Investor Presentation

21 February 2025

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Silex Systems Limited
ASX: SLX
OTCQX: SILXY

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 TRL-6 pilot demonstration program, nuclear fuel market conditions, industry and government support, project feasibility and commercial plant licensing, 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 'Quantum Silicon' for the emerging technology of silicon-based quantum computing. The 'Quantum Silicon' project remains dependent on the outcomes of the project as well as the successful development of silicon quantum computing technology by third parties, and is therefore subject to various risks. Silex is also conducting early-stage research activities in its Medical Isotope Separation Technology (MIST) Project, which is also subject to various risks and unknowns. 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.

Forward Looking Statements

The commercial potential of the abovementioned technologies and activities 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, Quantum Silicon production, medical and other isotope separation projects, and any associated commercial prospects, including TRL-6 achievement and other commercialisation milestones at GLE, are forward-looking and are subject to a number of variables, including but not limited to, known and 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 Announcement involve subjective judgement and analysis and are subject to: change at any time due to variations in the outlook for, and management of, Silex's business activities (including project outcomes); changes in industry trends and government policies; and new or unforeseen circumstances. The Company's management believes that there are reasonable grounds to make such statements as at the date of this Announcement. 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 global economic stresses such as interest rates and inflation; geopolitical risks, in particular relating to Russia's invasion of Ukraine and tensions between China and Taiwan which may impact global supply chains; uncertainties related to the effects of climate change and mitigation efforts; the results of the GLE/SILEX uranium enrichment pilot demonstration (TRL-6) program; the market demand for natural uranium and enriched uranium; the outcome of the project for the production of Quantum Silicon for the emerging technology of silicon-based quantum computing; the outcome of the MIST program; 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; 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.

The release of this presentation was authorised by the Board.

Cover page image accreditation: Prof. Michelle Simmons team at UNSW/CQC2T demonstrated the fastest 2 qubit gate in silicon using atom qubits. Nature 571, 371 (2019) (Illustration by Tony Melov).

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

92
U
Uranium
238.03

Uranium production and enrichment
(nuclear power)

14
Si
Silicon
28.0855

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

Evolution of Enrichment Technology

1st Generation Technology

Gaseous Diffusion

Very low efficiency – tails legacy

High cost

Obsolete

2nd Generation Technology

Centrifuge

Modest efficiency

Moderate cost

Current technology

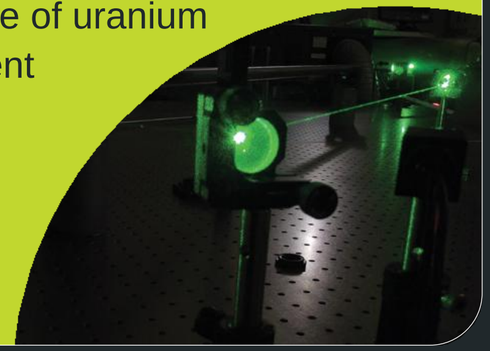
3rd Generation Technology

SILEX Laser

High efficiency and throughput

Anticipated to be lower cost

The future of uranium enrichment



SILEX laser process → higher separation efficiency and throughput vs centrifuge technology

Recent Highlights and Developments

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

- GLE and Silex continued to advance the technology demonstration program for the SILEX uranium enrichment technology. Preliminary testing commenced in late CY2024 and triggered some minor engineering modifications to the Test Loop pilot demonstration facility. These have been recently completed and commencement of full (TRL-6[1]) enrichment testing is imminent
- GLE aims to complete TRL-6 testing for the SILEX technology around mid-CY2025, with completion of the TRL-6 project subject to an independent assessment and report, which will follow the TRL-6 testing
- GLE acquired a 665-acre site for the planned Paducah Laser Enrichment Facility (PLEF) in November 2024 - which is strategically located adjacent the US Department of Energy's (DOE) former first-generation Paducah Gaseous Diffusion Plant
- In December 2024, GLE submitted an Environmental Report to the US Nuclear Regulatory Commission (NRC) in support of site licensing for the planned PLEF. GLE plans to submit the Safety Analysis Report in mid-CY2025, which will complete the licence application to the NRC
- Also in December 2024, GLE was selected by the US DOE as one of six awardees under the DOE's LEU Enrichment Acquisition Request for Proposals (RFP). The award provides a maximum aggregate value for all awardees totalling US$3.4bn
- GLE is currently preparing a submission to the High-Assay Low-Enriched Uranium (HALEU) Nuclear Fuel Supply Chain Innovative Technology Notice of Funding Opportunity (NOFO), under which ~US$80m in funding is available to support technology innovation

