NexGen Energy Ltd.

Securing the Energy Transition

Corporate Presentation

October 2024

Forward Looking Statements

Information Contained in this Presentation

This presentation is a summary description of NexGen Energy Ltd. (“NexGen” or the “Company”) and its business and does not purport to be complete. This presentation is not, and in no circumstances is to be construed as a prospectus, advertisement or a public offering of securities. No securities regulatory authority or similar authority has reviewed or in any way passed upon the document or the merits of the Company’s securities and any representation to the contrary is an offence.

Except where otherwise indicated, the information contained in this presentation has been prepared by NexGen and there is no representation or warranty by NexGen or any other person as to the accuracy or completeness of the information set forth herein. This presentation includes information on adjacent properties that was obtained from various publicly available sources referred to herein and the accuracy and completeness of such information has not been verified by NexGen. Except as otherwise stated, information included in this presentation is given as of the date hereof. The delivery of this presentation shall not imply that the information herein is correct as of any date after the date hereof.

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 presentation 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.sedarplus.com and Edgar at www.sec.gov.

This presentation 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 the SEC's rules that are applicable to domestic United States reporting companies. Consequently, Mineral Reserves and Mineral Resources information included in this presentation is not comparable to similar information that would generally be disclosed by domestic U.S. 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 U.S. standards.

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.

The world is embracing nuclear energy as the linchpin to a carbon-free future. At the same time, geopolitical tensions are increasing pressure on the limited uranium supply necessary to make this future a reality.

The Rook I Project is essential to meeting the growing demand for uranium and delivering clean and secure energy solutions.

URANIUM'S MOMENT

Nuclear provides populations and economies with a reliable, cost-effective, and carbon-free power source.

Nuclear power generates **9% of global electricity** and accounts for nearly **30% of all emission-free power**.[1]

It is essential to meet the growing demand for **reliable, emission-free baseload energy**, ensuring access to affordable power without contributing to greenhouse gas emission.

Government policy support and shifting energy landscape have positioned nuclear as a critical component of global energy strategies, with increasing recognition of its role in meeting both energy and climate goals.

67 nuclear reactors under construction are expected to add **69 GW** of capacity largely by 2030, with over 110 more planned. This will bolster the existing fleet of **439 reactors, which already provides 395 GW** annually, this growth marks a pivotal moment – where **escalating energy needs intersect with critical supply considerations**. [2]

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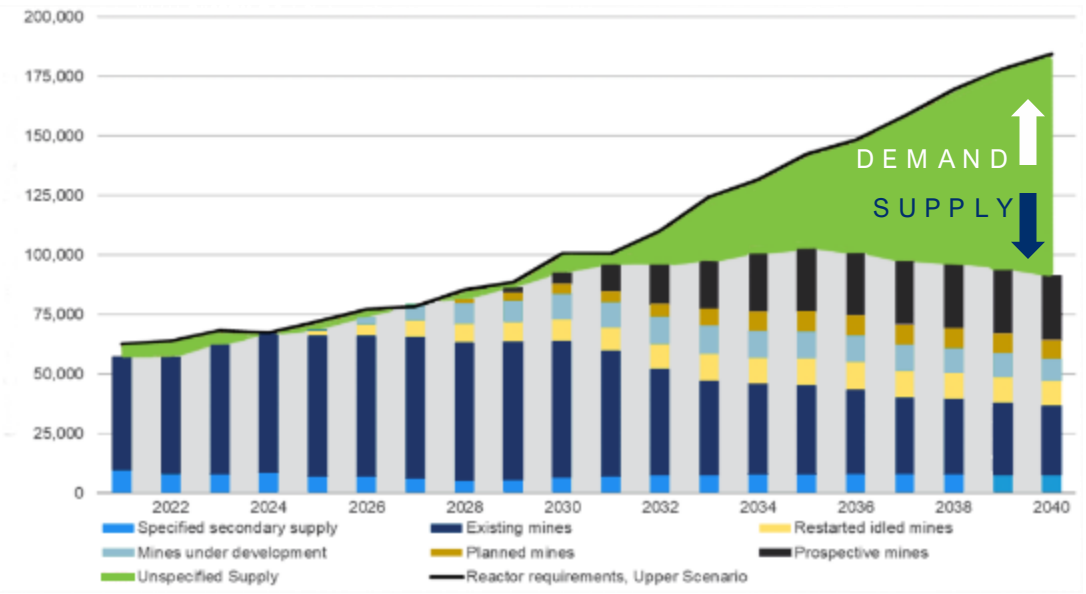
NEXGEN IS:

- Developing world-class Rook I Project which is capable of being largest supplier of uranium to the world's growing nuclear demand.
- Long-life asset with initial licensing for 24-year mine-life for up to 30Mlbs per annum.
- Located in Saskatchewan, Canada.
- Fully leveraged to future uranium prices.
- Full project execution team in place and site fully ready for major construction activities following final Federal approval.

URANIUM'S MOMENT

Rising Demand…Fragile Supply

WNA Uranium Supply Demand (Upper Scenario)



Current demand is ~180-190Mlbs / yr & Primary supply is only 130-140Mlbs

Demand for uranium is expected to rise by

127% by 2030

and

200% by 2040

Creating a ~240Mlbs annual deficit by 2040 that will continue to widen[3] as growth is expected to triple by 2050[4].

- Demand driven by decarbonization targets, favorable government policies, surging energy consumption from insatiable AI/data centre growth, reactor builds, extensions and refurbishments.
- Supply challenged due to decades of underinvestment, production constraints, inventory drawdowns, regulatory hurdles, and geopolitical risks.

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URANIUM'S MOMENT

Bifurcating Market Dynamics

~70% of Demand is from OECD Countries[4]

~75% of supply is from state-sponsored entities[3]

The Prohibiting Russia Uranium Import Ban, is intensifying challenges for Western buyers, highlighting the critical need of sovereign-produced uranium.

Collectively, the US, UK, and Europe import ~90Mlbs of uranium annually[5], near 100% of their uranium needs with a majority from state-sponsored entities.

However, over 90% of Western mine supply is already contracted for the next 5+ years, with pricing subject to ceilings significantly below current spot prices.

To address the growing supply gap, new sources of supply, like the Rook I Project, must come online.

ECONOMICS

Rook I At A Glance*

Robust Economics @ US$95/lb.	**C$6.32B NPV** 8% discount, after-tax	**C$1,932M FCF** Years 1 – 5, after-tax
High Grade Production	**29.2Mlbs U_3O_8** Year 1- 5 Avg Annual Production	**256.7Mlbs M&I** @ 3.10% U_3O_8
Longevity	**11.7 year** Initial Mine Life	**24 year** Mill Permit
Quick Payback	C$2.2B Capex **12-month payback**	**45.2% IRR** 8% discount, after-tax

*2024 CapEx Update using $95/lb. The above sensitivity based solely on price per lb.
Does not include inferred resources or growth potential

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ROOK I PROJECT

An Unrivaled Mining Deposit

MEASURED RESOURCES[6]:

2,183,000 Tonnes

4.35% Grade U_3O_8

209,600,000 lbs. U_3O_8 (contained)

INDICATED RESOURCES[6]:

1,572,000 Tonnes

1.36% Grade U_3O_8

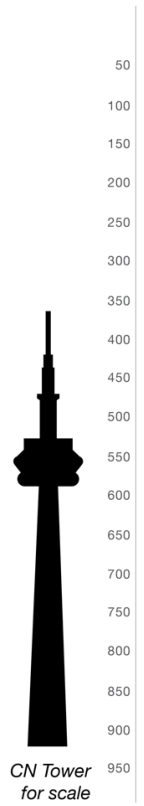
47,100,000 lbs. U_3O_8 (contained)

