Silex Systems Limited

Investor Presentation

(ASX: SLX) (OTCQX: SILXY)

Dr Michael Goldsworthy
CEO/Managing Director

23 August 2023

Forward Looking Statements and Risk Factors

About Silex Systems Limited (ASX: SLX) (OTCQX: SILXY)

Silex Systems Limited ABN 69 003 372 067 (**Silex** or **Company**) is a technology commercialisation company whose primary asset is the SILEX laser enrichment technology, originally developed at the Company's technology facility in Sydney, Australia. The SILEX technology has been under development for uranium enrichment jointly with US-based exclusive licensee Global Laser Enrichment LLC (GLE) for a number of years. Success of the SILEX uranium enrichment technology development program and the proposed Paducah commercial project remain subject to a number of factors including the satisfactory completion of the engineering scale-up program and nuclear fuel market conditions and therefore remains subject to associated risks.

Silex is also at various stages of development of additional commercial applications of the SILEX technology, including the production of 'Zero-Spin Silicon' for the emerging technology of silicon-based quantum computing. The 'Quantum Silicon' project remains dependent on the outcomes of the project and the viability of silicon quantum computing and is therefore subject to various risks. Silex is also conducting research activities in its Medical Isotope Separation Technology (MIST) Project, which is early-stage and subject to numerous risks. The commercial future of the SILEX technology in application to uranium, silicon, medical and other isotopes is therefore uncertain and any plans for commercial deployment are speculative.

Additionally, Silex has an interest in a unique semiconductor technology known as 'cREO®' through its 100% ownership of subsidiary Translucent Inc. The cREO® technology developed by Translucent has been acquired by IQE Plc based in the UK. IQE has paused the development of the cREO® technology until a commercial opportunity arises. The future of IQE's development program for cREO® is very uncertain and remains subject to various technology and market risks.

Forward Looking Statements

The commercial potential of these technologies is currently unknown. Accordingly, no guarantees as to the future performance of these technologies can be made. The nature of the statements in this Presentation regarding the future of the SILEX technology as applied to uranium enrichment, Zero-Spin Silicon production, medical and other isotope separation projects, the cREO® technology and any associated commercial prospects are forward-looking and are subject to a number of variables, including but not limited to, unknown risks, contingencies and assumptions which may be beyond the control of Silex, its directors and management. You should not place reliance on any forward-looking statements as actual results could be materially different from those expressed or implied by such forward-looking statements as a result of various risk factors. Further, the forward-looking statements contained in this Presentation involve subjective judgement and analysis and are subject to change due to management's analysis of Silex's business, changes in industry trends, government policies and any new or unforeseen circumstances. The Company's management believes that there are reasonable grounds to make such statements as at the date of this Presentation Silex does not intend, and is not obligated, to update the forward-looking statements except to the extent required by law or the ASX Listing Rules.

Except as required by law or regulation (including the ASX Listing Rules and OTCQX Rules for US Companies), Silex does not intend, and is not obligated, to update the forward-looking statements and Silex disclaims any obligation or undertaking to update forward-looking statements in this Presentation to reflect any changes in expectations.

No representation, warranty or assurance (express or implied) is given or made in relation to any forward-looking statement by any person (including the Company or any of its advisers). In particular, no representation, warranty or assurance (express or implied) is given that the occurrence of the events expressed or implied in any forward-looking statements in this Presentation will actually occur.

Risk Factors

Risk factors that could affect future results and commercial prospects of Silex include, but are not limited to: ongoing economic and social uncertainty, including in relation to the impacts of the COVID-19 pandemic; geopolitical risks, in particular relating to Russia's invasion of Ukraine and tensions between China and Taiwan which may impact global supply chains, among other risks; uncertainties related to the effects of climate change and mitigation efforts; the results of the GLE/SILEX uranium enrichment pilot demonstration program; the market demand for natural uranium and enriched uranium; the outcome of the project for the production of Zero-Spin Silicon for the emerging technology of silicon-based quantum computing; the outcome of the MIST Project; the potential development of, or competition from alternative technologies; the potential for third party claims against the Company's ownership of Intellectual Property; the potential impact of prevailing laws or government regulations or policies in the USA, Australia or elsewhere; whether IQE's commercialisation program for cREO® is resumed, the results from the program and the market opportunities for cREO® products; actions taken by the Company's commercialisation partners and other stakeholders that could adversely affect the technology development programs and commercialisation strategies; and the outcomes of various strategies and projects undertaken by the Company.

Our Mission: to commercialise the unique SILEX laser enrichment technology for application to:

Uranium production and enrichment
(nuclear power)

Silicon enrichment
(silicon quantum computing)

Medical isotope enrichment
(new cancer therapies)

Our strategy is focused on extracting maximum value from our core SILEX technology and expertise

Recent Highlights and Developments

Global Laser Enrichment (GLE) Commercialisation Project / SILEX Uranium Enrichment Technology:

- GLE is uniquely positioned to address (via the SILEX technology) the '***Triple Opportunity***' that has emerged in the global nuclear fuel market
- In February 2023, GLE's owners (Silex and Cameco) agreed to a plan and budget to accelerate CY2023 activities for the commercial-scale pilot demonstration project for the SILEX uranium enrichment technology – now aiming for completion in mid-2024 (previously end of CY2025)
- GLE signed a non-binding Letter of Intent (LOI) with US nuclear utility Dominion Energy in April 2023, following two similar LOIs signed with Constellation Energy Generation and Duke Energy in 2022 – which aim to support GLE's commercialisation activities
- GLE recently executed a lease for a new facility in Wilmington that provides significant new space for the planned growth in activities
- Various US Government nuclear fuel funding initiatives, which may be applicable to GLE, are currently before the US Congress

Quantum Silicon Project and Other Highlights:

- Quantum Silicon (Q-Si) project announced on 17 August 2023, following award of $5.1m in funding from the Federal Government's Defence Trailblazer Program. This follows the successful demonstration of ZS-Si production (~99.998% enriched Si-28) in a pilot demonstration facility
- In February 2023, Silex announced the commencement of the MIST Project, initially focused on identifying a process to produce enriched Ytterbium (Yb-176), the critical precursor isotope required for Lutetium (Lu-177) production – a breakthrough therapy for advanced cancers
- In Q1 2023, Silex completed an equity raise by way of a placement and a Share Purchase Plan. Net proceeds from the equity raise were $114.7m – which will support the Company's efforts to transition from engineering to commercial production over the next three years

Investment Focus – Strong ESG Credentials

Investment in three key growth industries with strong ESG credentials:

1) Nuclear Power for Clean Energy – potential to support Net-Zero 2050 targets with carbon-free electricity production
2) Next Generation Quantum Computing – expected to help solve global social and environmental issues
3) Advanced Nuclear Medicine Isotopes – potential to support front line cancer diagnosis and treatment

The SILEX technology offers investors potential exposure to several growth markets:

Uranium and nuclear fuel (via 51% ownership of GLE):

- Fueling carbon-free electricity generation for the world's clean energy needs
- Sustainable production of nuclear fuel in the form of natural UF_6 and enriched UF_6 (as LEU, LEU+ and HALEU)

Quantum Silicon (via 100% owned internal development project):

- Potential production of Quantum Silicon (Q-Si) – key enabling material for silicon quantum computing
- Quantum computing – a strategic technology – will drive new frontiers in AI, medicine, cybersecurity, etc

Medical Isotopes (via 100% owned internal development project):

- Enrichment of Ytterbium (Yb-176) to potentially provide a new low-cost path to production of Lutetium-177 for a new targeted beta therapy for aggressive (metastatic) cancers – significant breakthrough in nuclear medicine

Primary Focus on GLE Commercialisation

Uranium production and enrichment
(nuclear power)

- SILEX uranium technology licencee Global Laser Enrichment (GLE) is actively progressing towards commercialisation
- US-based licensee GLE under JV ownership since 2021: 51% by Silex and 49% by Cameco Corporation (Cameco)
- Cameco is one of the world's leading uranium producers and nuclear fuel suppliers
- GLE has unique potential to address the '*Triple Opportunity*' that has emerged in the global nuclear fuel supply chain with the potential production of nuclear fuels in the form of:

1. ***Natural UF_6 production*** *- from DOE[1] tails inventories (support rising demand for uranium and conversion)*
2. ***LEU production*** *- fuel for existing reactor fleet (help mitigate supply risks for enriched uranium fuel)*
3. ***HALEU production*** *- fuel for next generation reactors, including Small Modular Reactors (SMRs) (help establish HALEU capability in the US)*

1. DOE: US Department of Energy

Significant Additional Opportunities

Silicon enrichment
(silicon quantum computing)

- SILEX technology proven capable of producing highly enriched silicon in the form of Zero-Spin Silicon (ZS-Si) in FY2023
- Initial ZS-Si project achieved target milestones, including ~99.998% pure enriched Si-28 with the pilot demonstration facility in FY2023

Quantum Silicon (Q-Si) Production Project:

- Quantum Silicon Production Project to focus on transitioning from engineering demonstration to initial commercial production
- New 3.5-year project announced on 17 August 2023 being undertaken with SQC and UNSW and with $5.1m of Federal Government funding
- Project aim is to build facility for initial commercial production and develop product conversion capability for Q-Si in solid and gaseous forms required by various potential customers

Medical isotope enrichment
(new cancer therapies)

- Newly commenced medical isotope project aiming to develop a process to enrich Ytterbium (Yb-176) for production of Lutetium-177 (Lu-177)
- Lu-177 radioisotope represents a breakthrough development for the diagnosis and treatment of aggressive metastatic cancers

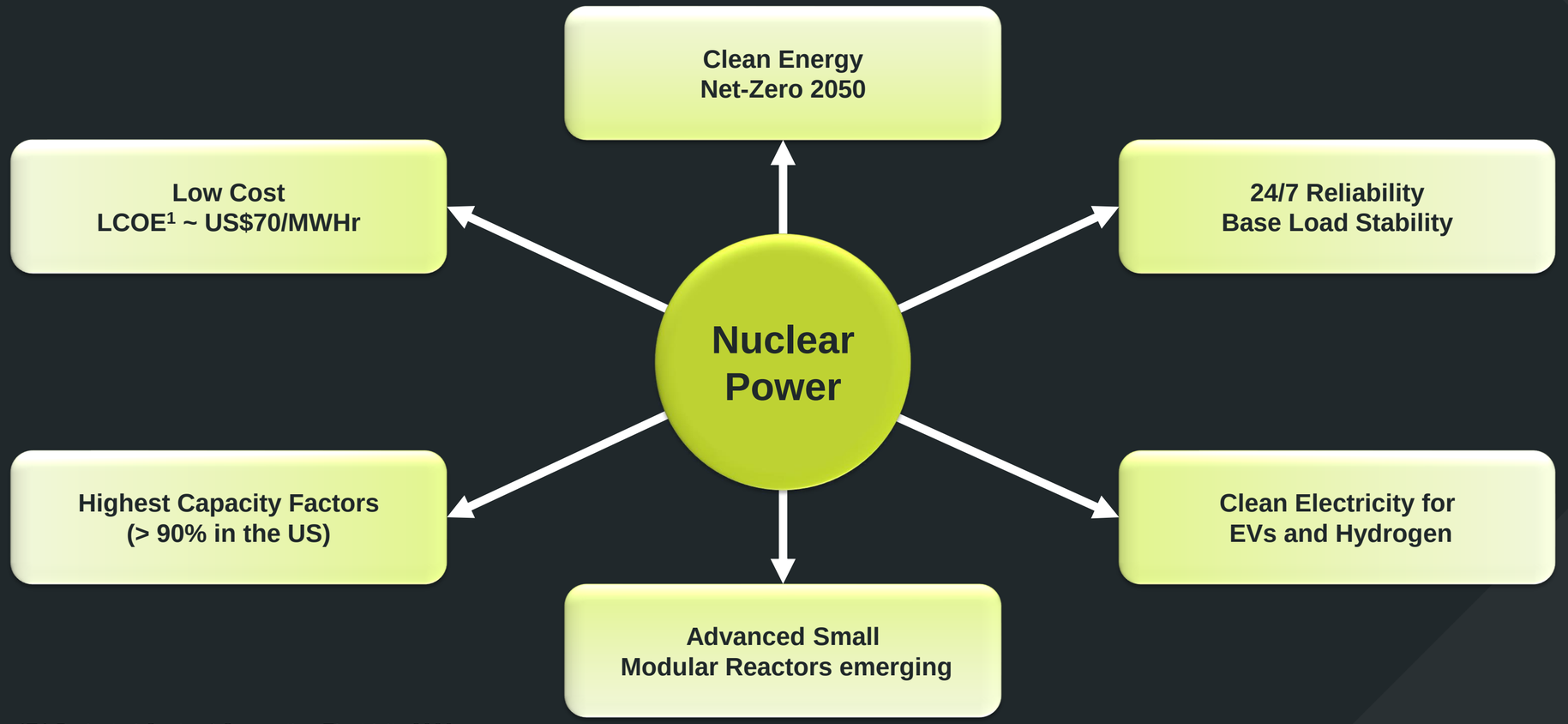
Medical Isotope Separation Technology (MIST) Project:

- New 3-year MIST project commenced in February 2023 - aims to develop SILEX technology to enrich Yb-176 to high purity (~99% +)
- The MIST project provides further diversification and leverages the business case for the SILEX technology across multiple markets

SILEX Uranium Enrichment Technology:
Triple Opportunity for Silex and GLE

Why Nuclear Power is important to achieving Net-Zero

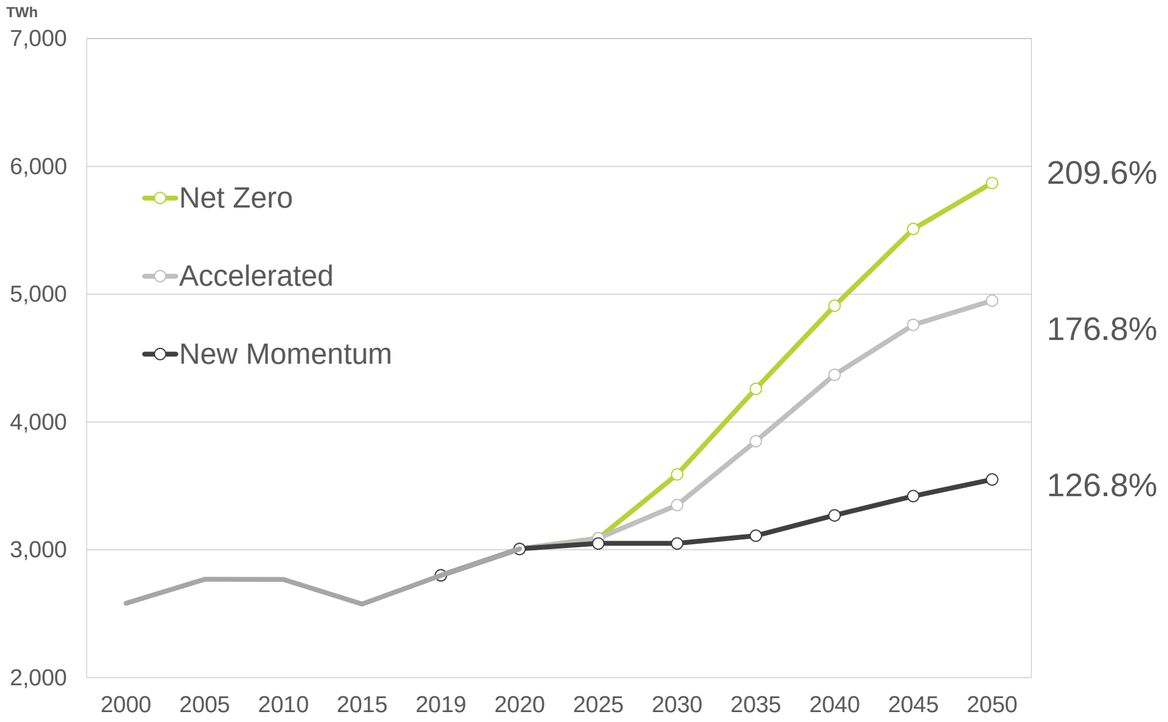
Nuclear power is currently the only economic source of zero-emissions base load electricity



1. LCOE ~US$70/MWhr, IEA Projected Costs of Generating Electricity 2020 (LCOE = Levelised Cost of Electricity – all-in costs basis)

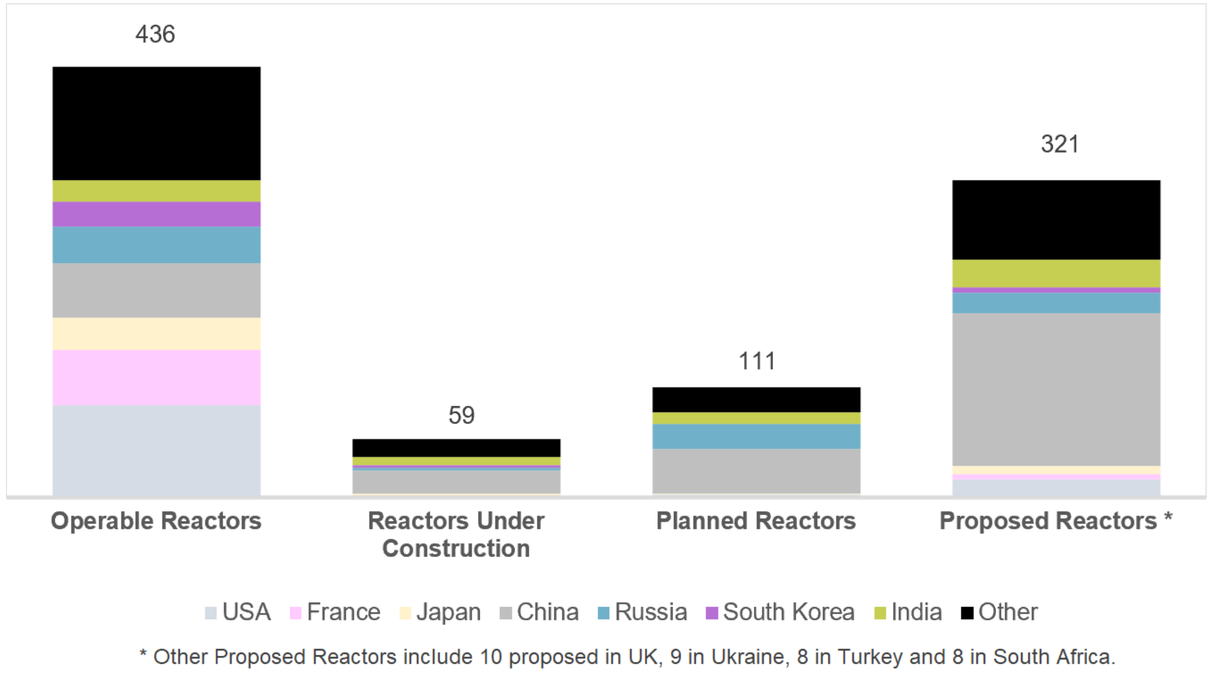
Significant Nuclear Power Growth to achieve Net-Zero 2050

