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Commercialising Next-Generation Laser Enrichment Technology

Investor Presentation | 27 August 2026

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Silex Systems Limited
ASX: SLX
OTCQX: SILXY



Forward Looking Statements and Risk Factors



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

Silex Systems Limited ABN 69 003 372 067 (**Silex** or the **Company**) is a technology commercialisation company, the primary asset of which is the SILEX laser enrichment technology (**SILEX technology**), originally developed at the Company's technology facility in Sydney, Australia. The SILEX technology has been under development for uranium enrichment jointly with 51% owned 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 SILEX technology maturation program, nuclear fuel market conditions, industry and government support, project feasibility, and commercial plant licensing, and, therefore, remains subject to associated risks.

Silex also is at various stages of development of additional commercial applications of the SILEX technology, including the production of 'Quantum Silicon' (**Q-Si**) for the emerging technology of silicon-based quantum computing. The Q-Si Project remains dependent on the outcomes of the Project, as well as the successful development of silicon-based quantum computing technology by third parties, and is, therefore, subject to various risks. Silex is also conducting early-stage research activities in its Stable Isotope Project (**SIP**), which focuses on additional enriched isotopes required for semiconductor and medical applications and is also subject to various risks and outcomes. The commercial future of the SILEX technology in application to uranium, silicon, stable, and other isotopes therefore is 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, Q-Si production, stable and other isotope separation projects, and any associated commercial prospects, including technology maturation activities 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 that 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 disclosure involve subjective judgement and analysis and, accordingly, 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 disclosure. 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. None of Silex, its related companies, or any of their respective officers, directors, employees, affiliates, partners, representatives, consultants, agents, or advisers makes any representation or warranty as to the accuracy of any forward-looking statements contained in this Presentation. 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 the 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; inflation; tariffs (including tariffs imposed by the United States); geopolitical risks, in particular, those relating to Russia's invasion of Ukraine, the war between Iran and the US, and tensions between China and Taiwan, which may affect global supply chains and capital markets; uncertainties related to the effects of climate change and mitigation efforts; the results of the GLE/SILEX uranium enrichment technology maturation program; the market demand for natural uranium and enriched uranium; the outcome of the Q-Si Project for the production of enriched silicon for the emerging silicon-based quantum computing industry; the outcome of the SIP; the potential development of, or competition from, alternative technologies; the regulatory changes and uncertainties related to various US Government funding initiatives, 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 US, 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 of Silex; 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).

Silex Investment Highlights

Progressing at pace towards commercialising Silex's laser enrichment technology

1. **Unique third-generation laser-based SILEX[1] enrichment technology** for uranium and nuclear fuel production in the US, classified by the US and Australian Governments
2. **Leveraged to global tailwinds**, including: nuclear energy growth (AI, electrification, hyperscalers); Net-Zero emissions targets; revitalisation of the US nuclear industry
3. **US-based JV Global Laser Enrichment (GLE) – Silex (51%) and Cameco (49%)** – perpetual technology licence with royalties from GLE to Silex in addition to any equity distributions
4. **Key technology demonstration (TRL-6)[2] completed in October 2025** – de-risking pathway to commercialisation with TRL-7[2] (full-scale demonstration in plant-like environment) underway
5. **DOE[3] Agreement** – providing GLE with exclusive access to valuable uranium tails inventories – up to 30 years of feedstock for commercial operations – largest 'above-ground uranium mine' in the US
6. **GLE's Paducah Laser Enrichment Facility (PLEF)** – a potential single-site solution for US uranium production, conversion, and enrichment services
7. **Additional growth opportunities** – enriched silicon for quantum computing and enrichment of other high value stable isotopes provide additional growth potential for Silex shareholders

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1. SILEX: **S**eparation of **I**sotopes by **L**aser **EX**citation
2. TRL-6/7: Technology Readiness Level 6/7 (refer to slide 12 for reference)
3. DOE: US Department of Energy

Silex's strategy is focused on maximising shareholder value[1]

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Two distinct value propositions for Silex shareholders when it comes to GLE:

1 Equity interest in GLE – currently at 51% Silex ownership

- **Equity position:** Silex has a significant equity stake in GLE as a potential nuclear fuel supplier, currently at 51%
- **Cameco option:** Agreement between Silex and Cameco on call option for Cameco to acquire an additional 26% at fair market value
- **Option window:** open until April 2028

2 Perpetual royalty from GLE (under the exclusive SILEX technology licence agreement)

- **Perpetual SILEX royalty:** 7% to 12% on GLE's enrichment SWU[2] revenues (purely by way of example, for ~8 MSWU of PLEF operations, royalties could potentially reach ~US$100m p.a. based on 7% minimum royalty rate and current price ~US$180/SWU)
- **Classification:** SILEX uranium enrichment technology classified by Australian and US Governments, with no patent disclosures permitted → no sunset on IP
- **Trade Secret Protection:** Technology kept under strictest security mandated by Australian and US governments

1. GLE's progress to commercialisation is dependent on several factors, including, but not limited to: technology maturation outcomes, market conditions, licensing, industry and government support, PLEF feasibility assessment, and other factors, and may vary according to differing scenarios or outcomes
2. SWU: Separative Work Units, typically used as a standard measure of enrichment services provided