Other Highlights:

- Design and construction of the first full-scale production module of the Quantum Silicon (Q-Si) Production Plant continues at the Company's Lucas Heights facility, with $5.1m in funding support from the Federal Government's Defence Trailblazer program and a further $4.35m cash contribution from initial offtake partner, Silicon Quantum Computing (SQC)
- The Medical Isotope Separation Technology (MIST) project continues at Lucas Heights – focused on developing a process to produce enriched Ytterbium (Yb-176), the key precursor required for Lutetium (Lu-177) production – a breakthrough therapy for advanced cancers

1. Technology Readiness Level 6 (TRL-6), as defined by DOE Technology Readiness Assessment Guide (G 413.3-4A)

Primary Focus on GLE Commercialisation

Uranium production and enrichment for nuclear fuel

- Global nuclear fuel industry undergoing disruptive bifurcation, intensifying the nuclear renaissance in the Western world
- GLE and Silex advancing SILEX technology commercialisation under favourable market conditions with over US$500m invested to date
- US-based GLE: ~70k sq ft office space and manufacturing facility, and separate Test Loop pilot demonstration facility in Wilmington, NC
- Key technology de-risking demonstration (TRL-6) with pilot demonstration facility operational and large-scale enrichment testing imminent
- Parallel focus on GLE's commercialisation activities, including US Government funding initiatives, acquiring the PLEF site, and licensing efforts
- GLE's path to market focused on its unique ability to address the '*Triple Opportunity*' that has emerged in the global nuclear fuel supply chain with the potential for future production of three forms of nuclear fuel:

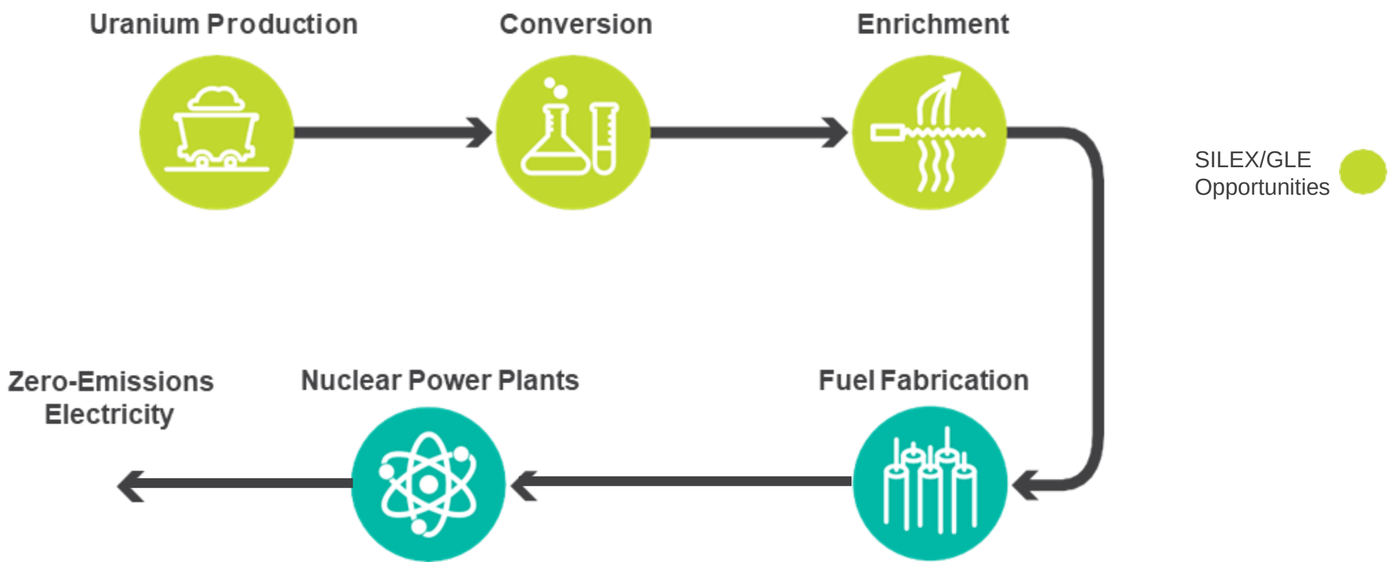
1. ***Natural UF_6 production*** *– from DOE* tails inventories (support rising demand for uranium and conversion)*
2. ***LEU production*** *– enriched fuel for existing reactor fleet (help mitigate supply risks for enriched uranium products)*
3. ***HALEU production*** *– High Assay LEU (HALEU) fuel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