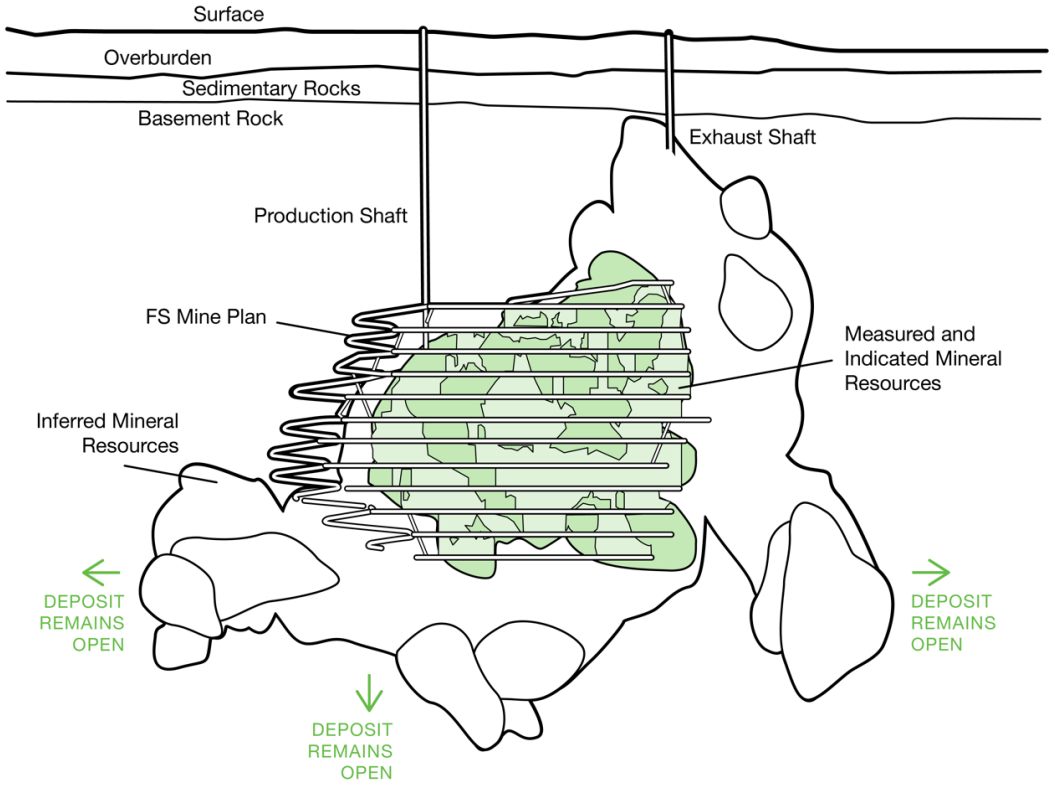
INFERRED RESOURCES[6]:
(not included in NPV)

4,399,000 Tonnes

0.83% Grade U_3O_8

80,700,000 lbs. U_3O_8 (contained)





M&I: 256,000,000 lbs. U_3O_8 @3.10% | MI&I: 337,400,000 lbs. U_3O_8 (contained)

Over 60% of M&I lbs. at ~17% grades, or 170x the average.

ROOK I PROJECT

100% Leverage to Uranium

NexGen is utilizing a **volume-based contracting approach**, **referencing spot prices** at the time of delivery.

NexGen's **low OPEX of US$9.98/lb**, provides natural downside protection, and with production tailored to market conditions at the time of delivery, optimal leverage to future uranium prices can be achieved.

NexGen's approach will provide customers with reliable, flexible supply with the added knowledge that it has been sourced in an elite ESG manner. **The company currently holds 2.7Mlbs of uranium, this acts as an insurance policy during the mine commissioning phase and supports strong contract negotiations.**

> **An industry-leading approach that will optimize the sustainability of the uranium supply-chain.**

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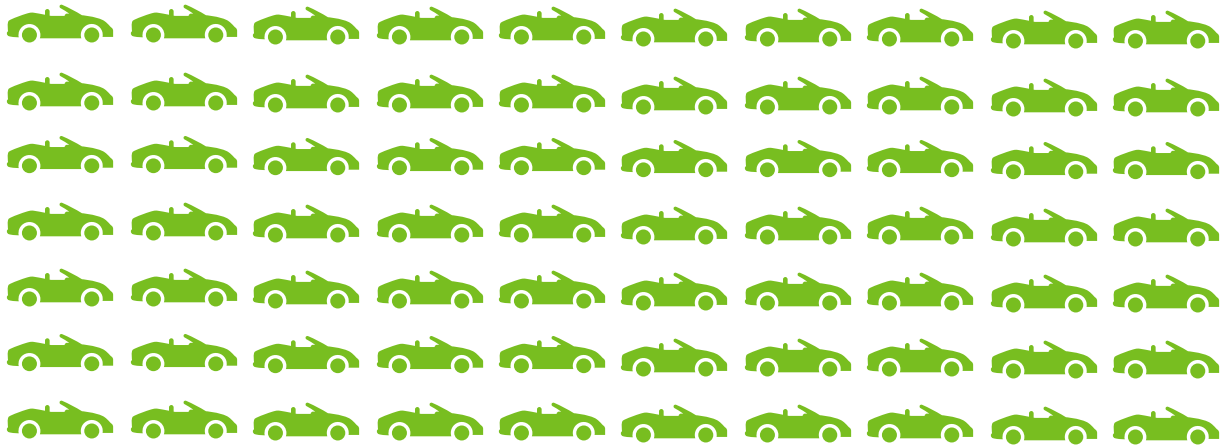
BENEFITS

Enough carbon-free energy to power up to **46 million homes**[7]

That's approximately ***1/3 of the homes in the U.S.***

- ✓ Over 300,000,000 tonnes of CO_2 would be avoided annually from Rook I's uranium fuel: the equivalent of taking nearly **70 million cars** off the road each year.[7]

By comparison, Tesla produced ~1.8 million cars in 2023



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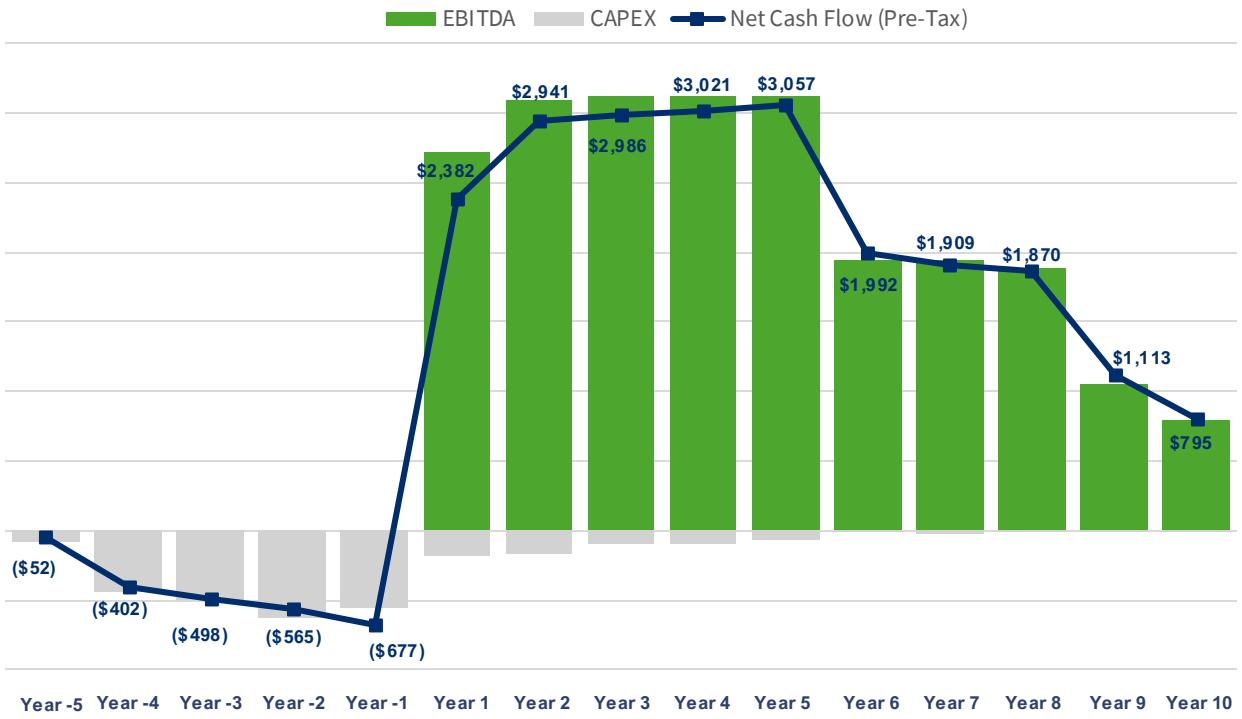
ECONOMICS

Highly cash generative in all pricing environments with downside protection from low-cost profile[8]



