

NexGen Energy (Canada) Ltd.

ARBN 649 325 128

A foreign company registered in its original jurisdiction of British Columbia, Canada as NexGen Energy Ltd.

FIFTH SUPPLEMENTARY PROSPECTUS

1. Important Information

This is a supplementary prospectus (**Fifth Supplementary Prospectus**) which supplements and is intended to be read with the prospectus dated 9 January 2023 (**Original Prospectus**) as supplemented by:

- (a) a refresh supplementary prospectus dated 6 April 2023 (**First Refresh Supplementary Prospectus**);
- (b) a supplementary prospectus dated 1 May 2023 (**First Supplementary Prospectus**);
- (c) a second supplementary prospectus dated 16 June 2023 (**Second Supplementary Prospectus**);
- (d) a second refresh supplementary prospectus dated July 6 2023 (**Second Refresh Supplementary Prospectus**);
- (e) a third supplementary prospectus dated 29 August 2023 (**Third Supplementary Prospectus**);
- (f) a fourth supplementary prospectus dated 3 September 2023 (**Fourth Supplementary Prospectus**); and
- (g) a third refresh supplementary prospectus dated 4 October 2023 (**Third Refresh Supplementary Prospectus**),

each of which was issued by NexGen Energy (Canada) Ltd. (ARBN 649 325 128), a foreign company registered in its original jurisdiction of British Columbia, Canada as NexGen Energy Ltd. (British Columbia company incorporation number BC0983846) (**NexGen**).

This Fifth Supplementary Prospectus is dated 9 November 2023 and was lodged with ASIC on that date.

ASIC, the ASX and their respective officers take no responsibility for the contents of this Fifth Supplementary Prospectus.

This Fifth Supplementary Prospectus should be read together with the Original Prospectus, the First Refresh Supplementary Prospectus, the First Supplementary Prospectus, the Second Supplementary Prospectus, the Second Refresh Supplementary Prospectus, the Third Supplementary Prospectus, the Fourth Supplementary Prospectus and the Third Refresh Supplementary Prospectus (together, the **Prospectus**). Other than as set out below, all details in relation to the Prospectus remain unchanged. Terms and abbreviations defined in the Prospectus have the same meaning in this Fifth Supplementary Prospectus. If there is any conflict between the Prospectus and this Fifth Supplementary Prospectus, this Fifth Supplementary Prospectus will prevail.

This Fifth Supplementary Prospectus will be issued with the Prospectus as an electronic prospectus, copies of which can be downloaded from <https://www2.asx.com.au/markets/trade-our-cash-market/todays-announcements> under the code "NXG". This is an important document and should be read in its entirety. If you do not understand it, you should consult your professional advisers without delay. NexGen will send a copy of this Fifth Supplementary Prospectus to all applicants who have subscribed for CDIs under the Prospectus to the date of this Fifth Supplementary Prospectus.

2. Purpose of this Fifth Supplementary Prospectus

The purpose of this Fifth Supplementary Prospectus is to provide additional information to investors as set out in Section 4 below.

3. No investor action required

The Directors believe that the changes in this Fifth Supplementary Prospectus are not materially adverse from the point of view of an investor. Accordingly, no additional investor action is required. An investor may apply to be issued CDIs pursuant to the Cleansing Offer in the manner set out in section 1.5 of the Original Prospectus.

4. New Information – NexGen Receives Provincial Environmental Assessment Approval for the Rook I Project

NexGen has today released the announcement attached to this Fifth Supplementary Prospectus.

The Directors of NexGen are not aware of any other acts, matters or things (not already described in the Prospectus) which may be material to the making of and informed assessment of the effect of the Cleansing Offer on NexGen or the rights attaching to the CDIs.

5. Authorisation and consent to lodgement

This Fifth Supplementary Prospectus is issued by NexGen and its issue has been authorised by a resolution of the Directors.

In accordance with section 720 of the Corporations Act, each Director has consented to the lodgement of this Fifth Supplementary Prospectus with ASIC and has not withdrawn that consent.

Signed for and on behalf of NexGen.