Silex

* DOE: US Department of Energy

Nuclear Fuel Supply Chain and Evolving Issues

The Nuclear Fuel Supply Chain



Issues facing the Global Nuclear Fuel Supply Chain:

- Western supply chain recent history – curtailments and under-investment in resources and production capacity
- Supply chain risks – exposed by over-dependence on Russian-sourced nuclear fuel
- Conversion services – only three Western suppliers (Cameco, Orano, Converdyn)
- Enrichment services – only two Western suppliers (Urenco, Orano)
- HALEU fuel for advanced reactors, including SMRs – technology developers were relying on Russian HALEU

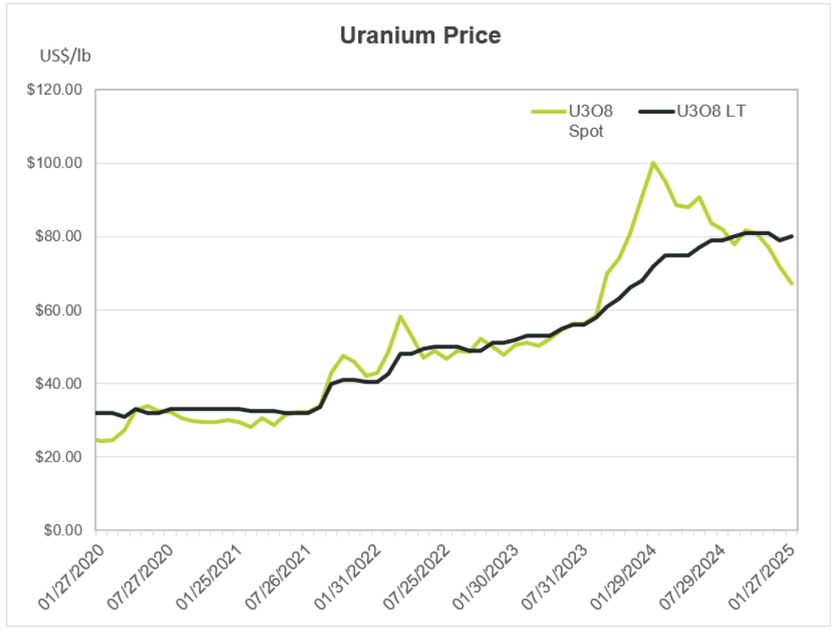
US and EU Nuclear Fuel Requirements Supplied by Russia

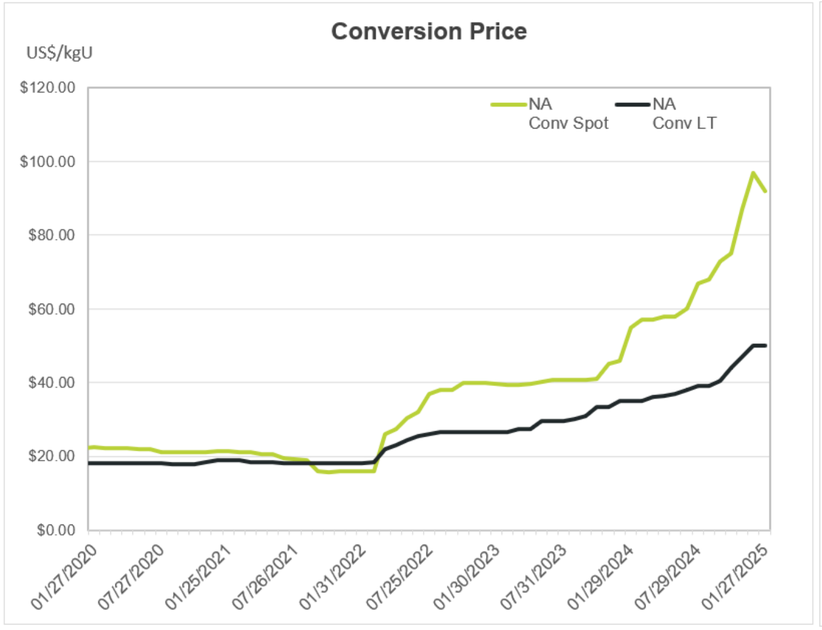
	Russian Share of Global Production Capacity[1]	EU Nuclear Fuel Supplied by Russia[2]	US Nuclear Fuel Supplied by Russia[1,3]
Uranium (U_3O_8)	~14%	~23%	~12%
Conversion	~22%	~27%	~18%
Enrichment (SWU)	~44%	~38%	~27%