Uranium Price ($ USD/lb U_3O_8)	After-Tax NPV[8]	After-Tax IRR	Avg. Annual EBITDA[9] (Years 1-5 production)
$150/lb U_3O_8	US$8.64 Billion	60.9%	US$3.77 Billion
$100/lb U_3O_8	US$5.09 Billion	46.9%	US$2.42 Billion
$95/lb U_3O_8	US$4.74 Billion	45.2%	US$2.28 Billion
$80/lb U_3O_8	US$3.67 Billion	39.6%	US$1.88 Billion
$50/lb U_3O_8 (Base Case)	US$1.58 Billion	25.2%	US$1.09 Billion

*24'FEED Model uses US$95/lb., chart and graph using US$95/lb price sensitivity[9]
CAPEX includes pre-production capital cost, sustaining capital costs, and inclusive of closure costs as outlined in the FEED model

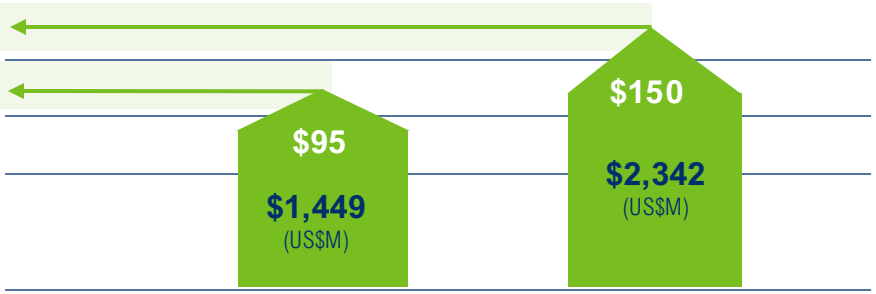
VALUE UNLOCK

Path to Becoming a Top 10 World Mining Company

Mining Companies Ranked by 2023A FCF *(Excl. Precious Metals and Steel Companies)*

Rank	Company Name	2023A FCF (US$M)	# of Assets (#)	# of Regions (#)	Market Cap. (US$B)	Enterprise Value (US$B)
1	BHP Group	$11,918	57	9	$161.8	$174.1
2	Rio Tinto	$8,536	51	8	$122.3	$152.6
3	Glencore	$7,880	109	17	$70.0	$92.6
4	Vale	$7,362	57	6	$52.9	$59.9
5	Fortescue Metals	$5,556	12	3	$44.2	$44.7
6	Southern Copper	$2,565	34	4	$90.9	$95.3
7	Norilsk Nickel	$1,947	24	4	$26.8	$41.3
8	Sumitomo Metal Mining	$737	22	5	$8.7	$12.4
9	IGO Limited	$671	21	1	$3.1	$2.8
10	Alpha Metallurgical	$634	25	1	$3.1	$2.8

NexGen	1 Asset 1 Region	MARKET CAP: US$3.8B



Rook I First 5 Year Avg. FCF at Different U_3O_8 Prices

Source: FactSet, CapIQ, BMO, NexGen FS Financial Model; First 5 year average FCF for Rook I at various U_3O_8 commodity prices pulled from internal corporate FS model; Screened and ranked largest mining companies by FCF (excluding precious metals and steel producers); 2023A FCF calendarized and sourced from FactSet (calculated as 2023A Operating Cash Flow (OCF) less 2023A CAPEX); Active mining properties and jurisdictions pulled from CapIQ; Based on FactSet as at 30-Sep-24. NXE Market cap as of 30-Sep-24

GROWTH

Patterson Corridor East (PCE)

New Discovery just 3.5 km East of Arrow

Executing a 30,000-metre drill program for CY2024, with ~12,000 metres remaining on the summer drill program.

- Eight (8) out of Twelve (12) drill holes have mineralized occurrences.
- **Off-scale (>61,000 cps) high-grade uranium mineralization has been intersected in four drillholes to date: RK-24-183, -197, -202, and -207.**
- RK-24-207 contains the first instance of massive replacement by uraninite, a key indicator of a strongly mineralized system with 1.5 m >10,000 cps (including 0.3 m >61,000 cps).
- Contained solely in the competent basement rock which is the ideal underground setting.

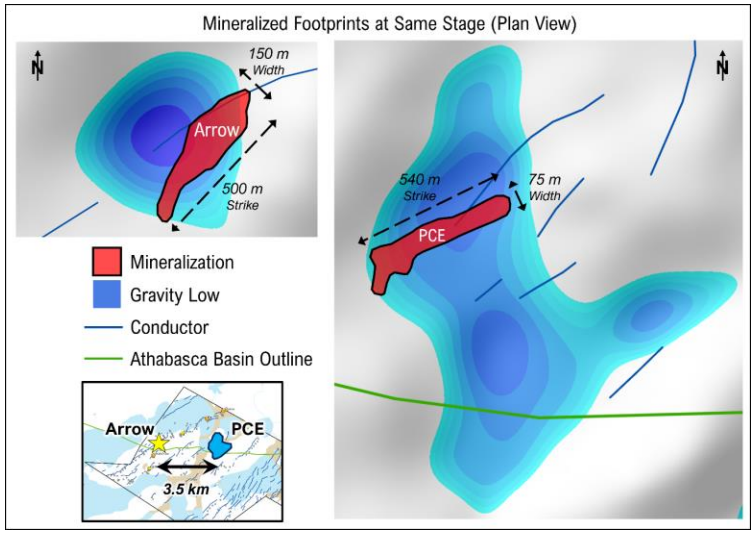
Mineralized system target has now doubled in size and covers 1.5 km by 1.2 km with a strike length of 540 m and a vertical extent of 600 m.

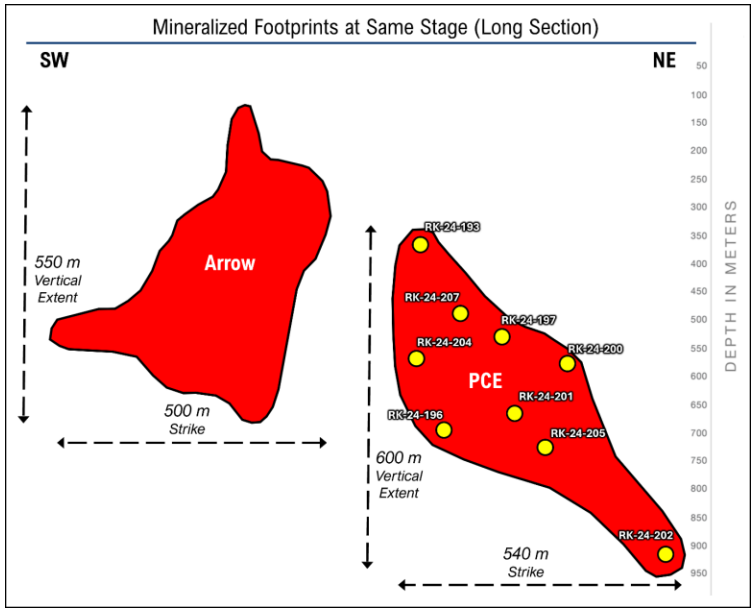
PCE is surpassing Arrow in terms of size and intensity of mineralization discovered at the same stage