Nuclear Generation Growth Scenarios



Source: BP Energy Outlook 2023 Edition

Conventional Large-Scale Reactor Population

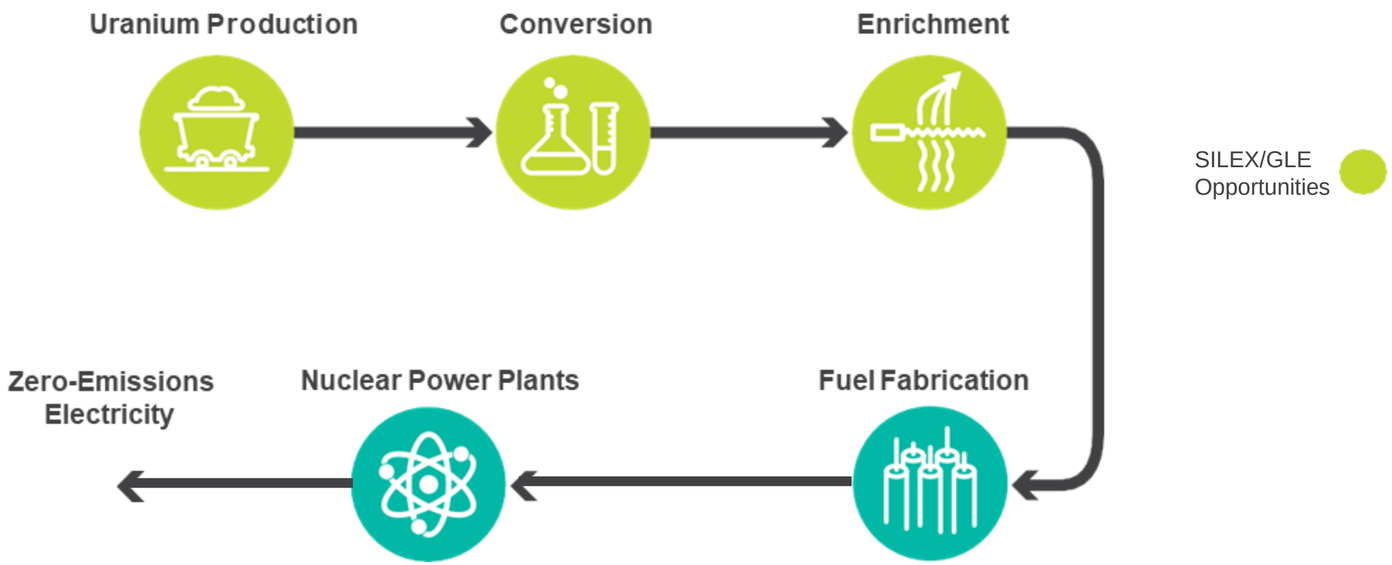


* Other Proposed Reactors include 10 proposed in UK, 9 in Ukraine, 8 in Turkey and 8 in South Africa.

Source: World Nuclear Association July 2023

Nuclear Fuel Supply and Current Threats

The Nuclear Fuel Supply Chain



Current Threats to the Global Nuclear Fuel Supply Chain:

- Supply chain risks exposed by over-dependence on Russian-sourced nuclear fuel
- Western supply – curtailments and under-investment in resources and production capability
- Conversion services – only 3 Western suppliers (Cameco, Orano, Converdyn) excluding Russia
- Enrichment services – only 2 Western suppliers (Urenco, Orano) excluding Russia
- HALEU fuel for advanced reactors, including SMRs – no Western-based suppliers – developers were relying on Russian HALEU

US and EU Nuclear Fuel Requirements Supplied by Russia

	Russian Share of Global Production Capacity[1]	EU Nuclear Fuel Supplied by Russia[2]	US Nuclear Fuel Supplied by Russia[1,3]
Uranium (U_3O_8)	~14%	~20%	~14%
Conversion	~27%	~25%	~18%
Enrichment (SWU)	~45%	~31%	~24%

1. WNA and UxC, various sources 2023
2. Euratom Supply Agency Annual Report 2021
3. EIA, 2022 Uranium Marketing Annual Report, June 2023

- Major concerns regarding Western reliance on Russia for the supply of nuclear fuel
- US is the largest market for nuclear fuel with ~25% of world's nuclear reactor fleet
- Open market^ currently accounts for ~65% of global enriched uranium demand

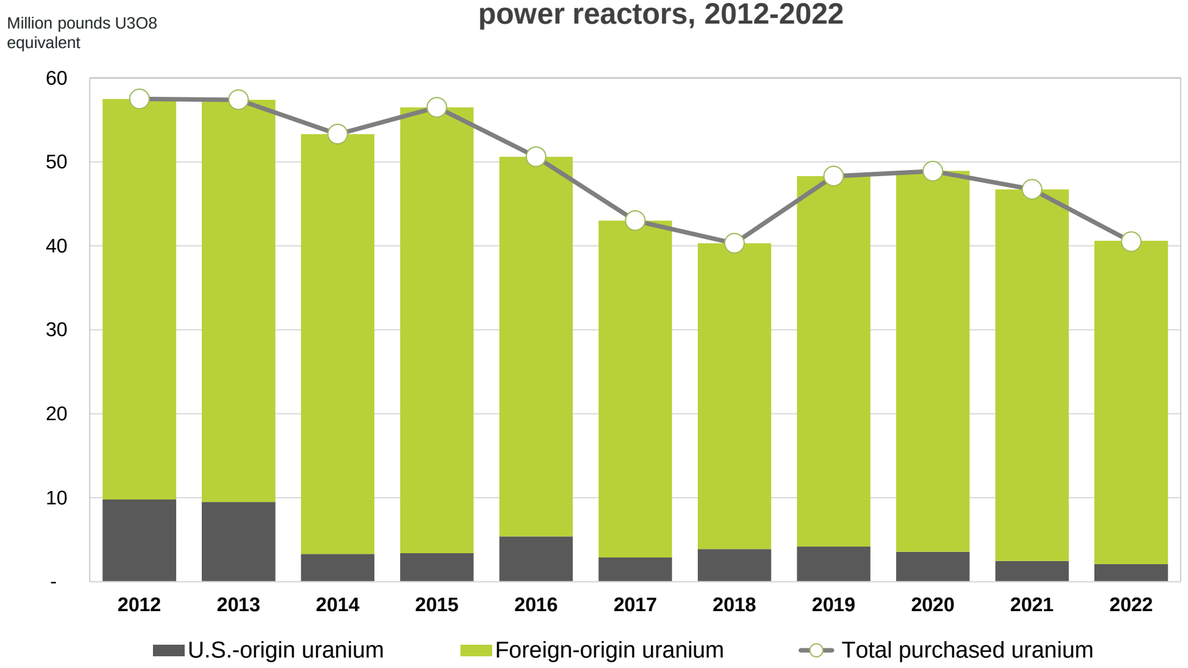
^Open market consists of North America, Europe, Northeast Asia, and various other parts of the world