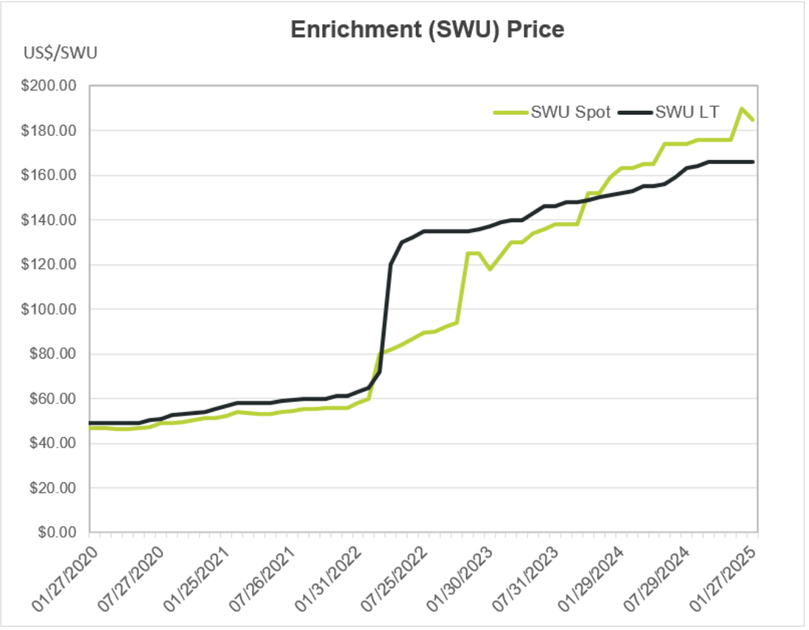
- Major concerns regarding Western reliance on Russia for the supply of nuclear fuel
- Significant shift away from Russian sourcing, with nuclear fuel sanctions and prohibitions imposed across Western countries and the open market
- Open market[4] currently accounts for ~65% of global enriched uranium fuel demand
- US is the largest market for nuclear fuel, with ~25% of worldwide generation of nuclear power

1. UxC, various sources 2024
2. Euratom Supply Agency Annual Report 2023, published August 2024
3. EIA, 2023 Uranium Marketing Annual Report, June 2024
4. Open market comprises North America, Europe, Northeast Asia, and various other parts of the world

Favourable Nuclear Fuel Market Price Trends







Source: UxC

- Global nuclear fuel markets tightening as they bifurcate in response to Russia's invasion of Ukraine and nuclear fuel sanctions and prohibitions
- Uranium term prices reflect the significant increase in term contracting as a result of supply-demand concerns
- Conversion term prices have steadily increased since the Russian invasion of Ukraine in February 2022
- Enrichment (SWU) term prices have increased by over 150% since February 2022, reflecting a potential global enrichment shortfall without Russian supply

US Support for GLE's Commercialisation Activities

US Government policies support nuclear as a critical energy source:

Inflation Reduction Act (IRA) (2022) – US$700m in support for the DOE's HALEU Availability Program, including US$80m funding support for technology innovation across front-end of nuclear fuel supply chain – a key focus for GLE

Nuclear Fuel Security Act (NFSA) (2023) – substantial support for new nuclear fuel capacity – DOE released the LEU RFP in July 2024 and GLE selected as an awardee in December 2024. Maximum aggregate funding for all awardees of US$3.4bn