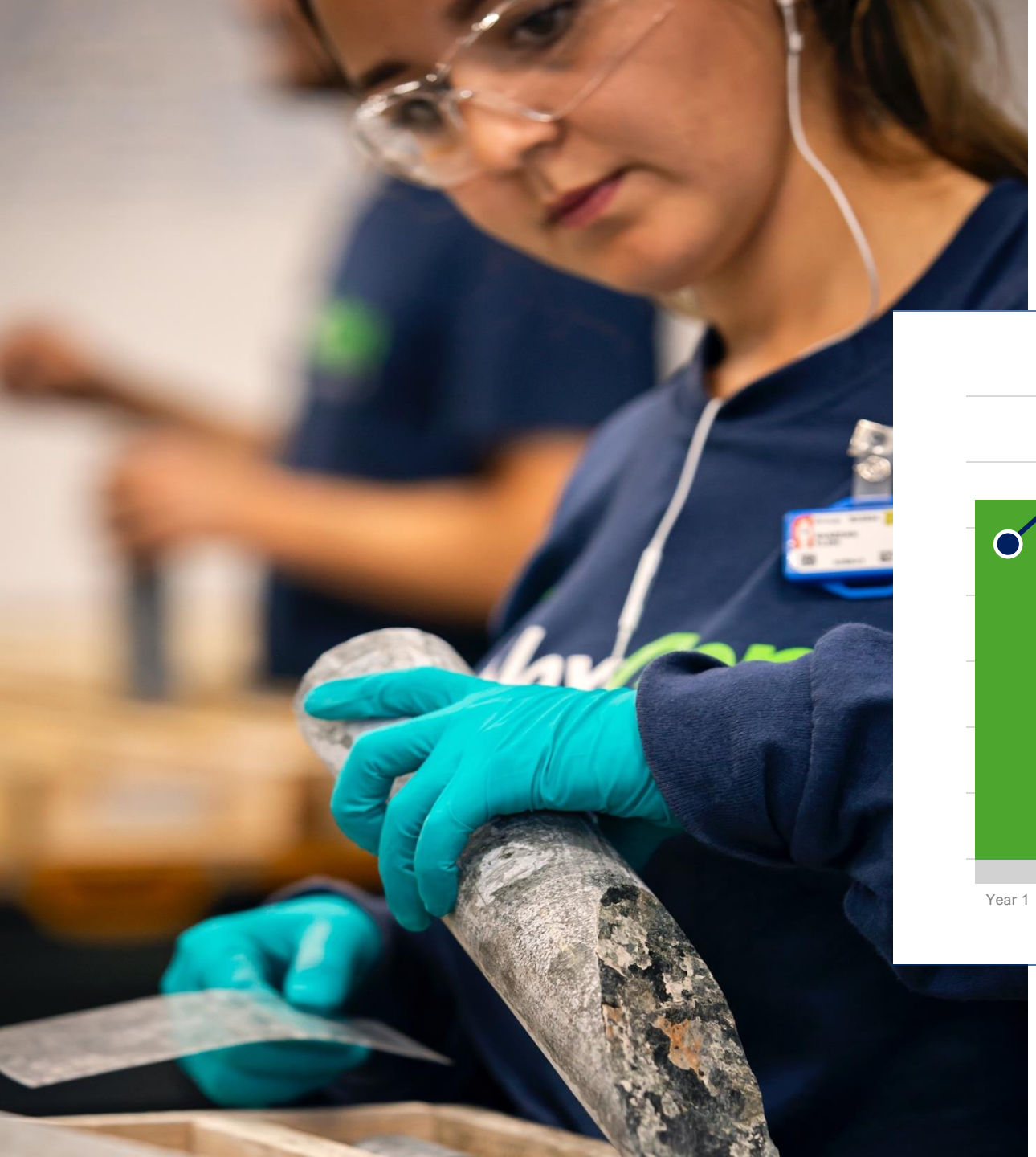
Focus of the program has two primary objectives:

- Continue to test the extent of the mineralized system through bold step outs, and
- Vector in on the high-grade zones within the broader mineralized system.

The intention of the drilling programs is to find another Arrow to support the burgeoning nuclear industry with clean fuel.

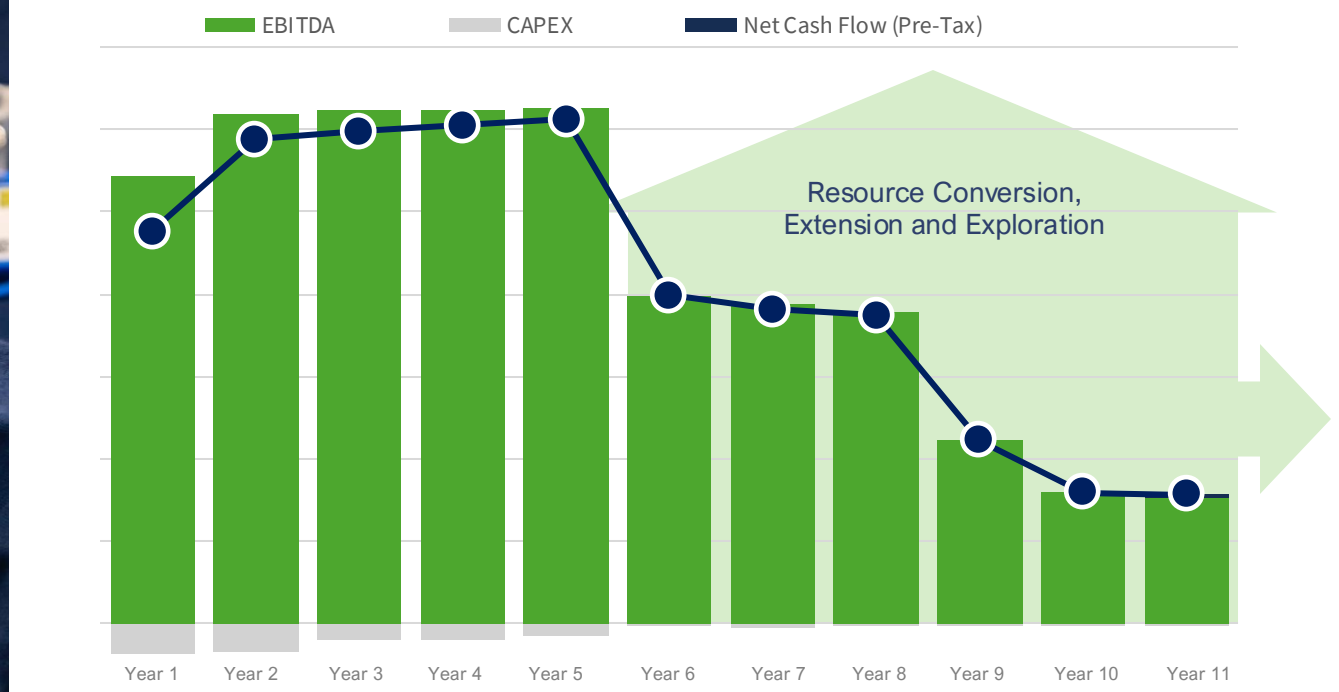






GROWTH

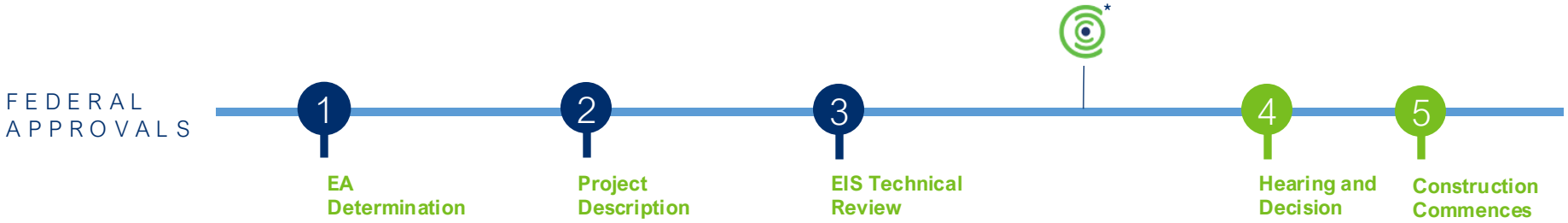
Expansion Potential[3]



The Rook I Project has Generational Potential

ROOK I PROJECT

Permitting Timelines



- **Federal License Accepted September 2023, Provincial EA approved November 2023.**
- **Federal EA and licensing advancing in parallel.**
- **The Federal technical review is underway and completing final steps.**
- **Full Support and Advocacy from local Indigenous Nations in the Local Priority Area.**

** We are Here*

BENEFITS

Full support and partnership for Rook I from local Indigenous Nations

Industry-leading Benefit Agreements signed with four local Indigenous communities with tremendous advocacy for the Project:

- ✓ Clearwater River Dene Nation
- ✓ Birch Narrows Dene Nation
- ✓ Buffalo River Dene Nation
- ✓ Métis Nation – Saskatchewan Northern Region II, in partnership with the Métis Nation – Saskatchewan

Creating positive and generational opportunities through the responsible development of the Rook I Project.

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Empowering Workforce:

100%
support from Indigenous communities local to the Rook I Project through the signing of four benefit agreements.

$9.2M
invested into initiatives promoting education, health and wellness, economic capacity building, and cultural activities in local communities.

$44.3M
spent on Local Priority Area suppliers, representing 81% of Rook I Site expenditure.

Located 150 km north of **La Loche and Clearwater River Dene Nation** (combined population +4,500), Rook I is dedicated to integrating local talent by creating training programs, hiring locally and developing skillsets that extend beyond mining.