US Uranium and Enrichment Vulnerability

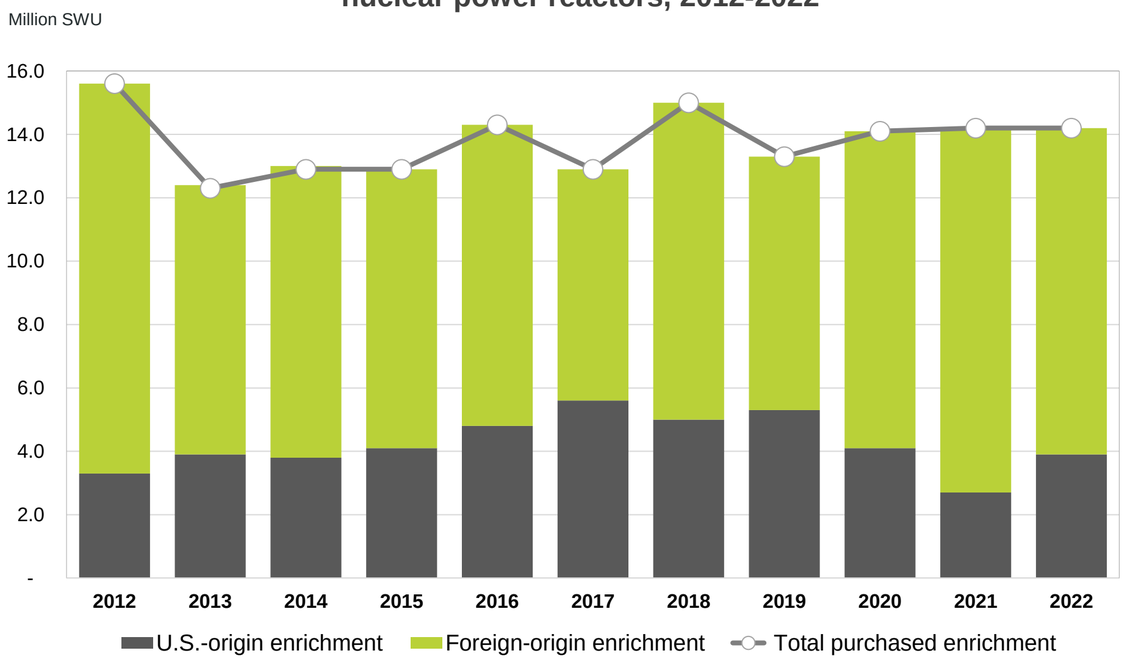
US currently imports the vast majority of its nuclear fuel:

- 95% of its uranium requirements (including ~14% from Russia)
- 100% of its conversion requirements (including ~18% from Russia)
- 70% of its enriched uranium requirements (including ~24% from Russia)

Uranium purchased by owners and operators of U.S. civilian nuclear power reactors, 2012-2022

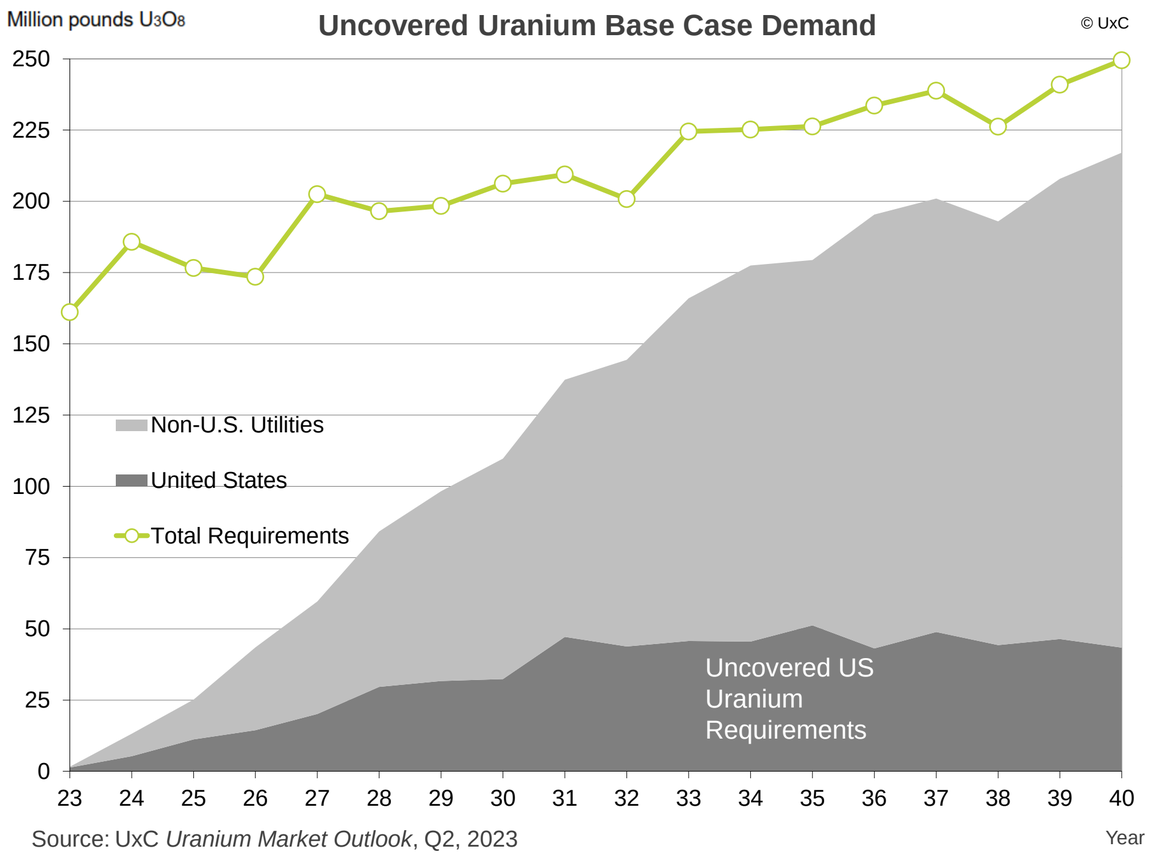


Enrichment purchased by owners and operators of U.S. civilian nuclear power reactors, 2012-2022