Leigh Curyer
President and Chief Executive Officer
NexGen Energy (Canada) Ltd

Dated: 9 November 2023



NexGen Receives Provincial Environmental Assessment Approval for the Rook I Project

Vancouver, BC, November 9, 2023 – NexGen Energy Ltd. (“NexGen” or the “Company”) (TSX: NXE) (NYSE: NXE) (ASX: NXG) is pleased to announce that it has received Ministerial approval under *The Environmental Assessment Act* of Saskatchewan to proceed with the development of its 100%-owned Rook I Project (the “Project”).

NexGen is the first company in more than 20 years to receive full Provincial Environmental Assessment approval for a uranium project in Saskatchewan.

Leigh Curyer, Chief Executive Officer, commented: “The achievement of this major milestone of Provincial Environmental Assessment approval for Rook I is key in meeting the surging global demand for ethically sourced uranium. I am incredibly proud of the NexGen team’s dedication and commitment working together with our valued local Indigenous communities in this highly transparent and diligent regulatory process. Throughout the rigorous EA process, the Government of Saskatchewan recognized the unparalleled value and future opportunities the Rook I Project will provide for local communities, Saskatchewan, and Canada. Today is a milestone for NexGen, the communities where we operate, the Province of Saskatchewan, and accelerates Canada in returning to being the world’s leader in the production of clean energy fuel for the global environment.

With Provincial EA approval now in place, NexGen has submitted all responses to the Federal technical review of the Rook I Project Environmental Impact Statement and eagerly look forward to the completion of the Federal EA approval process.”

Further, NexGen has lodged, in advance, the initial applications for approvals of site earthworks, shaft sinking infrastructure, site water and mine waste management facilities, and associated ancillary infrastructure and services and is continuously engaged with the Saskatchewan Ministry of Environment (“ENV”) regarding these phases of development.

“This represents a major milestone in advancing another uranium mine in our province,” Premier of Saskatchewan the Honourable Scott Moe said. “Saskatchewan and our northern communities are well-positioned to benefit from the increased demand for critical minerals. NexGen’s Rook I Project will help build our local communities and create jobs for many northerners while providing an ethically and sustainably produced supply of uranium to world markets.”

“I would like to congratulate NexGen on this significant milestone with their Rook I Project”, commented the Honourable Christine Tell, Saskatchewan Minister of Environment. “We look forward to working with them as this project advances and are excited that NexGen has chosen Saskatchewan as a place to do business.”

This is a Designated News Release

Indigenous and Community Partnership Approach

The Project is located within the Clearwater Dene Nation (CRDN), Birch Narrows Dene Nation (BNDN), and Buffalo River Dene Nation (BRDN) traditional territories, and the Métis Homeland. All four Local Priority Area (“LPA”) Communities have formally confirmed their consent and strong support for NexGen’s stewardship of the Rook I Project covering the full life-cycle of the mine, including post-closure.

CRDN Chief Teddy Clark commented: “Since as early as 2013, the Rook I Project has been a platform for both NexGen and the CRDN, together with regulatory authorities, to set a new and elite standard on Indigenous engagement, participation, and partnerships for projects in the traditional territory of Indigenous peoples. We, the community of Clearwater River Dene Nation, have taken a generational outlook in creating a threshold of engagement interpretation and practices with NexGen representing a socio-economically diverse approach for our members.

With this major milestone of the Provincial approval for the Rook I EA, CRDN is excited for construction to commence that will ultimately lead to production at Rook I, where we stand collectively to maximize accommodation measures and business opportunities for our people. Achieving this success with a recognized industry partner in NexGen demonstrates responsible development of a major clean energy project, and we are encouraging other companies to take a similar Indigenous and industry partnership approach. Today brings another day of recognition for NexGen in raising the bar to an elite level, and we remain in solidarity working with NexGen and supporting their integrated commitments in making the Rook I Project a success.”