Highlights and upcoming catalysts for GLE / Silex

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RECENT HIGHLIGHTS

1 TECHNOLOGY DEMONSTRATION COMPLETED

- Key large-scale technology demonstration (TRL-6) successfully completed in October 2025 at GLE's Test Loop pilot plant facility
- Independent assessor's report confirmed completion of TRL-6 and endorsed GLE's plans to proceed to detailed design with confidence

2 SITE ACQUISITION

- ~700-acre site acquired for planned PLEF[1] in November 2024
- Initial site clearing and other preliminary site works underway

3 LEGISLATION / GOVERNMENT POLICY

- *Prohibiting Russian Uranium Imports Act* passed in May 2024 (no waivers for any Russian imports from 2028)
- Trump executive orders to re-establish US leadership in nuclear energy (May 2025) – including quadrupling US nuclear energy generation

4 GOVERNMENT FUNDING

- GLE selected for US DOE award of up to US$28.5m to continue to advance next generation laser-based uranium enrichment technology (January 2026), and a US$98.9m performance-based incentive package from the Commonwealth of Kentucky and McCracken County for the PLEF (March 2026)

EXPECTED UPCOMING CATALYSTS

1 CONTINUED TECHNOLOGY MATURATION

- TRL-7 activities underway, focusing on technology maturation and final designs for full-scale plant equipment
- MRL-7[2] activities underway, focusing on in-house and external manufacturing, and supply chain development for commercial plant

2 NRC[3] LICENCE FOR PLEF

- Progress of the full licence application to the US NRC for the PLEF commercial production plant potentially planned for Paducah, KY (licence application accepted by NRC in August 2025)

3 MARKETING AND FEASIBILITY ACTIVITIES

- Early-stage customer engagement
- Preparations for potential feasibility assessment activities

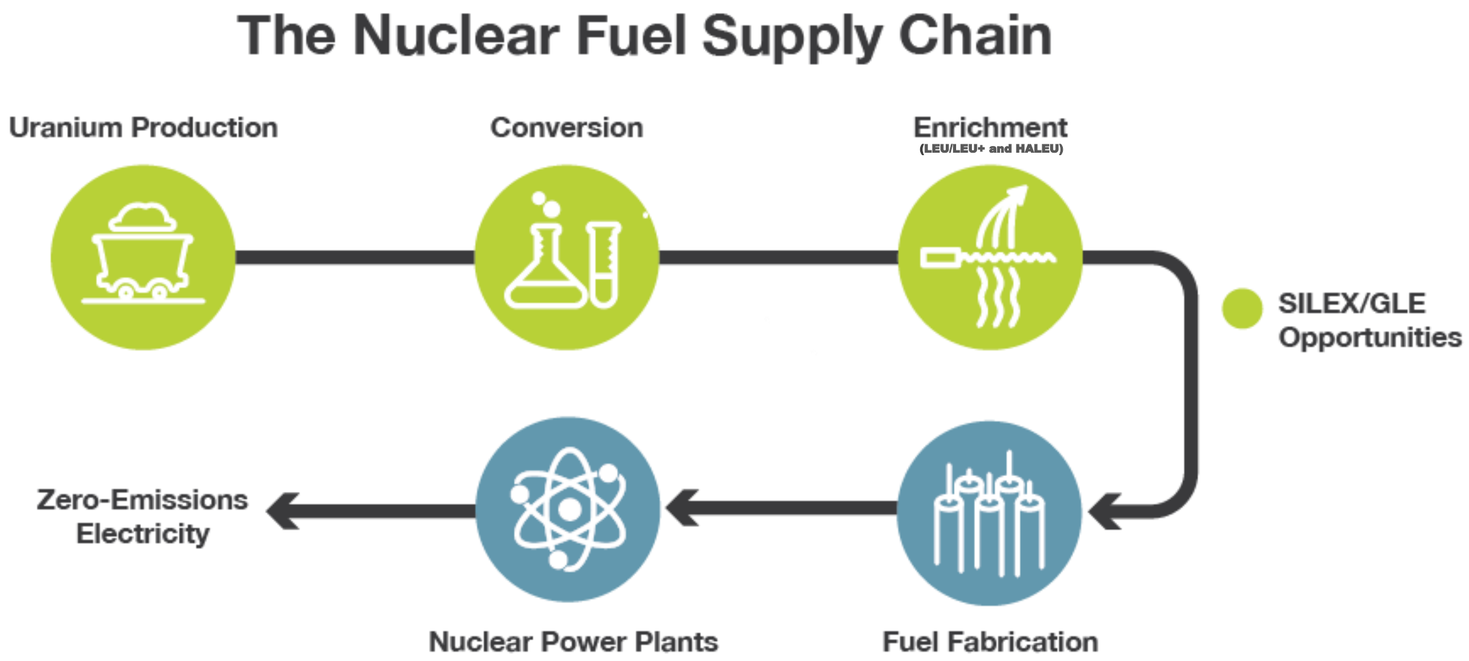
4 OTHER COMMERCIALISATION MILESTONES

- Industry, government, and stakeholder engagement
- PLEF Feasibility / FID[4], PLEF planning and EPC contractor engagement