Prohibiting Russian Uranium Imports Act (2024) – took effect mid-August (with waivers available to eligible entities to 2027) – no imports permitted from 2028 until at least 2040. ***Russia imposed export restrictions in November 2024***

Accelerating Deployment of Versatile, Advanced Nuclear for Clean Energy (ADVANCE) Act (2024) – allows for support for the US NRC in anticipation of a surge in nuclear regulation demand

GLE supported by key US nuclear utilities:

GLE signed Letters of Intent (LOIs) with four US utilities: Constellation Energy Generation, Duke Energy, Dominion Energy, and another undisclosed entity to support GLE's commercialisation activities

Status of SILEX Technology Pilot Demonstration Project[1]

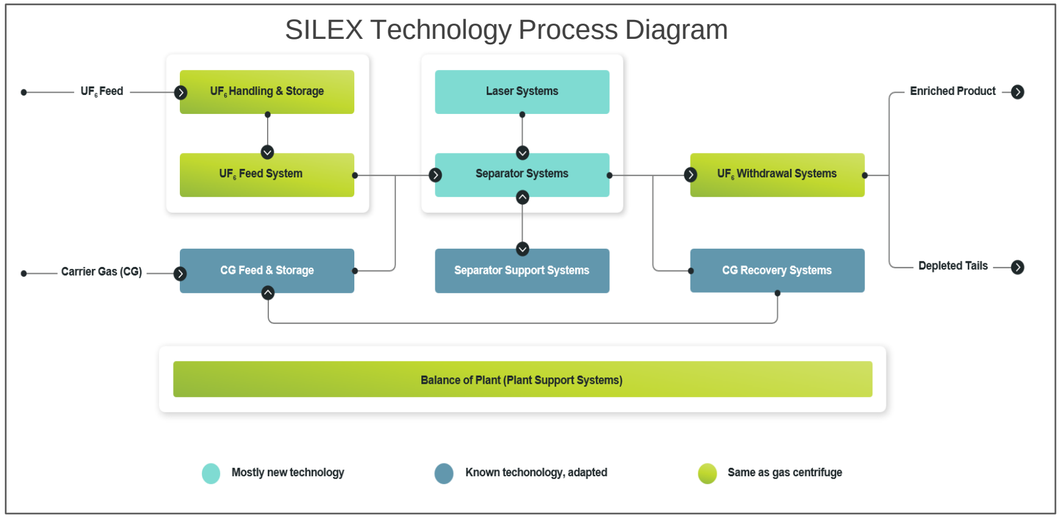
Significant progress towards pivotal TRL-6 technology demonstration continues

Integrated TRL-6 Pilot Demonstration Facility:

- Integrated large-scale Pilot Demonstration Facility built and commissioned, including two full pilot-scale laser system modules designed and built by Silex at its Lucas Heights facility in Sydney
- Nuclear Regulatory Commission (NRC) completed inspection of GLE's Test Loop facility and operations, with UF_6 process feed gas loaded in August 2024