Leonard Montgrand, Métis Nation – Saskatchewan (MN-S) Northern Region 2 (NR2) Director commented: “Since as early as 2013, NexGen has engaged and worked closely with the MN-S NR2 locals and citizens. We are proud to be working with NexGen and the regulatory authorities to set a new and elite standard for Indigenous engagement, participation, and partnerships for major projects in the traditional territory of our peoples. The approval from the Province of Saskatchewan is a major milestone for the MN-S NR2 and NexGen, and will have positive impacts on the long-term economic sustainability of our Nation. We look forward to the next steps of the Project where our partnership with NexGen will deliver generational opportunities for our Nation and the citizens. We support the Provincial approvals and await with great anticipation for the approval of the Federal EA.

Glen McCallum, MN-S President commented: “Métis Nation-Saskatchewan is proud of the relationships we are building with governments, industry, and organizations. MN-S welcomed the opportunity to partner with NexGen, Northern Region 2, and the regulatory authorities to develop the Rook I Project responsibly, while recognizing and respecting Métis rights and interests. The approval from the Province of Saskatchewan is a major milestone in this partnership, and we look forward to continuing to work together to ensure the success of the project and provide much-needed resources and economic opportunities to Northern Region 2 families and citizens.”

BNDN Chief Jonathan Sylvestre commented: “With this positive Provincial approval for the Rook I Project, we are proud to say we have worked in collaboration with NexGen and the Province through this rigorous regulatory process. Now that the Project has Provincial environmental assessment requirements approved, as soon as construction begins our community stands to substantially benefit through employment, business opportunities, environmental monitoring, and funding to support community priorities. NexGen has been working with us in a respectful way since day one and our leadership and community look forward to advancing this generational project together.”

BRDN Chief Norma Catarat commented: “Buffalo River Dene Nation and NexGen have built a meaningful relationship over the past six years based on trust, respect, and confidence. The approval from the Province of

Saskatchewan is a major milestone for our partnership with NexGen and will have positive impacts on the long-term economic sustainability of our community. We look forward to the advancement of the Project throughout all phases of its lifecycle.”

This major milestone enables NexGen to optimally advance the Rook I Project towards production where the Project will be in a unique position to be one of the most substantial suppliers of uranium globally, and 100% ethically sourced through rigorous commitments, controls, and processes to ensure the elite environmental performance, maximum community inclusion, and supply chains and customers that are allied for net-zero goals.

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 environmental and social governance standards. The Rook I Project is supported by a National Instrument 43-101 (“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 and 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.

For additional information and media inquiries:

Leigh Curyer

Chief Executive Officer

NexGen Energy Ltd.

+1 604 428 4112

lcuryer@nxe-energy.ca

Travis McPherson

Chief Commercial Officer

NexGen Energy Ltd.

+1 604 428 4112

tmcpherson@nxe-energy.ca

Monica Kras

Vice President, Corporate Development

NexGen Energy Ltd.

+44 (0) 7307 191933

mkras@nxe-energy.ca

Media Inquiries

+1 604 218 1142
Media@nxe-energy.ca

Technical Disclosure

All technical information in this news release has been reviewed and approved by Kevin Small, NexGen's Senior Vice President, Engineering and Operations, a qualified person under National Instrument 43-101. A technical report in respect of the Feasibility Study is filed on SEDAR+ (www.sedarplus.ca) and EDGAR (www.sec.gov/edgar.shtml) and is available for review on NexGen's website (www.nexgenenergy.ca).

Cautionary Note to US Investors

This news release includes Mineral Reserves and Mineral Resources classification terms that comply with reporting standards in Canada, and the Mineral Reserves and the Mineral Resources estimates are made in accordance with NI 43-101. NI 43-101 is a rule developed by the Canadian Securities Administrators that establishes standards for all public disclosure an issuer makes of scientific and technical information concerning mineral projects. These standards differ from the requirements of the Securities and Exchange Commission ("SEC") set by the SEC's rules that are applicable to domestic United States reporting companies. Consequently, Mineral Reserves and Mineral Resources information included in this news release is not comparable to similar information that would generally be disclosed by domestic US reporting companies subject to the reporting and disclosure requirements of the SEC. Accordingly, information concerning mineral deposits set forth herein may not be comparable with information made public by companies that report in accordance with US standards.

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 materially 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 February 24, 2023 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.sedarplus.ca 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.