1. PLEF: Paducah Laser Enrichment Facility
2. MRL-7: Manufacturing Readiness Level 7 (refer slide 12 for reference)
3. NRC: Nuclear Regulatory Commission
4. FID: Final Investment Decision

Nuclear Fuel Supply Chain and Evolving Issues

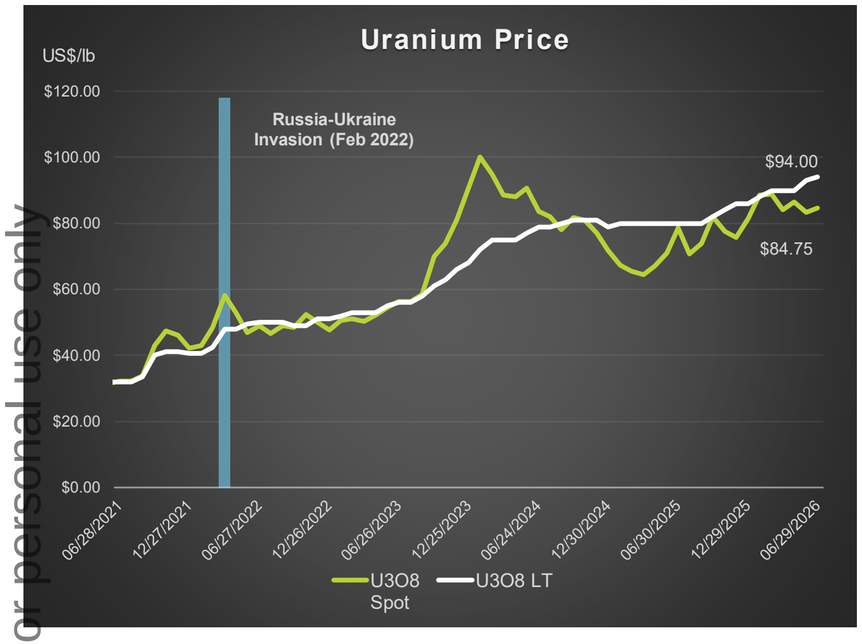
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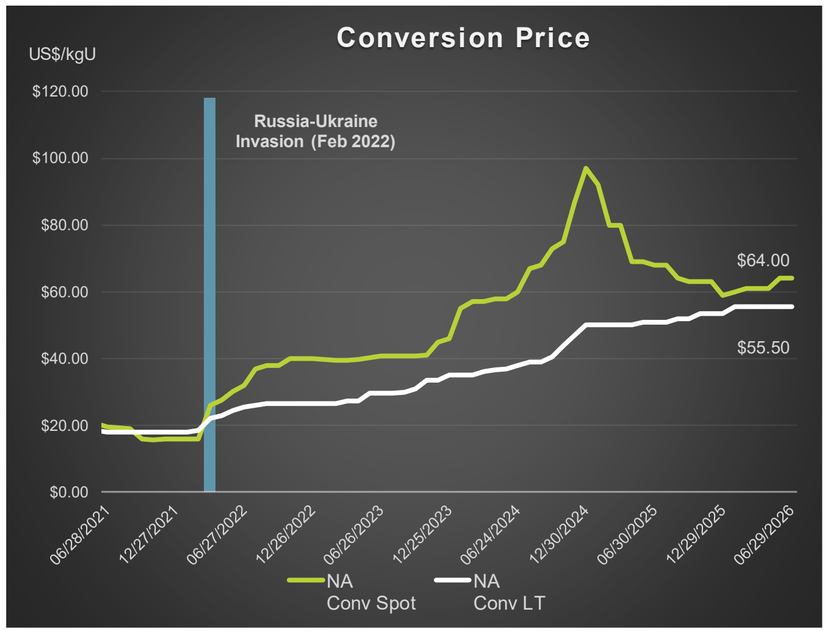


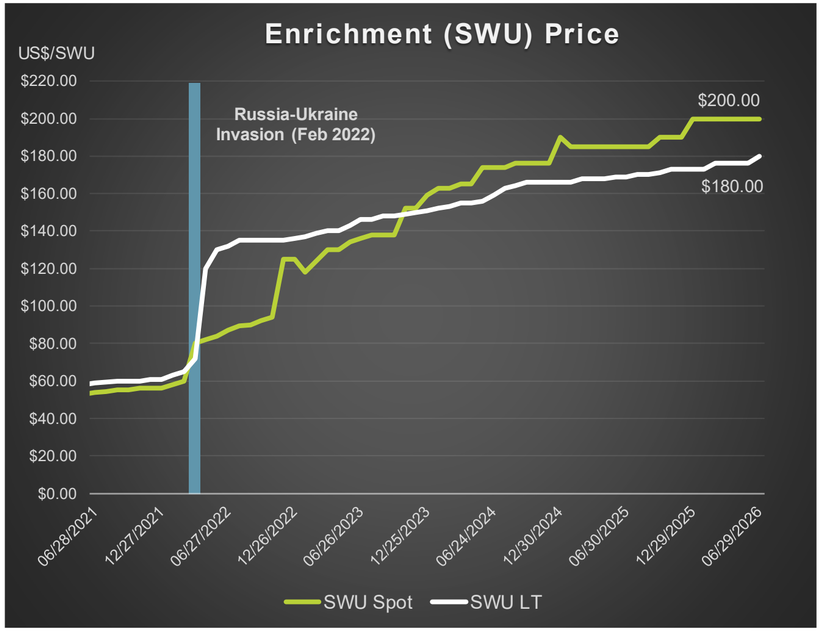
Issues facing the Global Nuclear Fuel Supply Chain:

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

Favourable Nuclear Fuel Market Price Trends







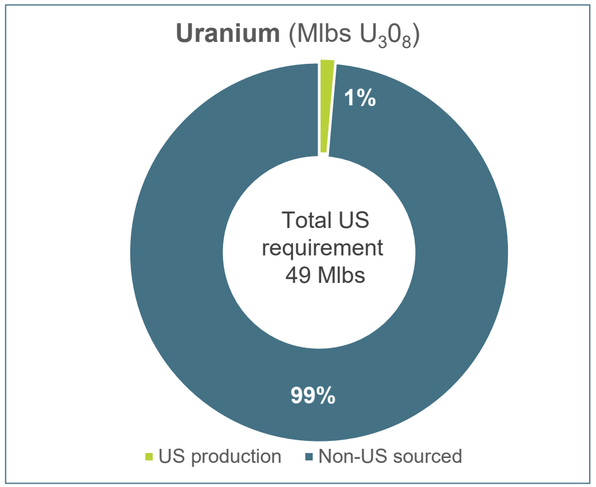
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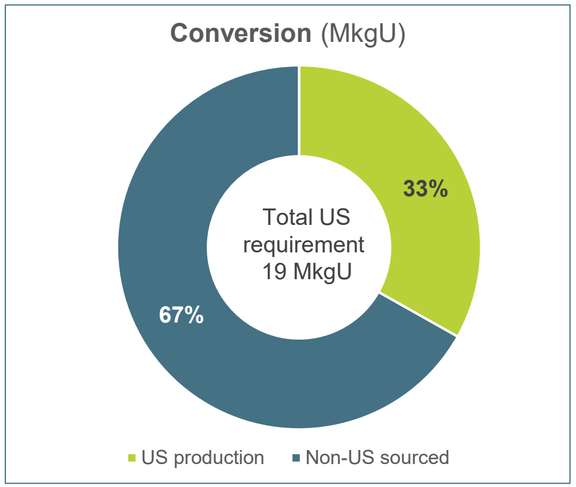
- Global nuclear fuel markets tightening and bifurcating in response to Russia's invasion of Ukraine and nuclear fuel sanctions and prohibitions
- Uranium term price rises (~120%) since February 2022 reflect the significant concerns over looming supply shortfalls in the open market as Russian-sourced nuclear fuel is excluded
- Conversion term prices have increased over ~200% since the Russian invasion of Ukraine in February 2022
- Enrichment (SWU) term prices have increased ~200% since February 2022, reflecting concerns of open market enrichment shortfall without Russian supply

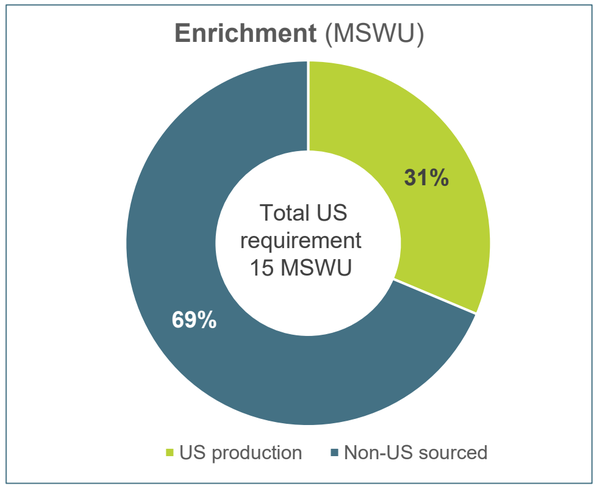
Source: UxC

GLE's PLEF – a potential single-site solution for US uranium, conversion, and enrichment services

The current US fleet of 94 reactors is largely dependent on imports for uranium, conversion, and enrichment requirements







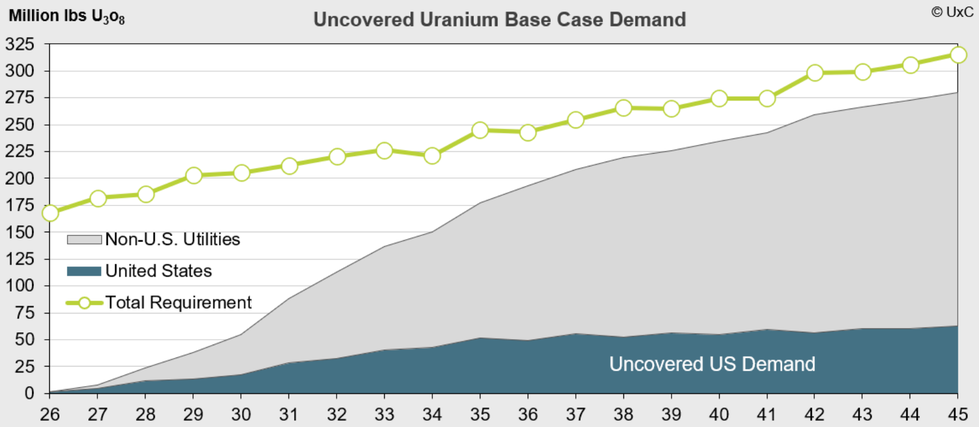
GLE's PLEF is uniquely positioned to play a pivotal role in rebuilding and strengthening the US domestic supply chain for uranium, conversion, and enrichment services