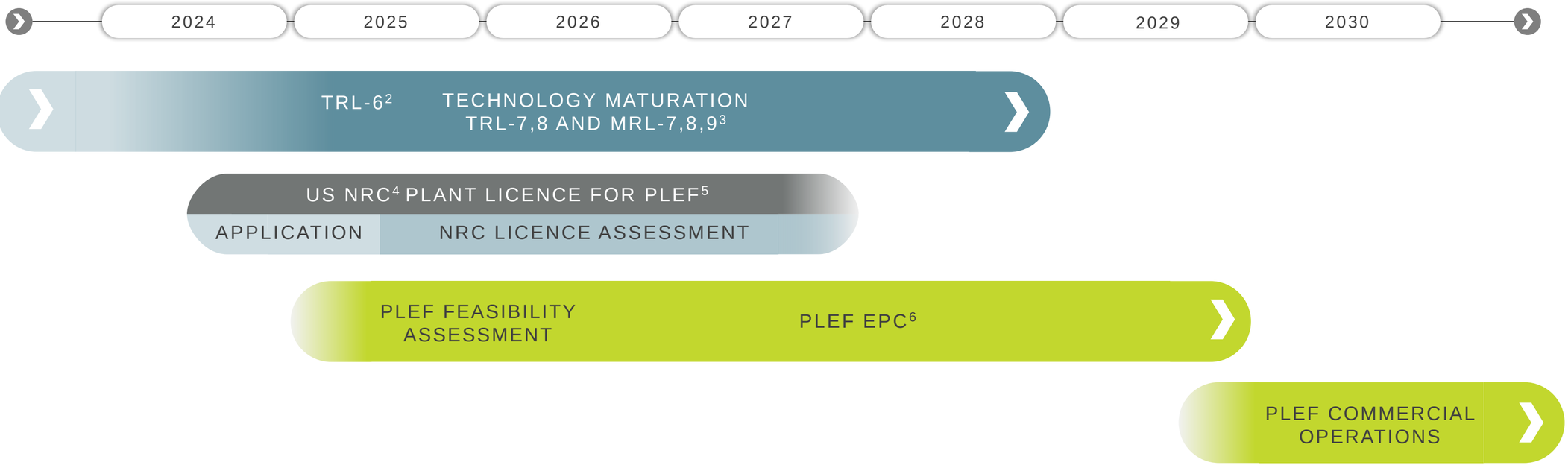
SILEX *TRL-6 Pilot Demonstration Project:*

- Pilot demonstration facility commenced preliminary testing in late CY2024 and triggered some minor engineering modifications to the Test Loop pilot facility, which have been recently completed
- Commencement of full (TRL-6) enrichment testing is imminent
- GLE aims to complete TRL-6 enrichment testing around mid-CY2025[2], with completion of the TRL-6 project subject to an independent assessment and report, which will follow the TRL-6 testing
- TRL-6 Pilot Demonstration Project still anticipated to be completed ahead of the original schedule of end of CY2025



1. All scheduling is tentative and depends on progress and delays – subject to change at any time
2. Timing for testing duration and completion of assessment will be determined in consultation with the independent assessor

GLE's Tentative Timeline for Commercialisation of SILEX technology[1]



1. Tentative timeline subject to technology demonstration outcomes, market conditions, licensing, industry and government support, PLEF feasibility assessment and other factors and may vary according to changing circumstances and differing scenarios
2. Technology Readiness Level 6 (TRL-6) as defined by *DOE Technology Readiness Assessment Guide* (G413.3-4A)
3. MRL: Manufacturing Readiness Level (DOD Guide at dodmrl.com/MRL_Definitions_2010.pdf)
4. NRC: Nuclear Regulatory Commission
5. PLEF: Paducah Laser Enrichment Facility
6. EPC: Engineering, Procurement and Construction of commercial plant

GLE's PLEF Commercial Plant Opportunity

The PLEF Triple Opportunity

Paducah Laser Enrichment Facility (PLEF) – an opportunity 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 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
HALEU includes U^{235} assays up to 20%

GLE's Commercialisation Activities for the SILEX technology[1]

Paducah, KY site acquisition and commercial plant licencing activities:

- GLE acquired a 665-acre site for the planned PLEF in November 2024
- Site is strategically located adjacent the US DOE's former first-generation Paducah Gaseous Diffusion Plant (PGDP)
- Site provides access to the PGDP cylinder yards where the tails inventories are stored for future processing at the PLEF
- In December 2024, GLE submitted an Environmental Report to the US NRC in support of site licensing for the planned PLEF
- GLE plans to submit the Safety Analysis Report in mid-CY2025, which will complete the licence application to the NRC
- Activities on the PLEF site continue with site characterisation work ongoing in support of the licence application

PLEF site, Paducah, KY

1. GLE's progress to commercialisation is dependent on several factors, including, but not limited to: technology demonstration outcomes, market conditions, licensing, industry and government support, PLEF feasibility assessment, and other factors, and may vary according to differing scenarios