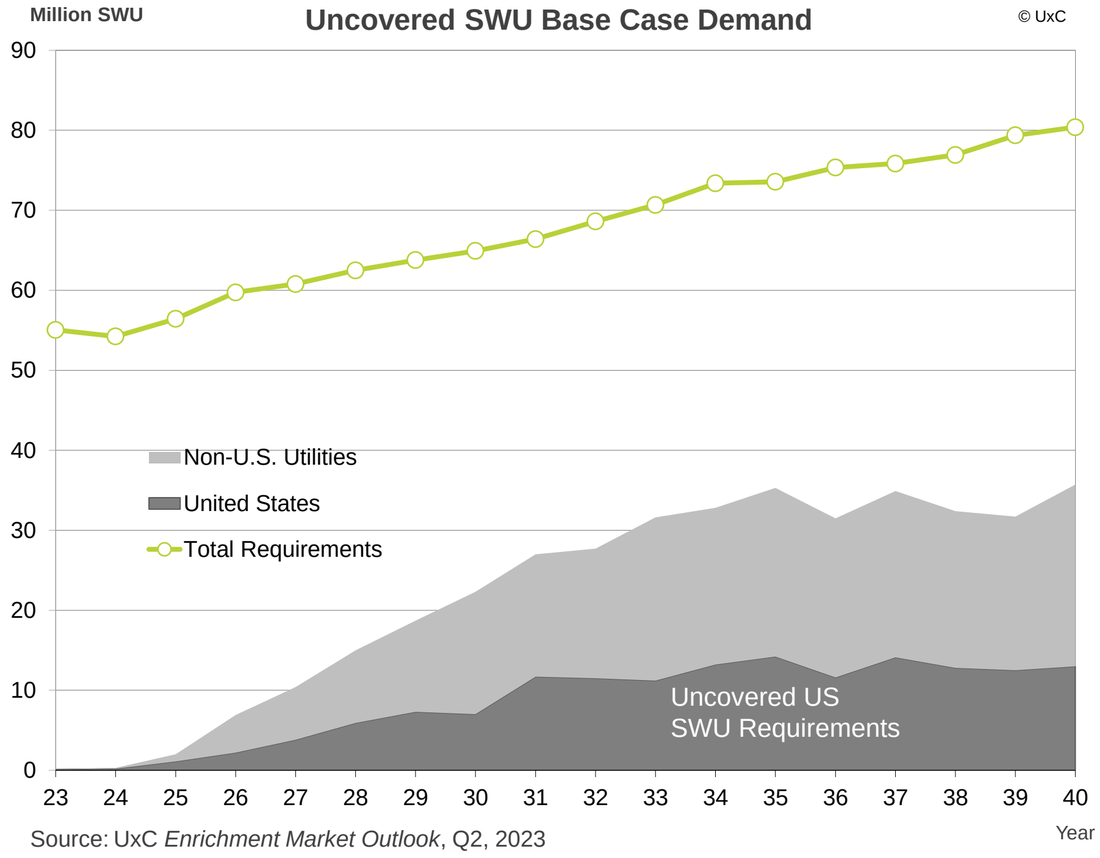


Source: US EIA Report – 2022 *Uranium Marketing Annual Report*, June 2023

Emerging Nuclear Fuel Supply Opportunities for GLE



Source: UxC *Uranium Market Outlook*, Q2, 2023

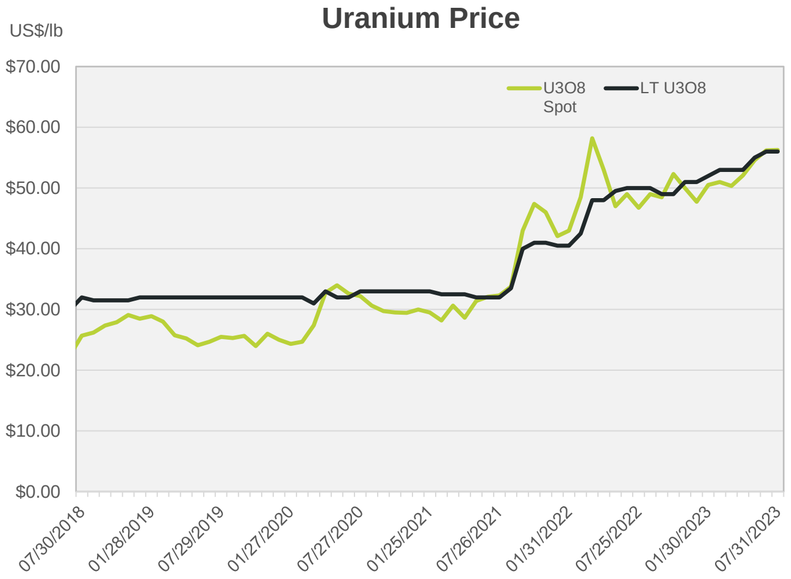


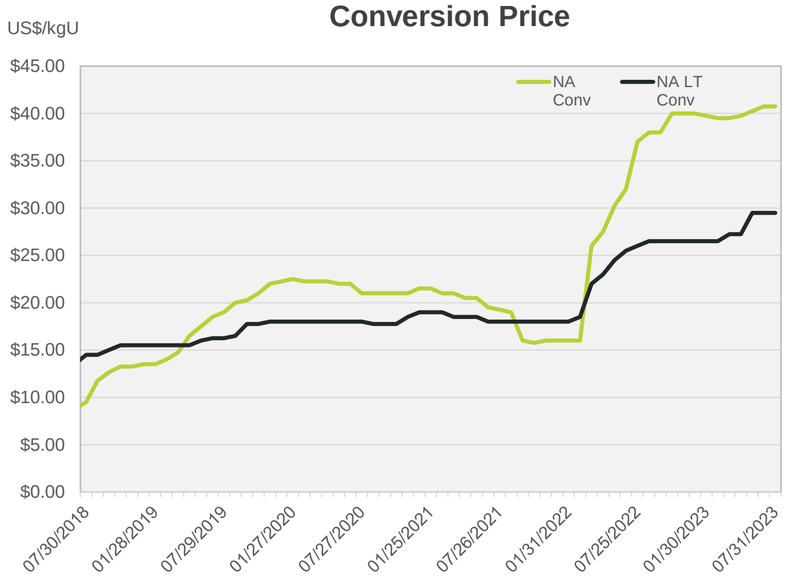
Source: UxC *Enrichment Market Outlook*, Q2, 2023

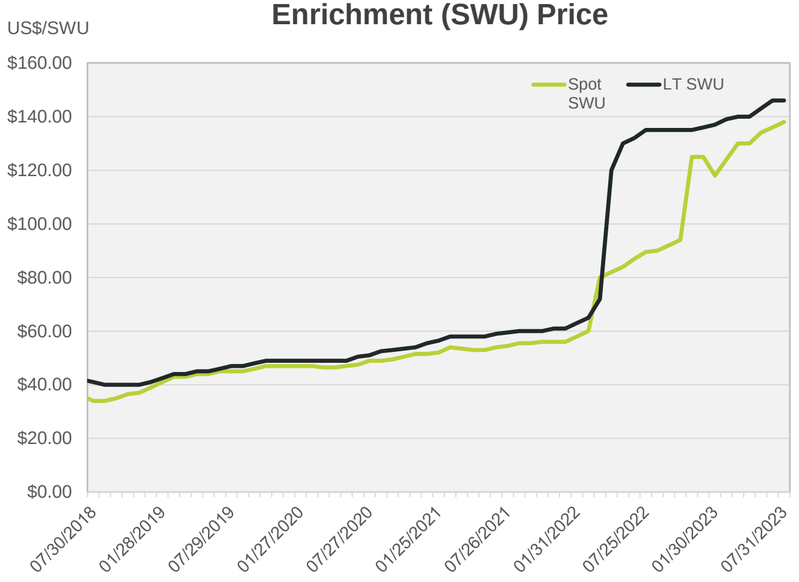
- Forecast uncovered ***US Uranium demand*** from 2027/28 is in excess of ~25 million lbs
- Forecast uncovered ***US SWU demand*** from 2027/28 is in excess of 5 million SWU

Significant nuclear fuel opportunities for GLE extend from the mid-2020s

Recent Nuclear Fuel Market Price Trends







Source: UxC

- Global nuclear fuel markets are pricing in the impact of a bifurcating market precipitated by looming Russian fuel sanctions/exclusions
- According to UxC, the Uranium spot price has increased by ~140% from ~US$23/lb (2018) to ~US$56/lb (July 2023)
- Conversion term prices have increased ~120% over the same period to ~US$30/kg
- Enrichment term prices have increased ~260% over the same period to ~US$146/SWU

Acceleration of GLE's CY2023 Activities for SILEX technology

GLE has unique potential to address the 'Triple Opportunity' that has emerged in the global nuclear fuel supply chain:

- GLE joint venture owners Silex (51%) and Cameco (49%) have agreed to a plan and budget for CY2023 that accelerates activities in the commercial-scale pilot demonstration project for the SILEX uranium enrichment technology
- The CY2023 plan and budget involves bringing forward activities, approximately doubling project expenditures compared to CY2022 – creating the potential opportunity to complete the commercial-scale pilot demonstration project as early as mid-2024 (previously c.2025)[1]
- Accelerated demonstration of the SILEX technology at commercial pilot scale preserves the option of commencing commercial operations at the planned Paducah Laser Enrichment Facility (PLEF) as early as 2028 (up to three years earlier than originally planned)[2]

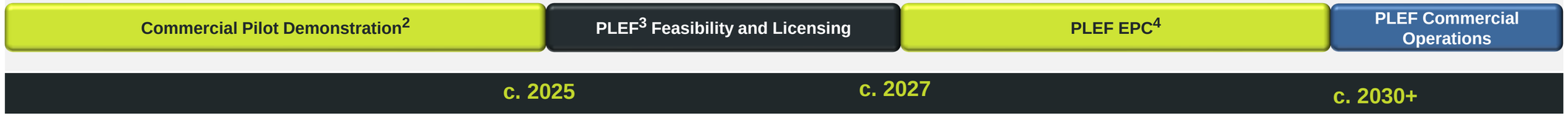
Significant Support Emerging from the US Government and Industry:

- US Government passed 'Inflation Reduction Act' in August 2022 – includes US$700 million support for the HALEU[3] Availability Program – draft Request for Proposal (RFP) response to request for comments submitted 6 July 2023
- 'Nuclear Fuel Security Act' before Congress could provide additional funding support for LEU / HALEU production
- Other draft Bills that may result in the ban of Russian imports of nuclear fuel to the US and progressing through Congress
- GLE signed LOIs[4] with US utilities Constellation Energy Generation, Duke Energy and Dominion Energy to support GLE's commercialisation

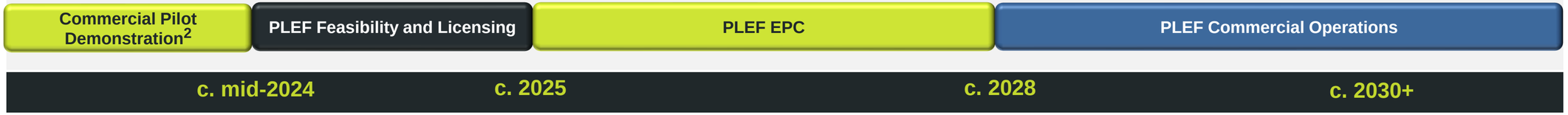
1. Acceleration of the plan beyond CY2023 remains conditional on availability of government and industry support, and geopolitical and market factors
2. Subject to successful pilot demonstration
3. High Assay Low Enriched Uranium
4. Letter of Intent

GLE's Potential Timelines for Commercialisation of SILEX technology[1]

Baseline - GLE Commercialisation Timeline:



Potential Acceleration - GLE Commercialisation Timeline[5]:



Up to 3 years earlier than originally planned

1. Timelines subject to technology demonstration outcomes, market conditions, licensing, commercial support and other factors
2. Includes achievement of Technology Readiness Level 6 (TRL-6) as defined by DOE Technology Readiness Assessment Guide (G 413.3-4A)
3. PLEF: Paducah Laser Enrichment Facility
4. Engineering, Procurement and Construction (EPC) of commercial plant
5. Potential acceleration remains subject to due diligence assessment and may vary according to differing scenarios

GLE's PLEF Production Plant Opportunity

The PLEF Triple Opportunity

Paducah Laser Enrichment Facility (PLEF) commercial project to deploy the SILEX technology in the US:

- ***PLEF UF_6 Production:*** Production of up to 5 million pounds (equivalent) natural grade uranium (as UF_6) annually for up to 30 years - underpinned by GLE's 2016 agreement with US DOE to acquire over 200,000 tonnes of legacy tails inventories
- ***PLEF LEU Production:*** Add-on opportunity to enrich PLEF output to produce Low Enriched Uranium (LEU/LEU+) for nuclear reactor fuel
- ***PLEF HALEU Production:*** Additional opportunity to enrich HALEU for next generation advanced reactors, including SMRs