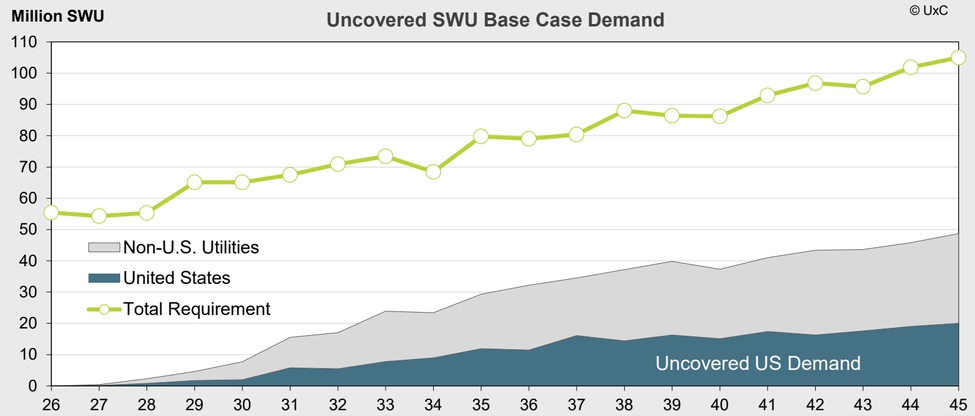
Sources: US Energy Information Administration, August and September 2025; World Nuclear Association, *World Nuclear Fuel Report*, 2025

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Nuclear Fuel Supply Opportunities for GLE

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Forecast uncovered ***US uranium demand*** from early 2030s is in excess of

25 million lbs annually

Forecast uncovered ***US SWU demand*** from early 2030s is ~5 million SWU, rising to more than

15 million SWU annually by mid 2030s

Significant nuclear fuel opportunities for GLE extend from 2030 – GLE's target initial commercial operation date, particularly in the absence of Russian-sourced fuel

Source: UxC *Uranium Market Outlook*, Q2, 2026 and UxC *Enrichment Market Outlook, Q2, 2026*

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SILEX Uranium Enrichment Technology and GLE's Commercialisation Plan



Evolution of Uranium Enrichment Technology

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1st Generation Technology

Gaseous Diffusion

Very low efficiency – tails legacy

High cost

Obsolete



2nd Generation Technology

Centrifuge

Modest efficiency

Moderate cost

Current technology



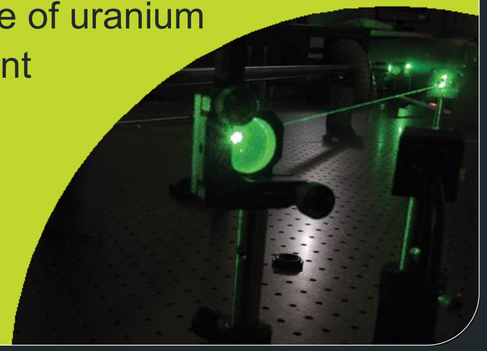
3rd Generation Technology

SILEX Laser

Higher efficiency and throughput

Anticipated to be lower cost

The future of uranium enrichment



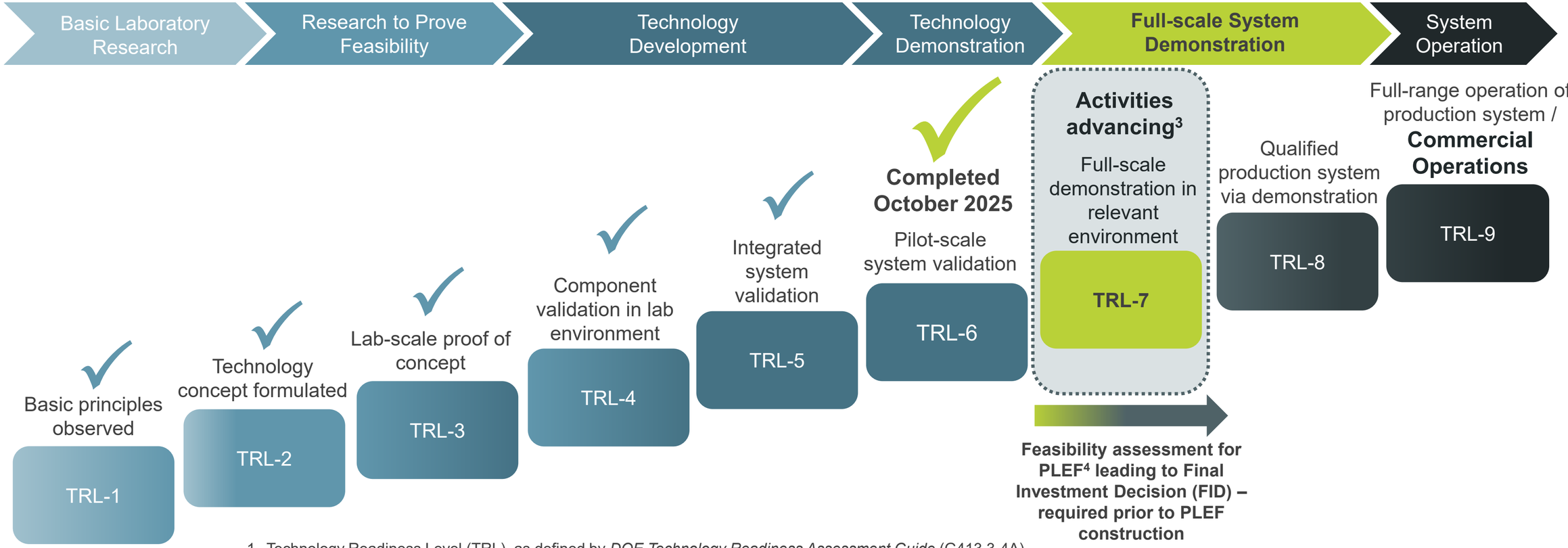
SILEX laser process → higher separation efficiency and throughput vs centrifuge technology