+85
Engagement activities with Indigenous Nations and local communities

+20
Partnerships in place to support our focus on youth wellness, education & skills training for local communities

80%
Of NexGen's Rook I site employees are from the Local Priority Area in northern Saskatchewan

+288 (est. +400 in 2024)
Local priority area students participated in company funded skills and certification programs

+80
High school and post-secondary students gained skill-building and industry experience through Rook I Site's Summer Student Program

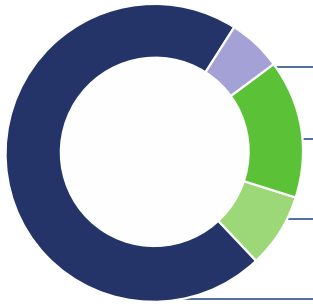
EDUCATIONAL PARTNERS IN SASKATCHEWAN:

Northern Lights School Division No.113
Morris Interactive it starts with people
SIIT
LOTUS LEARNING SOLUTIONS
SIXTEEN SAFETY SERVICES INC
SASKATCHEWAN POLYTECHNIC
NORTHLANDS COLLEGE
Carbon Medical Service Association
bird

BENEFITS

Rook I Economic Impact

ECONOMIC IMPACT[11]



$1.8B in Federal taxes

$4B in Provincial revenues

$2.2B in wages

$19B generated nationally

*using $50/lb U_3O_8

1,000 Annual jobs in Saskatchewan [11]

COMMUNITY INVOLVEMENT

- Committed to long-term community development through training programs, scholarships and local careers.
- Long-term aspirational target of 75% of hiring from local communities and 30% of Rook I external spending awarded to local businesses.

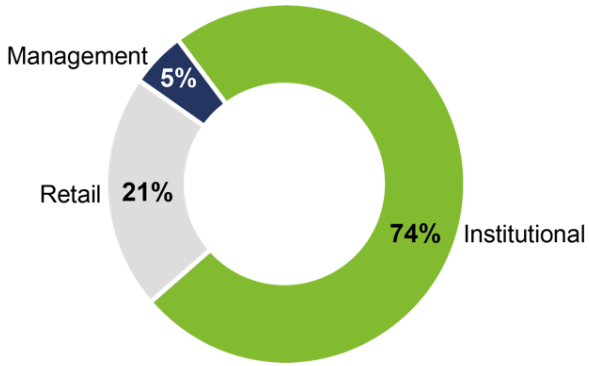
Training and investment in local communities since before the first drill hole.

GROWTH

Capital Structure

565M Shares Issued	**48M** Options	**~613M** Fully Diluted[12]	**C$572M** Cash[13]
C$72M Q3/24 Average Daily Trading Volume[14]	**~39M** Conversion for 2023 and 2024 Debentures[15]	**C$203M** Iso Energy Ltd. Ownership[16]	**2.7Mlbs** of U_3O_8 [17]

OWNERSHIP



ANALYST COVERAGE

RBC Dominion Securities · Raymond James · Argonaut · Scotiabank · Haywood · Canaccord Genuity · Eight Capital · Ventum Financial · Red Cloud Securities Inc. · Cormark Securities Inc. · BMO Capital Markets · TD Securities · Euroz Hartleys · Shaw and Partners · Taylor Collison · Sprott Capital Partners · Paradigm Capital

GROWTH

Executive and Leadership Team

Leigh Curyer
Chief Executive Officer, President & Director

Travis McPherson
Chief Commercial Officer

Ben Salter, CPA
Chief Financial Officer

Luke Moger
VP, Environment, Permitting, Licensing

Kevin Small
SVP, Engineering & Operations

Monica Kras
VP, Corporate Development

Simon Allard
VP, Commercial

Kelly Cardwell
SVP, Human Resources

Adam Engdahl
VP, Community

Mary Fraser
VP, Communications

Dylan Smart
VP, Regional Development

The NexGen Executive team spans the entire mining cycle, including experience in permitting, project financing, construction and operations.

GROWTH

Board Overview

Christopher McFadden
(Chairman)

Richard Patricio

Trevor J. Thiele

Brad Wall

Sybil Veenman

Karri Howlett
CFA, C.Dir

Warren Gilman

Ivan Mullany

Susannah Pierce

The Board enhances NexGen's deep expertise through a dozen subject matters, ranging from mining to capital markets and regulatory and government affairs.

GROWTH

2024 Priorities

- Establish Federal Approvals Hearing Date.
- Continue Advancing Detailed Engineering.
- Critical Path Procurement Advancing.
- Negotiate Offtake Contracts.
- Advance Financing Package.
- Continue Local Training Programs for Majority at Labour Onsite.
- PCE Exploration to Try and Define Extent of System.

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Appendix

ROOK I PROJECT

The largest uranium asset under development globally, in a Tier 1 mining jurisdiction

Located in the uranium-rich district of the southwestern area of the Athabasca Basin in Saskatchewan, **one of the world's top mining jurisdictions**[3].

Saskatchewan is a mining-friendly province that approaches resource development sensibly and sustainably—**ranked #3** in the 2022 Best Practices Mineral Potential Index by the Fraser Institute[18].

Rook I will be capable of producing nearly 30Mlbs of uranium annually, providing over 50% of Western supply [19,20].

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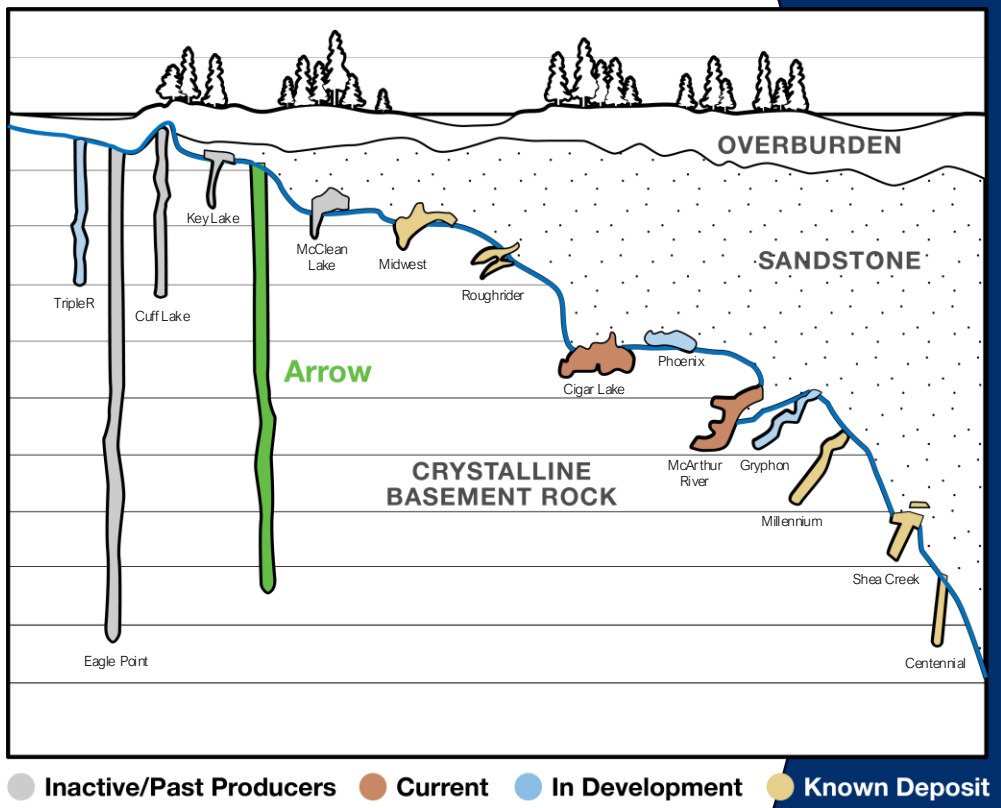
ROOK I PROJECT

Optimal Geological Setting Ensuring Innovative Development and Natural Cost Hedging

Rook I provides a sustained production, capital and cost advantage:

- Hosted underground in crystalline-granite rock with low hydraulic conductivity in mining areas. Ideal conditions for conventional bulk mining methods. [6]
- Competent rock conditions **facilitate the ability to store all tailings generated from the Project underground.**
- As a result of the high grades and technical setting, the OPEX is US$9.98/lb[6], establishing a natural cost hedge through low operating costs.

Allows for flexibility of production volumes and provides consistent grades with predictable supply.