PLEF UF_6

Natural Grade Uranium (as UF_6)

via enrichment of DOE inventories of depleted tails to produce natural UF_6 with U^{235} assay ~0.7%

PLEF LEU

Low Enriched Uranium (LEU)

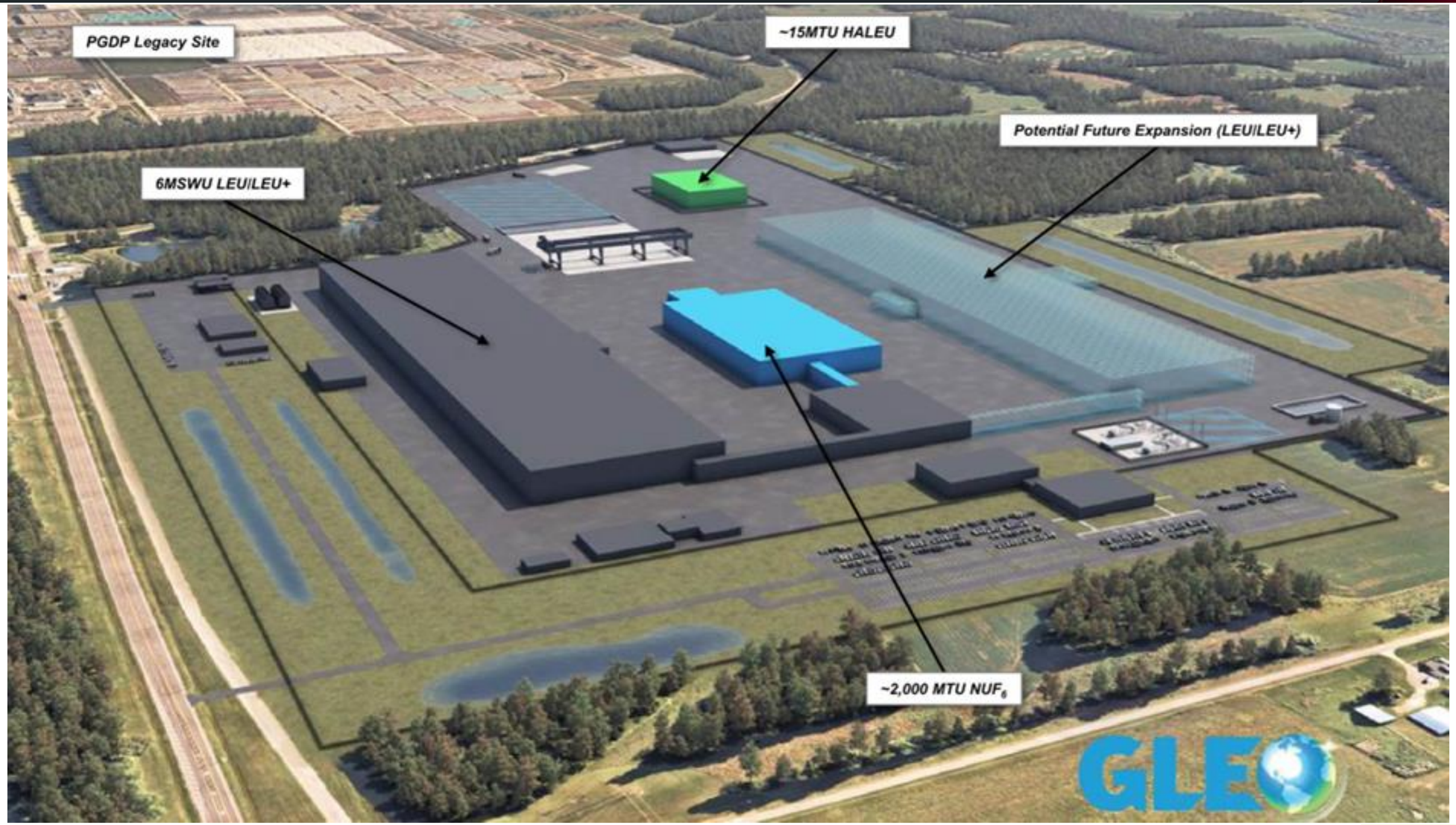
for conventional nuclear power reactors
LEU includes U^{235} assays of 3% to 5%
LEU+ includes U^{235} assays of 5% to 10%

PLEF HALEU

High Assay LEU (HALEU)

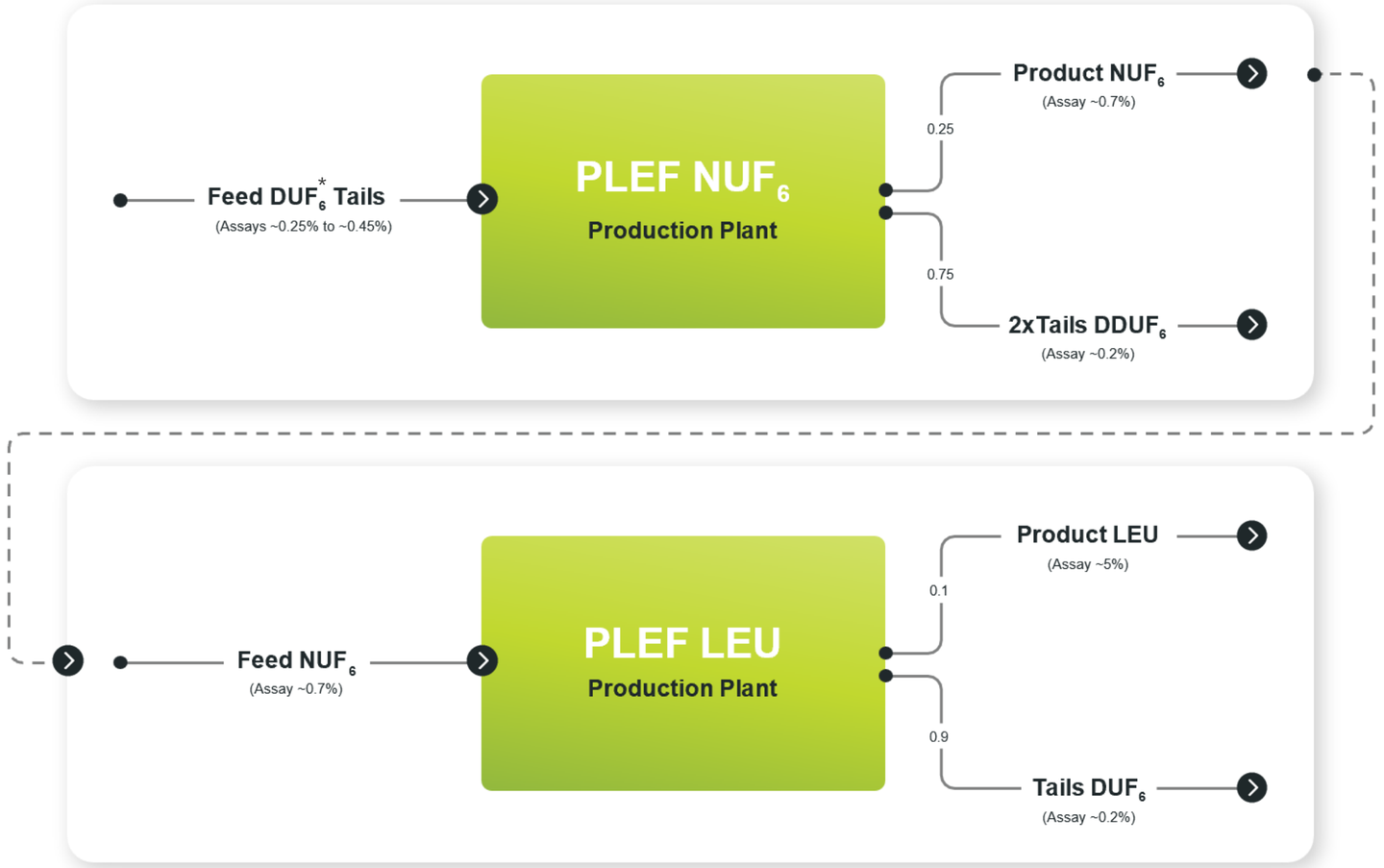
fuel for next generation advanced reactors, including SMRs
includes U^{235} assays up to 20%

GLE’s PLEF Multi-purpose Production Plant Opportunity



Source: GLE, multi-purpose PLEF (conceptual)

GLE's PLEF Production Plant Opportunity



GLE PLEF Process streams – NUF_6 and LEU Production

* DUF_6: Depleted UF_6

PLEF UF_6 Production Opportunity
(Natural UF_6 production from tails)

Target Commercial Operation Date

Baseline: c. 2030

(with potential acceleration by up to 3 years)

Akin to a 'Tier 1' Uranium Resource*

Based on low cost and longevity of production

(Silex estimate of all-in cost currently < US$30/lb)

Equivalent U_3O_8 Production

Up to 5 million lbs p.a. for approximately 30 years

Potential capture of Conversion Value

Feed and Product is UF_6 (current conversion value ~US$30/kg)

Potential to Enrich Further

From natural grade (0.7%)
to LEU (up to 5%)
to LEU+ (up to 10%)
& HALEU (up to 20%)

* All production estimates are based on preliminary modelling by Silex of project economics and longevity. Actual production output will depend on prevailing uranium market prices and other factors.