Technology Demonstration Completed in October 2025

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GLE completed key large-scale technology demonstration (TRL[1]-6) in October 2025

- Standard Technology Readiness Level (TRL) scale used to assess the stage of technology / system development of the SILEX technology
- Increasing focus on establishing in-house manufacturing capability and US-based supply chain development for balance-of-plant (MRL[2]-7)



1. Technology Readiness Level (TRL), as defined by *DOE Technology Readiness Assessment Guide* (G413.3-4A)
2. MRL: Manufacturing Readiness Level (DOD Guide at dodmrl.com/MRL_Definitions_2010.pdf)
3. All scheduling estimates shown are tentative and subject to change and/or unforeseen delays
4. PLEF: Paducah Laser Enrichment Facility

Overview of Global Laser Enrichment (GLE)

- **The GLE joint venture current consists of ~120 employees and contractors, mostly based in Wilmington, NC**
- **Focused on the commercialisation of the SILEX uranium enrichment technology in the US, with sites in North Carolina and Kentucky**

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Paducah Laser Enrichment Facility (PLEF)

- ~700-acre site strategically located adjacent the US DOE's former Paducah Gaseous Diffusion Plant (PGDP)
- Tails processing project equivalent to an ***'above-ground uranium mine'***, with potential production of up to 5 million lbs p.a. for up to 30 years (as UF_6) and 2 million kgs p.a. conversion capacity
- PLEF is a potential single-site solution for US uranium, conversion, and enrichment services

GLE Headquarters and Test Loop Facility

- Currently operating in Wilmington, NC
- Large-scale enrichment demonstration completed – key technology de-risking milestone (TRL-6)
- Wilmington classified manufacturing facility

GLE's commercial strategy based on unique single-site solution to address the 'Triple Opportunity' – enables potential production of all three grades of nuclear fuel at the PLEF

Strong tailwinds for clean, low-emissions nuclear power – GLE is well-positioned as a US-based, next- generation uranium enrichment provider

GLE's 'above-ground uranium mine' – DOE agreement provides 200,000 tonnes of high-grade tails inventories – feedstock for the planned PLEF

~US$600m invested in GLE over 20 years to progress the SILEX technology to TRL-6

The Paducah Laser Enrichment Facility (PLEF)

GLE's economic potential based on its unique single-site solution to address the 'Triple Opportunity'

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PLEF UF_6

Product: Natural Grade Uranium (as UF_6)

GLE's **'above-ground uranium mine'** – with enrichment of DOE depleted tails inventories to produce natural UF_6 with U^{235} assay ~0.7%

Revenue potential

- Production of up to 5 million pounds natural grade uranium (as UF_6) annually for up to 30 years
- Revenue will include value of uranium and conversion
- At today's long-term uranium price of ~US$90/lb, up to ~US$450m/yr potential revenue for 5 million lbs
- Plus 2 million kilograms conversion/yr – at today's long-term conversion price of ~US$55/kgU, up to ~US$110m/yr potential revenue

PLEF LEU

Product: Low Enriched Uranium (LEU/LEU+)

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

Revenue potential

- Potential initial LEU production of 2 million enrichment units (SWU) per year (to process DOE material)
- At today's long-term SWU price of US ~$180/SWU, potential revenue of up to ~US$360m/yr
- LEU/LEU+ capacity expandable if market demand grows – potentially up to 6MSWU/yr or more if global use of nuclear energy gathers pace

PLEF HALEU

Product: High Assay LEU (HALEU)

fuel for **next-generation advanced reactors**, including small modular reactors (SMRs)
HALEU includes U^{235} assays up to 20%