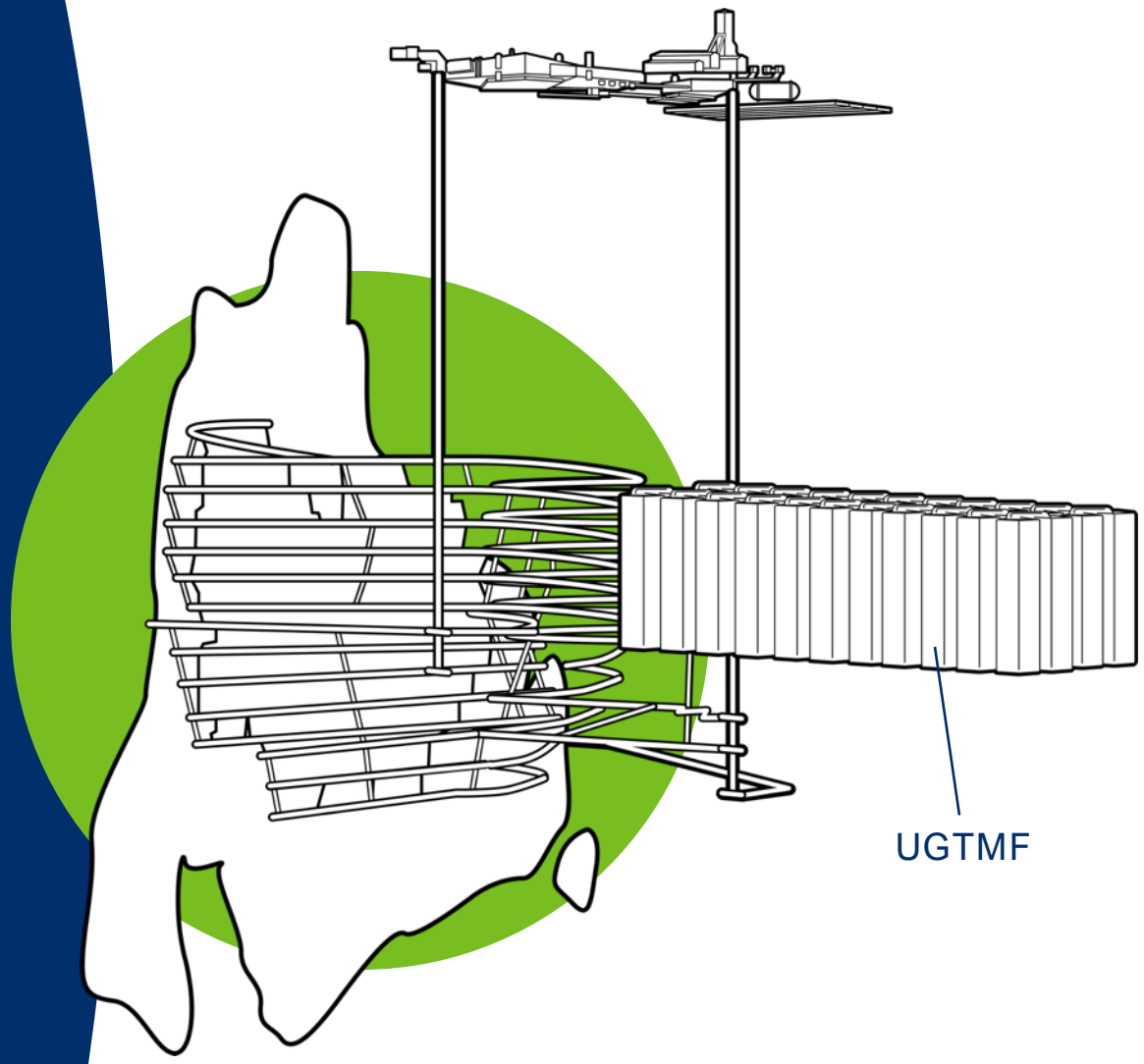
ROOK I PROJECT

Tailings Management: Industry-Leading Design

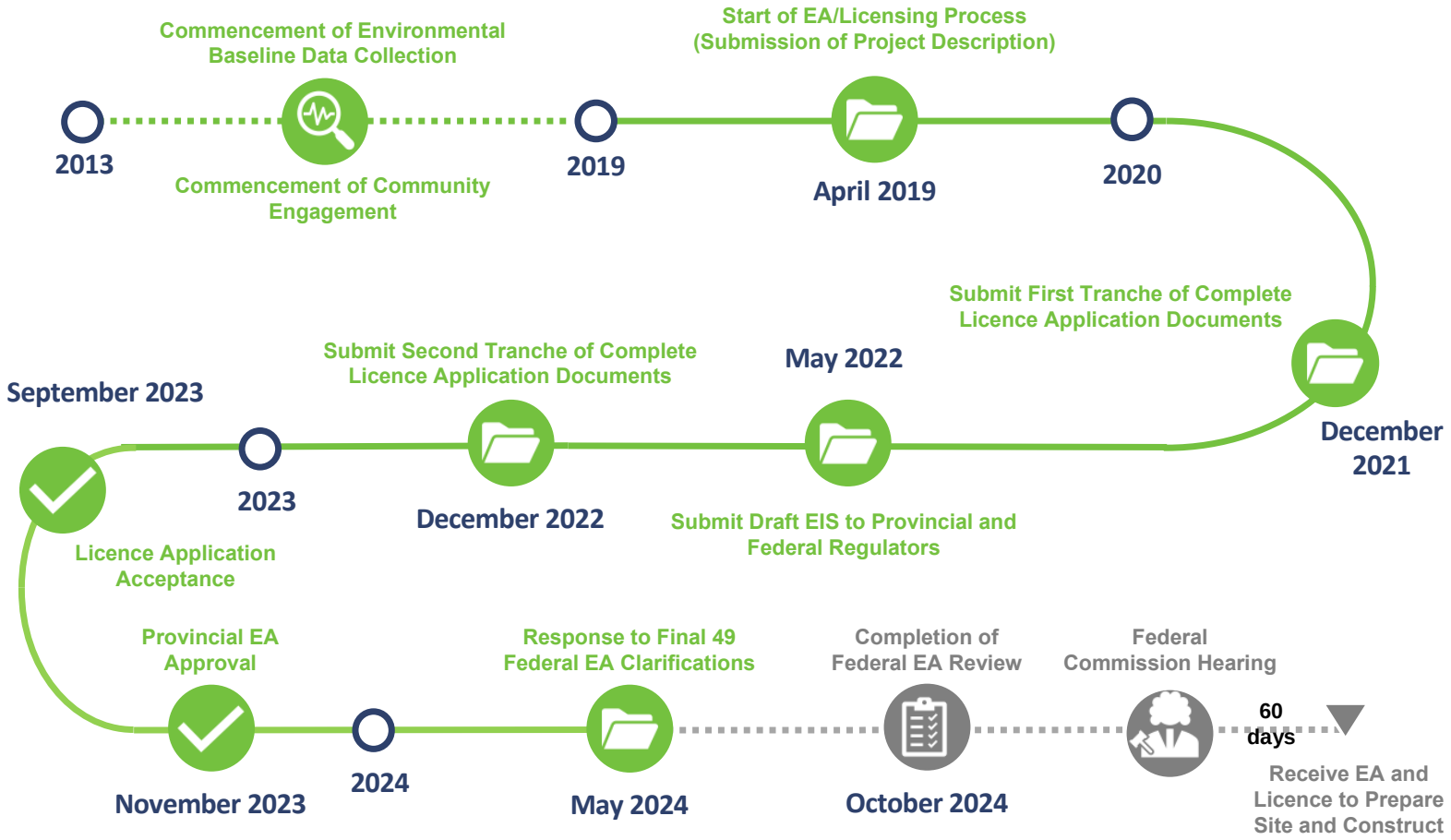
All processed waste streams will be stored underground, in **backfilled mine stopes,** or a purpose-built, innovative **Underground Tailings Management Facility (UGTMF)[4].**

- Eliminates surface tailings disturbance and reclamation.
- Near ZERO risk of surface tailings failures, mitigating one of the most significant risks in operating mining projects.

The UGTMF will set a new global standard in environmental mine management.