GLE Value Proposition for Silex*

1) GLE Equity – Minimum 25%:

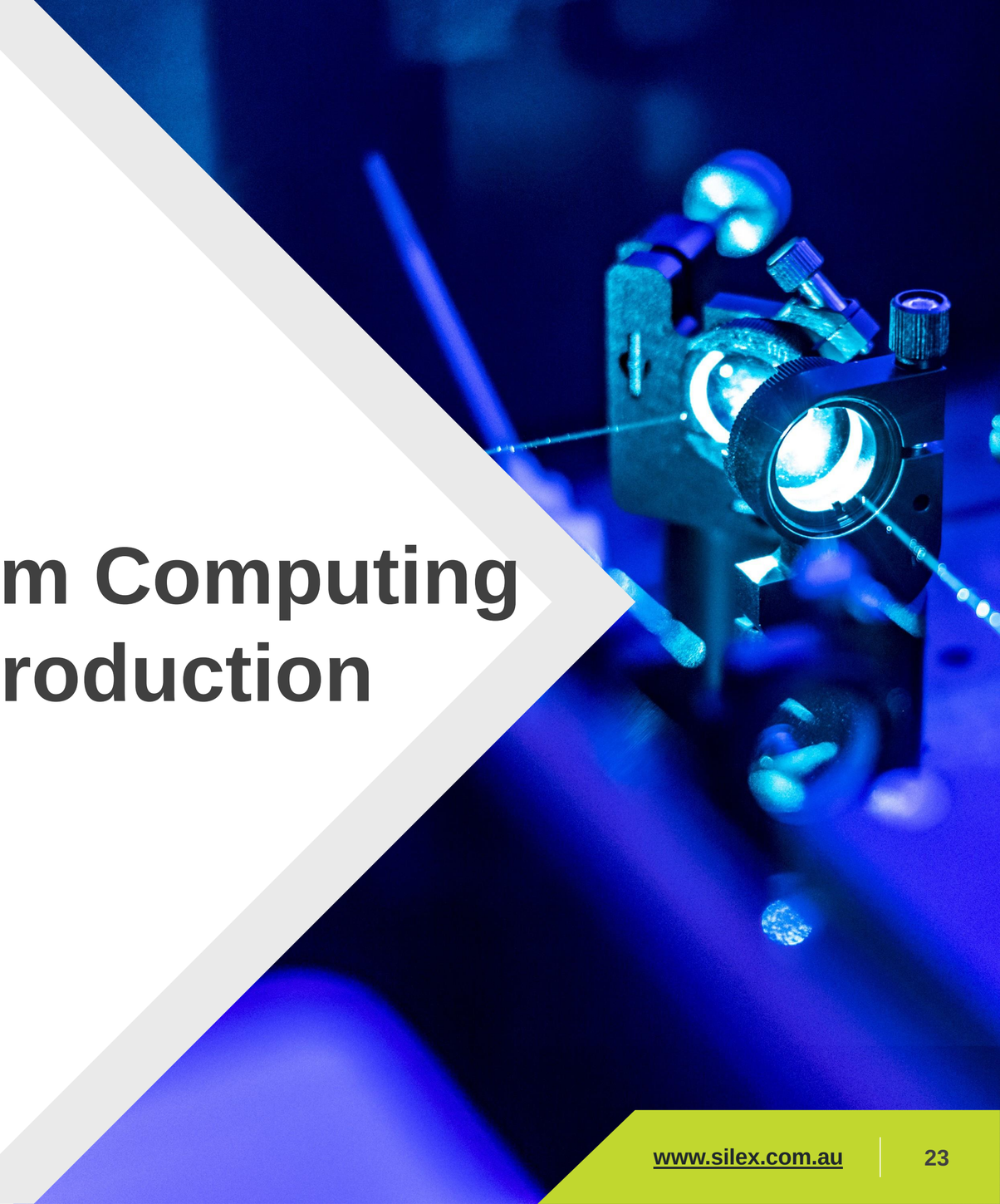
- Silex currently holds 51% – Cameco has a call Option to acquire 26% at fair market value
- Option window opened 1 February 2023 – closes 30 months after successful TRL-6 demonstration
- Either way, Silex has a significant equity stake in GLE as a potential nuclear fuel supplier
- Attractive business case with Triple Opportunity and very high entry barriers

2) SILEX Technology Licence and Perpetual Royalty:

- Technology classified by Australian and US Governments with no patent disclosures permitted
- Technology kept as Trade Secret under strictest security mandates → no sunset on IP
- Perpetual SILEX royalty of 7% to 12% on GLE's enrichment SWU revenues could potentially reach, for example, ~US$80m p.a. for 8 MSWU PLEF operations (at 7% royalty rate and current SWU price)

***** GLE's progress to commercialisation is dependent on several factors, including, but not limited to: successful completion of the commercial-scale pilot demonstration program; availability of government and industry support; timely licensing activities; securing of PLEF site; confirmation of PLEF economic feasibility; and supportive market factors

Quantum Silicon for Quantum Computing – transition to commercial production



Quantum Silicon (Q-Si) Production Project

- New 3.5-year Quantum Silicon (Q-Si) Production Project announced on 17 August 2023 being undertaken with partners, Silicon Quantum Computing Pty Ltd (SQC) and UNSW Sydney (UNSW)
- Project awarded $5.1m in funding from the *Defence Trailblazer for Concept to Sovereign Capability Program* (partnership between The University of Adelaide and UNSW) supported by the Australian Government's Department of Education
- Funding will support the establishment of a Q-Si Production Plant, which aims to deliver an end-to-end manufacturing facility at the Company's Lucas Heights technology centre
- First production module anticipated to produce between 5kg to 10kgs of ZS-Si (in the form of halo-silane) annually, which will be converted to multiple product forms of Q-Si for potential customers in the global silicon-based quantum computing industry:

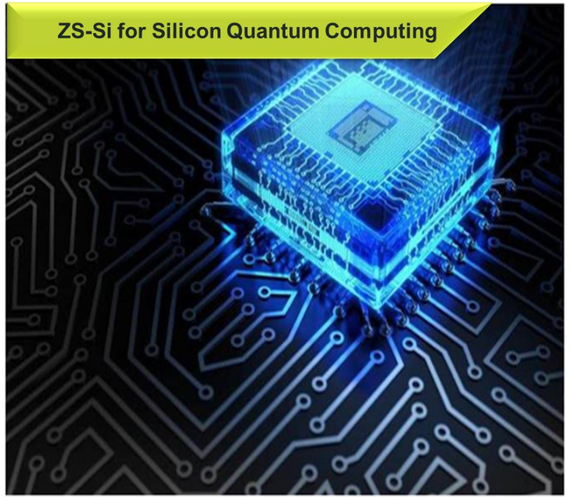
    1. **Quantum Silane gas** – for chemical vapour deposition (CVD) based processes used for quantum chip fabrication
    2. **Quantum Silicon solid** – for atomic / molecular beam epitaxy (ABE / MBE) processes used for quantum chip fabrication

Transition to Q-Si Production

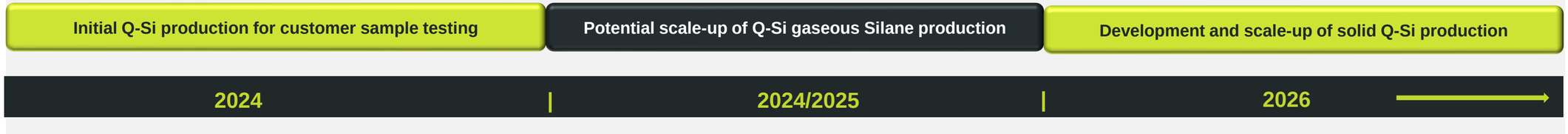
Q-Si Production Project will focus on four key elements:

1. Scaling of ZS-Si production capability to commercial-scale output (TRL-7, 8, & 9)
2. Scaled-production of gaseous Q-Si product in the form of Quantum Silane
3. Production of solid Q-Si products in the form of Quantum Polysilicon and Quantum Monosilicon
4. Development of a customer base and marketing for global sales of Q-Si products

SILEX Q-Si production technology is modular, enabling the Q-Si Production Plant to be incrementally scaled-up in response to increasing market demand and other factors



Q-Si Production and Commercialisation Timeline*:



* Subject to technology development program outcomes, market conditions and other factors

Quantum Computing (QC), Artificial Intelligence (AI) and Q-Si

Global race to develop world's first Quantum Computers for Artificial Intelligence (AI):

- Quantum Computing (QC) will be many times more powerful than today's conventional computers and will power up the new age of Artificial Intelligence (AI)
- QC and AI will create transformational technological advances in complex global industries, including generative and creative AI applications, defence, aerospace, finance, medicine, and logistics
- Corporates including Intel, Google, IBM, Microsoft, and Amazon are vying for leadership in this emerging strategic industry, which will underpin future national security and cybersecurity platforms
- Australia has been at the forefront of global efforts to develop and commercialise Quantum Computing and the sector and its associated technology ecosystem is a key Australian Government policy priority
- Development of Quantum Technologies is also a key plank of the AUKUS Trilateral Security Partnership between Australia, the United Kingdom, and the United States