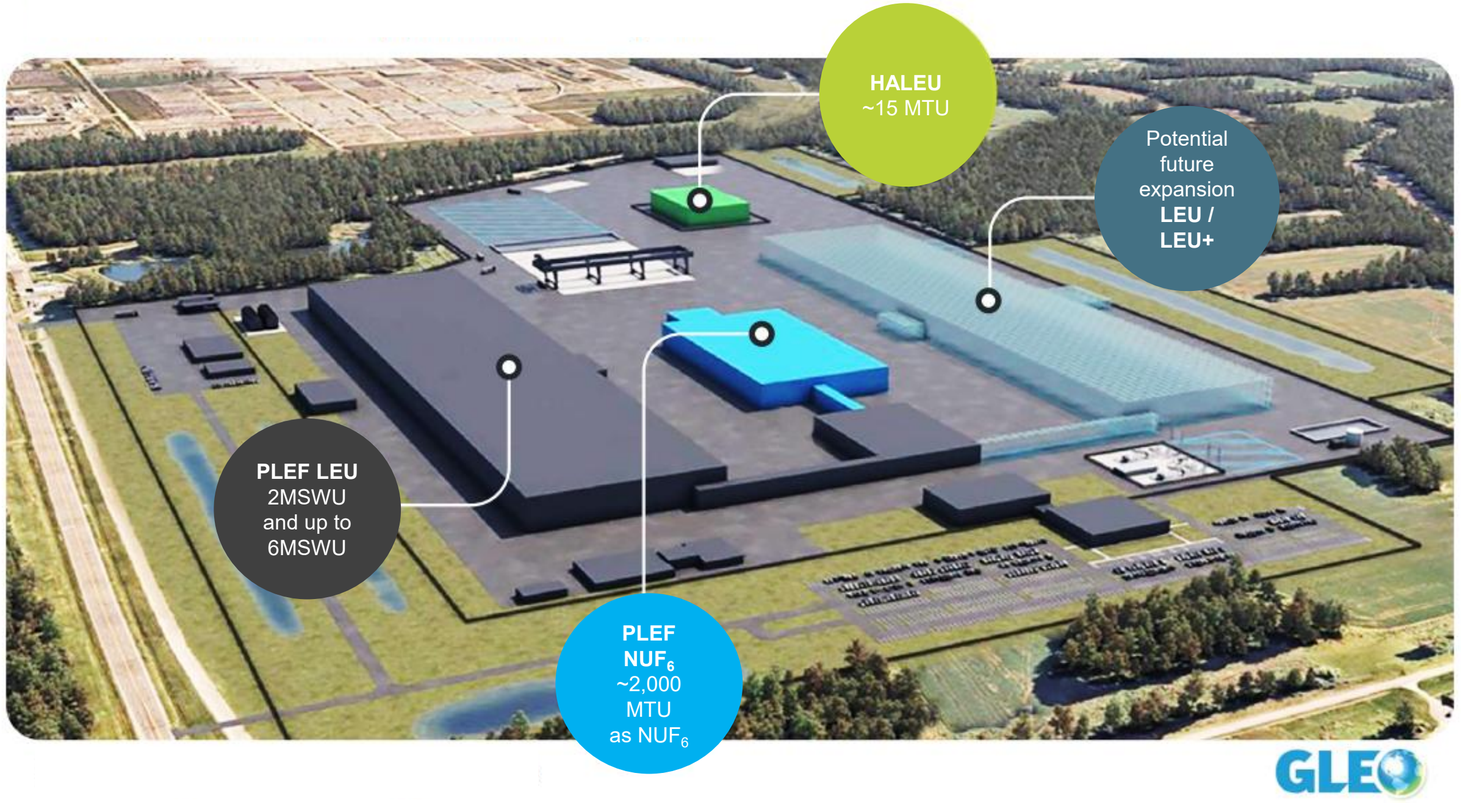
Revenue potential

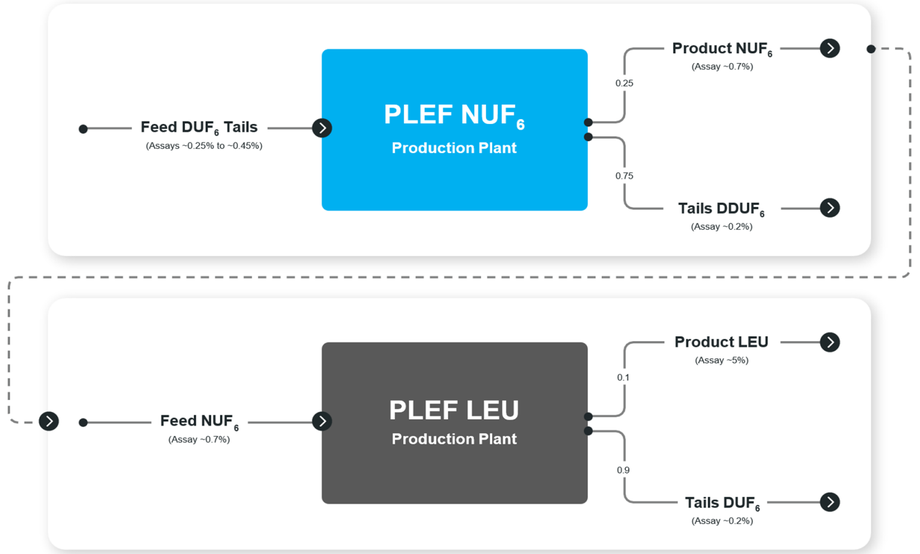
- Future HALEU market size and timing difficult to quantify until SMR market evolves
- HALEU is likely to be traded as kilograms HALEU – market price yet to be established, but potentially a high-value fuel