Permitting Timeline



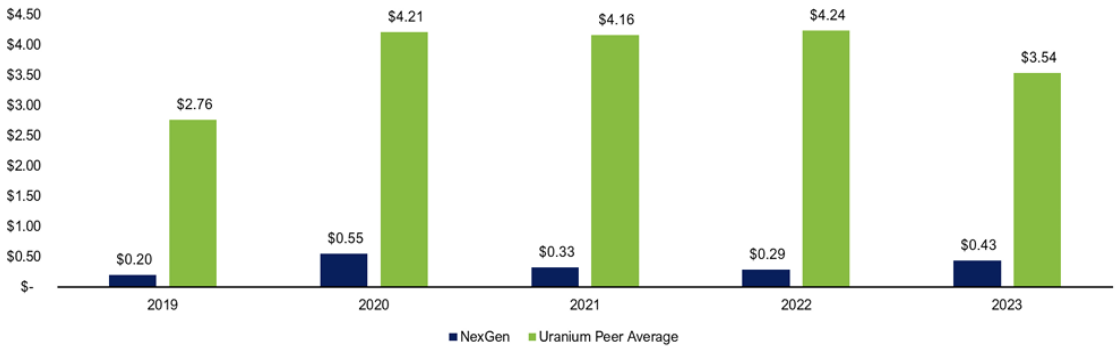
ROOK I PROJECT

Efficient Use of Capital

NexGen's ratio of Exploration and Development spend relative to its General and Administrative spend is the highest compared to its Uranium Peers, while the Company's ratio of General and Administrative spend relative to its market capitalization is the lowest compared to its Uranium Peers.

G&A Spend per Dollar of Exploration & Development Spend ($C)*

As of December 31, 2023

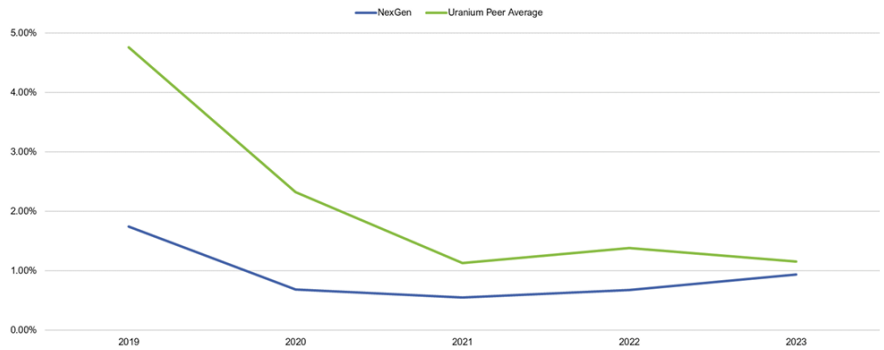


*Exploration and Development spend includes costs related to exploration, drilling, environmental and permitting, engineering and design, direct labour and associated costs. General and Administrative spend includes General or Administrative expenses as define in each peer's financial statements and does not include selling costs.

Source: Publicly filed *Annual Financial Statements* and *Management Information Circular* of the management selected "Uranium Peers", being Cameco Corp, Denison Mines Corp, Energy Fuels Inc, Fission Uranium Corp and Uranium Energy Corp.

G&A Spend as a Percentage of Market Capitalization(**)(***)

As of December 31, 2023



** General and Administrative spend includes General or Administrative expenses as defined in each peer's financial statements and does not include selling costs.

Source: Publicly filed *Annual Financial Statements* and *Management Information Circular* of the management selected "Uranium Peers", being Cameco Corp, Denison Mines Corp, Energy Fuels Inc, Fission Uranium Corp and Uranium Energy Corp.

*** Peer Market Capitalization sourced from S&P Capital IQ.

NexGen Energy Ltd.

BENEFITS

Energy Security Commitments

With an asset located in a premier stable democracy, NexGen is committed to being a supplier of choice. NexGen will:

Only sell to nations who are allied for energy security and targeting net zero.

Maintain a checklist of standards for all partners in the chain of custody of our uranium.

Keep our supply chain and operations onshore in these nations to guarantee the highest levels of security, safety, labour standards and local community partnership.

Advocate for policies that support sensibly produced uranium to set a new standard for the industry.

Our commitments make NexGen a supplier of choice for utilities as they seek to expand their nuclear energy operations.

APPENDIX

NexGen mineral resources and reserves[21]

2021 FS Mineral Resources

Classification	Zone	Tonnage (k Tonnes)	Grade (% U_3O_8)	Contained Metal (Mlb U_3O_8)
Measured	A2 LG	920	0.79	16.0
	A2 HG	441	16.65	161.9
	A3 LG	821	1.75	31.7
Measured Total		**2,183**	**4.35**	**209.6**
Indicated	A2 LG	700	0.79	12.2
	A2 HG	56	9.92	12.3
	A3 LG	815	1.26	22.7
Indicated Total		**1,572**	**1.36**	**47.1**
Measured & Indicated	A2 LG	1,620	0.79	28.1
	A2 HG	497	15.9	174.2
	A3 LG	1,637	1.51	54.4
Measured & Indicated Total		**3,754**	**3.10**	**256.7**
Inferred	A1 LG	1,557	0.69	23.7
	A2 LG	863	0.61	11.5
	A2 HG	3	10.95	0.6
	A3 LG	1,207	1.12	29.8
	A4 LG	769	0.89	15.0
Inferred Total		**4,399**	**0.83**	**80.7**

2021 FS Probable Mineral Reserves

Zone	Tonnage (k Tonnes)	Grade (% U_3O_8)	Contained Metal (Mlb U_3O_8)
A2	2,594	3.32	190.0
A3	1,982	1.13	49.5
Probable Reserves Total	**4,575**	**2.37**	**239.6**

NexGen Energy Ltd.

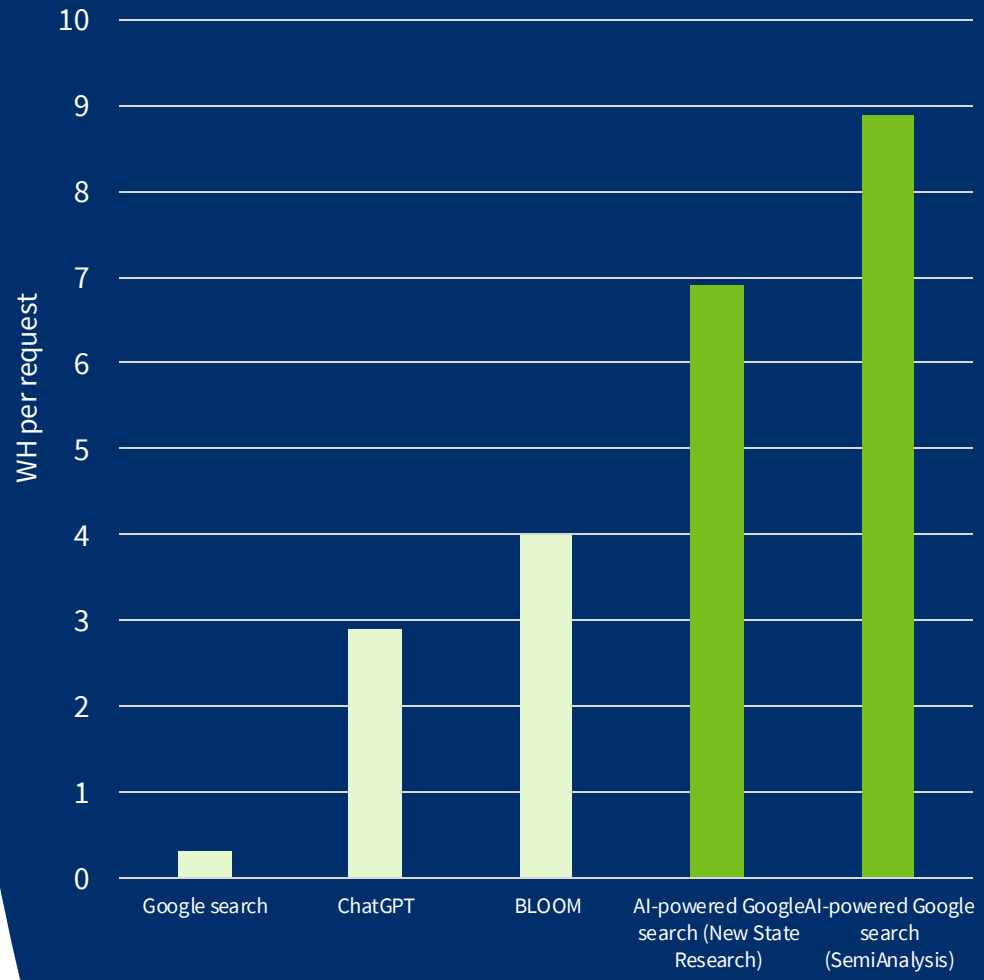
APPENDIX

The Electrification Boom and Implications for Nuclear Power

We are experiencing a seismic shift in energy consumption patterns. Energy providers are scrambling to revise demand forecasts to reflect the urgency of this escalating need.

