governmental and other approvals required to conduct NexGen's planned exploration and development activities will be available on reasonable terms and in a timely manner; that there will be no revocation of government approvals; that general business, economic, competitive, social and political conditions will not change in a material adverse manner; the assumptions underlying the Company's mineral reserve and resource estimates; assumptions made in the interpretation of drill results and other geological information; the ability to achieve production on the Rook I Project; and other estimates, assumptions and forecasts disclosed in the Feasibility Study for the Rook I Project. Although the assumptions made by the Company in providing forward-looking information or making forward-looking statements were considered reasonable by management at the time they were made, there can be no assurance that such assumptions will prove to be accurate. Forward-looking information and statements also involve known and unknown risks and uncertainties and other factors, which may cause actual results, performances and achievements of NexGen to differ materially from any projections of results, performances and achievements of NexGen expressed or implied by such forward-looking information or statements, including, among others, negative operating cash flow and dependence on third-party financing, uncertainty of additional financing, the risk that pending assay results will not confirm previously announced preliminary results, the imprecision of mineral reserve and resource estimates, the price and appeal of alternate sources of energy, sustained low uranium prices, aboriginal title and consultation issues, exploration and development risks, climate change, uninsurable risks, reliance upon key management and other personnel, risks related to title to its properties, information security and cyber threats, failure to manage conflicts of interest, failure to obtain or maintain required permits and licences, changes in laws, regulations and policy, competition for resources, political and regulatory risks, general inflationary pressures, industry and economic factors that may affect the business, and other factors discussed or referred to in the Company's most recent Annual Information Form under "Risk Factors" and management's discussion and analysis under "Other Risks Factors" filed on SEDAR+ at [www.sedarplus.ca](http://www.sedarplus.ca) and 40-F filed on Edgar at [www.sec.gov](http://www.sec.gov). Although the Company has attempted to identify important factors that could cause actual results to differ materially from those contained in the forward-looking information or statements or implied by forward-looking information or statements, there may be other factors that cause results not to be as anticipated, estimated or intended. Readers are cautioned not to place undue reliance on forward-looking information or statements due to the inherent uncertainty thereof. The Company undertakes no obligation to update or reissue forward-looking information as a result of new information or events except as required by applicable securities laws.