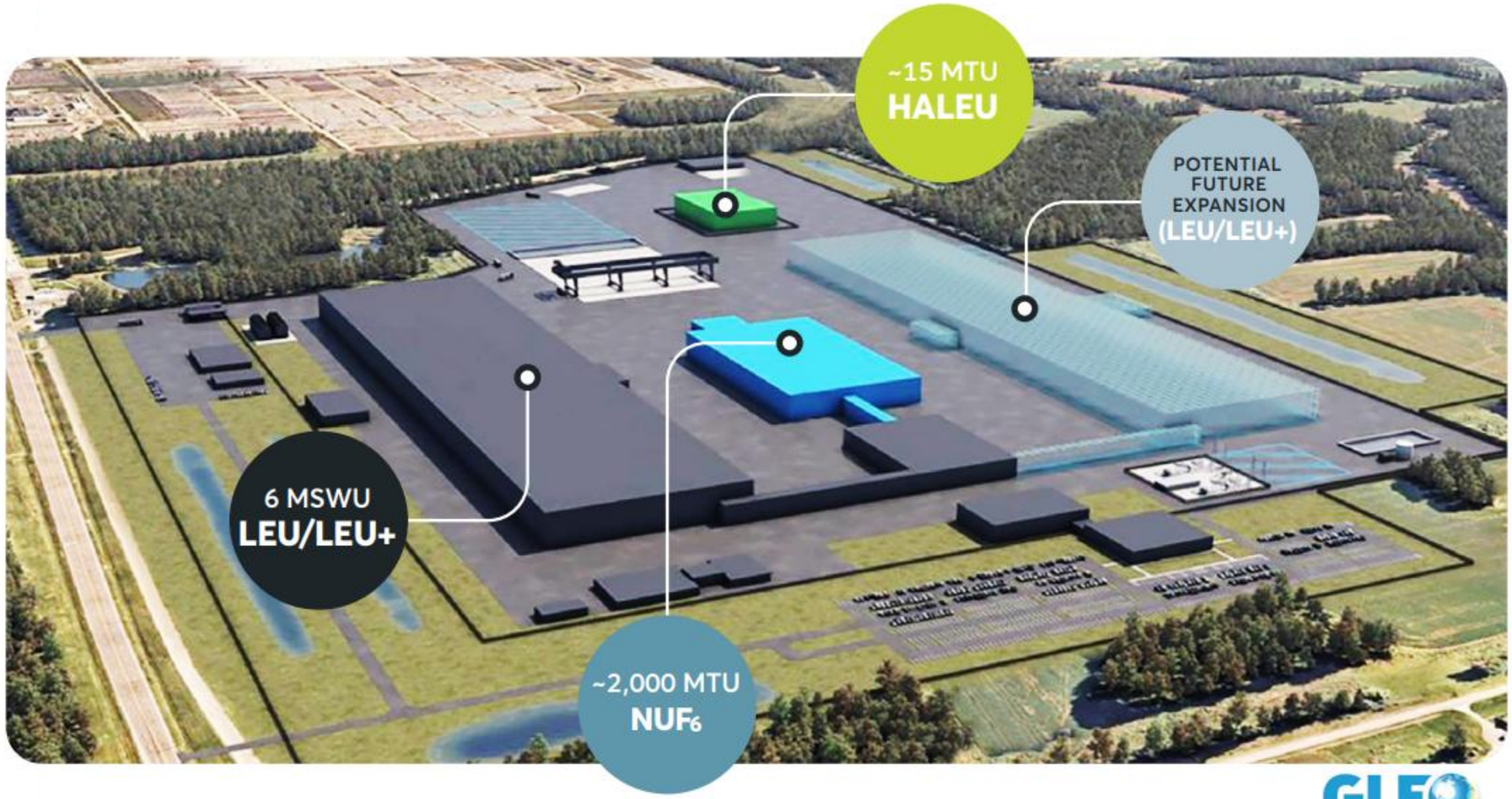
GLE’s Commercialisation Activities for the SILEX technology[1]

GLE corporate and classified manufacturing facility in Wilmington, NC:

GLE HQ and Classified Manufacturing Facility – Wilmington, NC

1. GLE’s progress to commercialisation is dependent on several factors, including, but not limited to: technology demonstration outcomes, market conditions, licensing, industry and government support, PLEF feasibility assessment, and other factors, and may vary according to differing scenarios

GLE's Potential PLEF Commercial Plant Opportunities[1]



Source: GLE – PLEF Potential Commercial Plant (conceptual only)

