

NexGen Announces the Appointment of Susannah Pierce to its Board of Directors

Vancouver, BC, June 18, 2024 - NexGen Energy Ltd. ("NexGen" or the "Company") (TSX: NXE) (NYSE: NXE) (ASX: NXG) is pleased to announce the appointment of Susannah Pierce to the Company Board to Directors following the Company's 2024 Annual General Meeting that took place Monday, June 17th, 2024.

Susannah Pierce

Ms. Pierce has more than 20 years of experience in bringing business, governments, communities, indigenous groups, and other non-governmental actors together to support the development of major capital projects to maximize investment returns. In her current role as president and Country Chair, Shell Canada, she is responsible for driving integration and coordination of business activity and corporate policy across Shell's businesses in Canada. She previously served as Director of Corporate Affairs at LNG Canada, a joint venture of Shell, Petronas, Mitsubishi, PetroChina and Kogas, where she was responsible for the project's federal and provincial regulatory approvals, Indigenous relations and negotiations, government relations, media relations, community consultation and communications.

Ms. Pierce currently serves as the Co-Chair of Business Council of Canada Working Group on Climate Change and Energy Transition, an Executive on the Greater Vancouver Board of Trade, and Catalyst Canada. She is the past chair of the Business Council of BC, Co-Chair of the Business Council of Alberta's Define the Decade, and Co-Chair of the Canada Chamber of Commerce Western Executive Council. She previously served on the Board of Gemini Corp. and holds an ICD certification.

Christopher McFadden, Chair of the Board of Directors, commented: "On behalf of the entire team at NexGen, I would like to warmly welcome Ms. Pierce to the Company's Board. Ms. Pierce brings to the Board skills and experience in the energy sector and international government relations that align strongly with NexGen's stage of development and long-term objectives. Her proven ability to optimize outcomes for all stakeholders will complement the Company's dedicated Board of Directors, and support NexGen's experienced management team as we advance the Rook I Project though the final stages of Federal regulatory approvals and into construction. Once in operation, NexGen will be a significant global industry leader in the energy industry when considering the Company will be capable of producing in excess of 25% of global uranium production used to power civilian nuclear power plants globally."

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 Icuryer@nxe-energy.ca www.nexgenenergy.ca

Travis McPherson

Chief Commercial Officer NexGen Energy Ltd. +1 604 428 4112 tmcpherson@nxe-energy.ca http://www.nexgenenergy.ca

Monica Kras Vice President, 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 mineral reserve and mineral resource estimates, the 2021 Arrow Deposit, Rook I Project and estimates of uranium production, grade and long-term average uranium prices, anticipated effects of completed drill results on the Rook I Project, planned work programs, completion of further site investigations and engineering work to support basic engineering of the project and expected outcomes. Generally, but not always, forward-looking information and statements can be identified by the use of words 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. Statements relating to "mineral resources" are deemed to be forward-looking information, as they involve the implied assessment that, based on certain estimates and assumptions, the mineral resources described can be profitably produced in the future.

Forward-looking information and statements are based on the then current expectations, beliefs, assumptions, estimates and forecasts about NexGen's 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 mineral reserve and resources estimates and the key assumptions and parameters on which such estimates are based are as set out in this news release and the technical report for the property, the results of planned exploration activities are as anticipated, the price and market supply of uranium, the cost of planned exploration activities, 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 activities will be available on reasonable terms and in a timely manner and that general business and economic conditions will not change in a material adverse manner. Although the assumptions made by the Company in providing forward looking information or making forward looking statements are considered reasonable by management at the time, there can be no assurance that such assumptions will prove to be accurate in the future.

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, the existence of negative operating cash flow and dependence on third party financing, uncertainty of the availability of additional financing, the risk that pending assay results will not confirm previously announced preliminary results, conclusions of economic valuations, the risk that actual results of exploration activities will be different than anticipated, the cost of labour, equipment or materials will increase more than expected, that the future price of uranium will decline or otherwise not rise to an economic level, the appeal of alternate sources of energy to uranium-produced energy, that the Canadian dollar will strengthen against the U.S. dollar, that mineral resources and reserves are not as estimated, that actual costs or actual results of reclamation activities are greater than expected, that changes in project parameters and plans continue to be refined and may result in increased costs, of unexpected variations in mineral resources and reserves, grade or recovery rates or other risks generally associated with mining, unanticipated delays in obtaining governmental, regulatory or First Nations approvals, risks related to First Nations title and consultation, reliance upon key management and other personnel, deficiencies in the Company's title to its properties, uninsurable risks, failure to manage conflicts of interest, failure to obtain or maintain required permits and licences, risks related to changes in laws, regulations, policy and public perception, as well as those factors or other risks as more fully described in NexGen's Annual Information Form dated March 6, 2024 filed with the securities commissions of all of the provinces of Canada except Quebec and in NexGen's 40-F filed with the United States Securities and Exchange Commission, which are available on SEDAR at www.sedar.com and Edgar at 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.

There can be no assurance that forward-looking information and statements will prove to be accurate, as actual results and future events could differ materially from those anticipated, estimated or intended.

Accordingly, readers should not place undue reliance on forward-looking statements or information. 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.