- **Artificial Intelligence and Sector Electrification**: The exponential rise of AI and the electrification of key sectors are catapulting electricity demands to unprecedented levels. This surge is particularly pronounced in AI, where data centers and computing infrastructure require significant resources.
- **Stable Energy Supply**: The intermittent nature of renewable energy sources like solar and wind require a clean, reliable, baseload power source.
- **Low-Carbon Objectives**: To meet global climate targets, the increased demand for energy will need to be supplied by low-carbon sources.
- **Unleashing the Potential of Advanced Nuclear Technologies**: Smaller, more flexible nuclear reactor designs like Small Modular Reactors (SMRs) are heralding a new era for nuclear energy.
- **Safety and Public Perception**: Continued improvements in nuclear technology are needed to enhance safety standards, waste management, and public perception.

ESTIMATED ENERGY CONSUMPTION PER REQUEST FOR VARIOUS AI-POWERED SYSTEMS COMPARED TO A STANDARD GOOGLE SEARCH



Source: The growing energy footprint of artificial intelligence by Alex de Vries

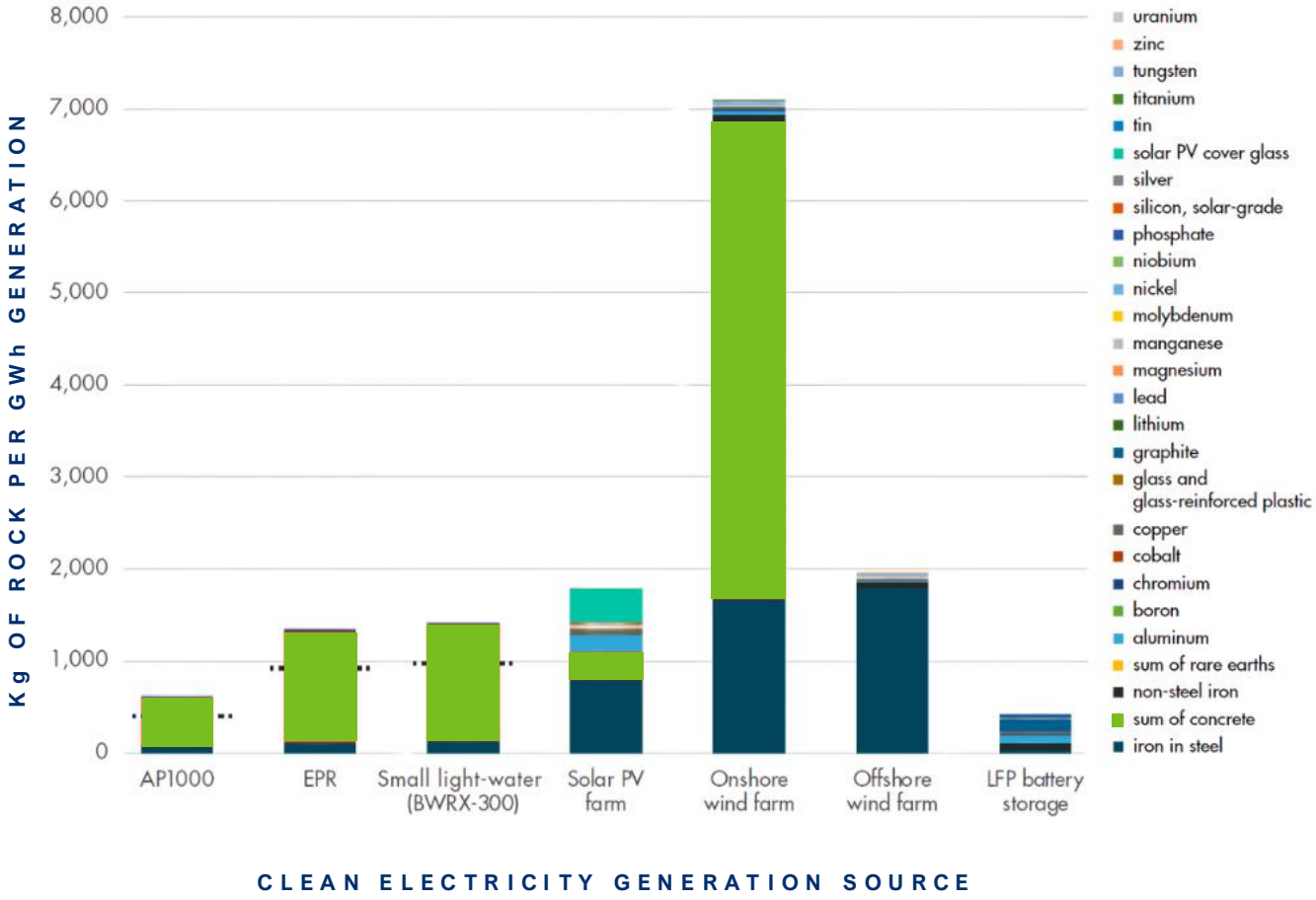
APPENDIX

Clean Energy from Nuclear Power

NUCLEAR POWER FOOTPRINT

- Utilize only **10% to 34%** of critical materials per GWh compared to solar, wind, and battery technologies, delivering potent low-carbon electricity with a minimal materials footprint.
- Has an extractive impact that is more than **20x** smaller than coal and gas per unit of electricity generated.

MINING INTENSITY OF CLEAN ELECTRICITY GENERATION



Source: *Break Through Institute – Updated Mining Footprint and Raw Material Needs for Clean Energy. April 2024*

APPENDIX

Footnotes

1. IAEA 2023
2. IEA 2022 & 2023
3. WNA - World Nuclear Fuel Report 2023 – Upper Case scenario
4. OECD Uranium 2022, Resources, Production, Demand
5. Supply Agency of the European Atomic Energy Community – Market Observatory & EIA 2024 - Domestic uranium market will grow between 2023 and 2024
6. Rook I Feasibility Study, 2021
7. EPA, WNA 2021, IEA, and Internal NXE calculations
8. The base case for U3O8 in the 2021 FS is $50/lb. Prices above this figure have been used for illustrative purposes only to demonstrate the sensitivities of the NPV and IRR in the 2021 FS to uranium prices, and readers are cautioned that such information may not be appropriate for other purposes. Prices in the 2021 FS below $50/lb have been removed from the extended sensitivity analysis in the FS. NPV and IRR in the 2021 FS are most sensitive to: metals prices, grade, metal recovery, and exchange rate.
9. The base case for U3O8 in the FS is $50/lb. Prices above this figure have been used for illustrative purposes only to demonstrate the sensitivities of FCF in the FS to uranium prices, and readers are cautioned that such information may not be appropriate for other purposes. FCF in the FS is most sensitive to: metals prices, grade, metal recovery, and exchange rate.
10. NexGen 2023 Sustainability Report
11. 2021 Economic Impact Study NexGen - Rook I Project – using $50/lb.
12. Inclusion of the new US$110M 2023 Debentures and the US$250M 2024 Debentures, converted at US$6.76 and US$10.73, respectively, would bring the number to fully diluted shares to 652,444,075
13. Cash balance is as per June 30th 2024
14. Traded on the TSX, NYSE and ASX for Q3 2024
15. Assumes potential conversion of the US$110M 2023 Debentures converted at US$6.76 (~16M), and of the US$250M 2024 Debentures converted at US$10.73 (~23M)
16. Based on IsoEnergy market capitalization as of September 30, 2024
17. On May 8, 2024 the Company entered into a binding term sheet with MMCap International Inc. SPC for purchase of 2,702,410 lb of natural uranium concentrate for an aggregate purchase price of US$250M based on the 5-day average UxC spot price. This transaction closed on May 28th 2024.
18. Fraser Institute, Annual Survey of Mining Companies, 2022
19. Rook I Feasibility Study, 2021 – using $100/lb
20. IAEA Ten New Nuclear Reactors Connected in 2016, Bringing Generating Capacity to Highest Ever
21. Rook I 2021 FS Technical Report as source. 1) Mineral Reserves are reported with an effective date of 21 January 2021. Mineral Reserves are estimated using a long-term metal price of US$50/lb U3O8. (2) Mineral Resources are inclusive of Mineral Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

NexGen Energy Ltd.

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