1. Dependent on various factors, including, but not limited to: technology demonstration outcomes, market conditions, licensing, industry and government support, PLEF feasibility assessment, and other factors, and may vary according to differing scenarios. Actual production capacity and output will depend on prevailing nuclear fuel market conditions and other factors

PLEF UF_6 Production Opportunity
(Natural UF_6 production from tails)

Aim to commence initial commercial operations ahead of original 2030 target[1]

Akin to a 'Tier 1' Uranium Resource[2]

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 up to 30 years
(~150m lb contained resource)

UF_6 production allows GLE to capture Conversion value in revenue

Feed and Product is UF_6
(current term conversion value ~US$50/kg)

Potential to Enrich Further

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

1. All target dates are subject to technology demonstration outcomes, market conditions, licensing, industry and government support, PLEF feasibility assessment and other factors and may vary according to differing scenarios
2. All production estimates are based on preliminary modelling by Silex of project economics and longevity. Actual production output will depend on prevailing uranium market conditions and other factors

GLE Value Proposition for Silex[1]

1) GLE Equity – Minimum 25%:

- Silex currently holds 51% – Cameco has a call Option to acquire an additional 26% at fair market value
- Option window opened 1 February 2023 – closes 30 months after successful TRL-6 demonstration
- Silex has a significant equity stake in GLE as a potential nuclear fuel supplier in either case
- Attractive business case with ‘Triple Opportunity’ and 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$90m p.a. based on ~8 MSWU PLEF operations at 7% royalty rate and current SWU price)

1. GLE’s progress to commercialisation is dependent on several factors, including, but not limited to: technology demonstration outcomes, market conditions, licensing, industry and government support, PLEF feasibility assessment, and other factors, and may vary according to differing scenarios

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)
- Initial ZS-Si project (completed FY2023) achieved target milestones, including ~99.998% enriched Si-28 with the pilot demonstration facility

Quantum Silicon (Q-Si) Production Project:

- Q-Si Production Project focuses on transition from engineering demonstration to initial commercial production
- 3.5-year project announced in August 2023 being undertaken with SQC (first off-take partner) and UNSW
- Project supported by $5.1m of Federal Government funding with SQC expanding its commercial arrangements with Silex in January 2024
- Project aim is to build and operate the first commercial production module and develop product conversion capability for Q-Si in solid and gaseous forms required by various potential customers

Medical isotope enrichment
(new targeted beta cancer therapies)

- Medical isotope project aiming to develop a process to enrich Ytterbium-176 (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:

- 3-year MIST project commenced in February 2023 – aims to develop SILEX technology to enrich Yb-176 to high purity (~99%)
- In December 2023, Stage 1 of the Project – proof-of-concept – was successfully completed
- Stage 2 is underway and aims to validate the process at prototype scale, including the first level of scale-up
- The MIST project provides further diversification and leverages the business case for the SILEX technology across multiple markets

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 conversion contained in DOE's legacy depleted UF_6 tails inventories
- The *'Triple Opportunity'* includes potential to add SILEX production capacity to produce LEU, LEU+, and HALEU at the PLEF Commercial Plant, helping to alleviate dependence on Russian-sourced nuclear fuel
- Commencement of full (TRL-6) enrichment testing in GLE's Test Loop pilot demonstration facility imminent
- GLE aims to complete TRL-6 testing for the SILEX technology around mid-CY2025, with completion of the TRL-6 project subject to an independent assessment and report, which will follow the TRL-6 testing
- Silex represents unique leverage into the nuclear fuel supply chain, with significant potential value through equity ownership in GLE (currently 51%) in addition to potential perpetual royalty flows under the SILEX uranium enrichment technology licence
- Q-Si Project commenced August 2023 to construct the first Q-Si production module and establish a sovereign capability and secure supply chain in support of the emerging global silicon quantum computing industry
- Silex continues to advance stage 2 of the MIST Project, initially for enrichment of Yb-176, used for production of Lu-177 – a breakthrough in nuclear medicine cancer treatment

As at 31 December 2024, the Company had cash and term deposit holdings of $93.1m and no corporate debt. In January 2025, the GLE Governing Board approved the Q1 CY2025 capital call – Silex's 51% contribution is ~US$9.7m (Silex's contribution to GLE's Q1 CY2024 capital call was US$7.1m)

Thank you