Silicon Quantum Computing is a leading contender:

- Silicon-based Quantum Computing is well placed to leverage the existing global silicon semiconductor nano-fabrication industry, uniquely capitalising on 60 years of development and production
- Silicon Quantum Computing is totally reliant on the use of highly enriched silicon, currently high-cost and in extremely limited supply (the main source of supply from Russia now largely disrupted)
- A reliable enriched silicon supply chain needs to be established to support timely commercialisation of quantum computing in the Western world

Q-Si Production Opportunity

Aim

Establish scaled, reliable, and economic production of ZS-Si in two product formats: solid Q-Si and gaseous Q-Si silane

2024 – Potential Sample Sales

In the form of halo-silane to potential Q-Si customers

2024 - 2026 Commercial Production Scale-up

Q-Si production of up to 10kg p.a. - depending on demand

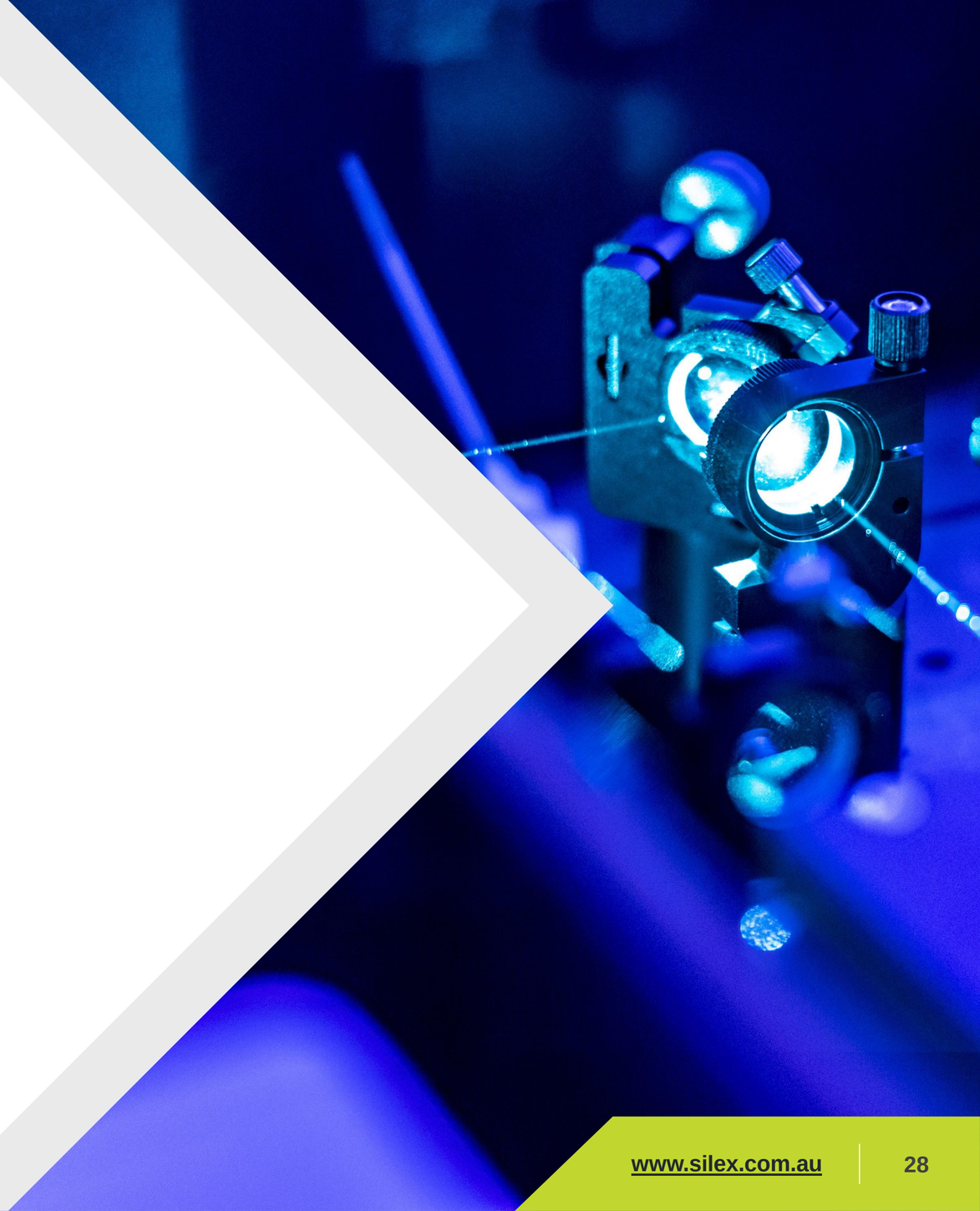
Product Conversion Capability

Conversion from ZS-Si halo-silane to silane gas Q-Si and solid Q-Si

Marketing and Commercial Agreements

Potential offshore customers being engaged

Medical Isotope Separation Technology (MIST) Project



Medical Isotope Separation Technology (MIST) Project

Opportunity to become a critical material supplier for a revolution in nuclear medicine:

- Lutetium-177 (Lu-177) radioisotope is a breakthrough development for the treatment of aggressive metastatic cancers – known as targeted beta therapy, which seeks out and selectively destroys cancer cells throughout the human body
- Lu-177 approved in the US and Europe for advanced prostate cancer and is in clinical trials for other cancers
- Lu-177 is produced from enriched Ytterbium (Yb-176) in nuclear reactors or accelerators
- Current global supply of enriched Yb-176 disrupted, as supply was previously sourced entirely from Russia
- A stable supply chain for Yb-176 is essential for the ongoing development of Lu-177-based radiopharmaceuticals

The Silex MIST Project:

- In February 2023, Silex announced the MIST opportunity and the commencement of the MIST Project
- Silex is undertaking a proof-of-concept assessment to investigate technical viability for production of high purity Yb-176
- MIST Project draws on technical and project execution expertise established by Silex over the last 20+ years
- Potential to partner with the global radiopharmaceutical industry will be explored – over 40 million nuclear medicine procedures performed yearly – with radioisotope demand increasing at up to ~5% annually
- MIST Project has the potential to provide a technology platform for application to other high-value medical isotopes

MIST Project for Enriched Yb-176 (Precursor to Lu-177)

Three year stage-gated project aims to demonstrate technology for economic enrichment of Yb-176

MIST Project to be undertaken in three stages:

- **Stage 1 –** Proof-of-Concept (POC) (CY2023) – TRL-3
  Lab-scale verification of 'proof-of-concept' in a custom-built test facility
- **Stage 2 –** Technology Validation (CY2024) – TRL-4/5
  Engineering-scale process validation in a prototype production reactor
- **Stage 3 –** Technology Demonstration (CY2025) – TRL-6/7
  Industrial-scale process verification in a commercial pilot-scale demonstration plant

Yb-176 Production Commercialisation Timeline*:

* Subject to technology development program outcomes, market conditions, and other factors.

If Stage 1 is successful, the MIST Project for enriched Yb-176 may be accelerated in light of market demand

MIST Project: Yb-176

Aim

To establish process viability and production capability for economic production of enriched Yb-176

Project Outline

Stage 1: Proof of Concept - 2023

Stage 2: Prototype validation - 2024

Stage 3: Pilot Demonstration - 2025

Initial Commercial Production

Enriched Yb-176 (~99%) in 2026

(with potential to accelerate based on market demand and other factors)

Commercial Engagement

With potential customers and development partners in the global radiopharmaceutical industry

MIST Technology Platform

Potential to apply to other medical isotopes

SILEX Technology Summary

- GLE's path to market is underpinned by the PLEF UF_6 project for cost effective production of natural uranium (in the form of UF_6) and significant value of the contained conversion component
- Acceleration of CY2023 activities in the pilot demonstration project creates opportunity for completion by mid-2024 and if successful, preserves option to commence commercial PLEF operations up to 3 years earlier than originally planned
- *'Triple Opportunity'* includes adding SILEX production capacity to produce LEU, LEU+ and HALEU nuclear fuels, with the PLEF potentially a multi-purpose nuclear fuel facility, helping to alleviate dependence on imported Russian fuel
- Long-term fundamentals for global growth in nuclear power strengthening, with climate change mitigation measures and emerging global energy supply disruptions energising Western nuclear fuel markets
- SILEX ZS-Si Project successfully demonstrated production of ZS-Si in support of development of silicon quantum computers – new Q-Si Production Project launched 17 August 2023 to construct first Q-Si Production module
- Silex is assessing other applications of the SILEX technology in the field of medical radioisotopes, initially for enrichment of Yb-176 – used for production of Lu-177 – a breakthrough in nuclear medicine cancer treatment

As at 30 June 2023, the Company has cash and term deposit holdings of ~$138.1m and no debt

Thank you