- All estimates are subject to technology maturation outcomes, market conditions including market pricing, licensing, industry and government support, PLEF feasibility assessment, and other factors, and may vary according to differing scenarios
- All production estimates are based on preliminary modelling by Silex of project economics and longevity. Actual production output will depend on prevailing nuclear fuel market conditions and other factors

GLE's Potential PLEF Commercial Plant Opportunities[1]

GLE – PLEF Potential Commercial Plant (conceptual only)





DUF_6: Depleted UF_6
$DDUF_6$: Double Depleted UF_6

1. Dependent on various factors, including, but not limited to: technology maturation 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

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PLEF UF_6 Production Opportunity

(Natural grade UF_6 production from DOE tails – an 'above-ground uranium mine')

Aim to commence initial commercial operations by 2030[1]

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

Based on the expected low cost and longevity of production

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

Equivalent U_3O_8 Production

Potential production of up to 5 million lbs p.a. for up to 30 years (~150m lb contained resource)

Potential UF_6 production allows GLE to capture Conversion value in revenue

Feed and Product is UF_6 (current term conversion value ~US$55/kg)

(with potential production of up to 2 million kgU p.a.)

Potential to enrich further

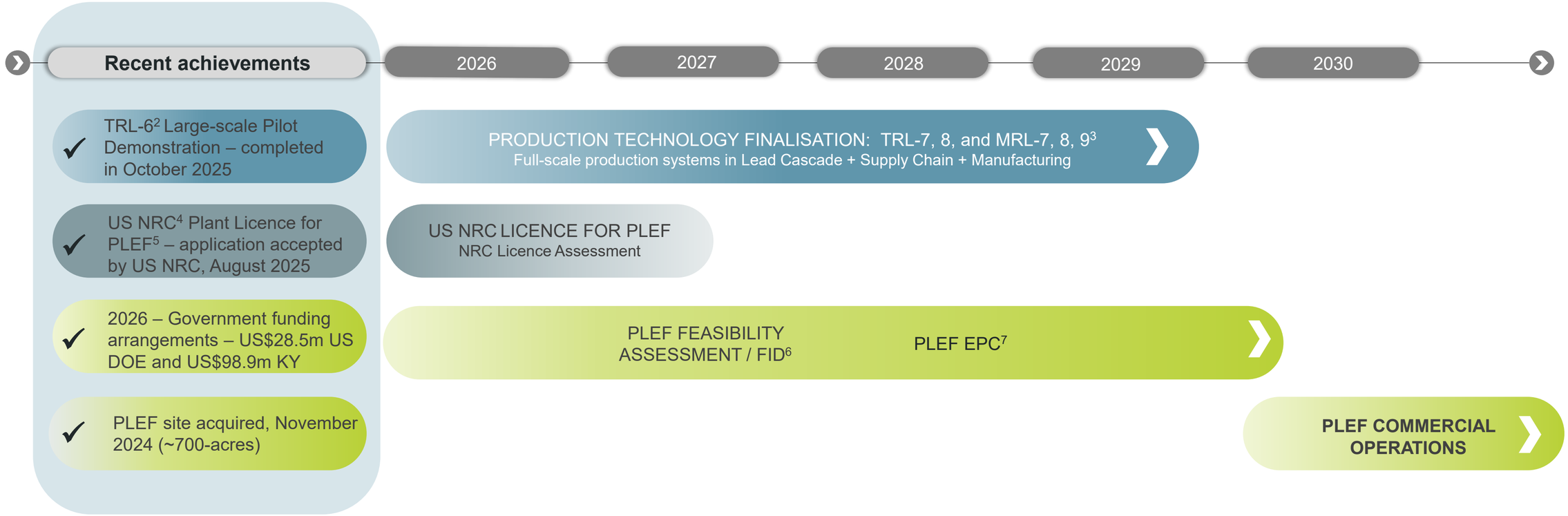
From natural grade (0.7%):

- to LEU (up to 5%)
- to LEU+ (up to 10%)
- to HALEU (up to 20%)

1. All target dates are subject to technology maturation 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

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GLE's Indicative Target Timeline for Commercialisation of SILEX Technology[1]



1. Indicative target timeline subject to schedule risks, such as technology maturation outcomes, market conditions, licensing, industry and government support, PLEF feasibility assessment, unforeseen delays, 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. FID: Final Investment Decision
7. EPC: Engineering, Procurement, and Construction of commercial plant

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GLE's Commercialisation Activities for the SILEX Technology

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The PLEF commercial plant site and licensing activities[1]:

- GLE acquired a ~700-acre site for the planned PLEF in November 2024
- Site is strategically located adjacent the US DOE's former first-generation Paducah Gas Diffusion Plant (PGDP)
- Site provides access to the PGDP cylinder yards, where the tails inventories are stored for future processing at the PLEF
- GLE continues to work with NRC to secure its construction and operating licence for the planned PLEF as early as CY2027
- A potential unique single-site solution for US uranium, conversion, and enrichment services
- Activities on the PLEF site continue, including initial site clearing and other preliminary site works



PLEF site, Paducah, KY

1. GLE's progress to commercialisation is dependent on several factors, including, but not limited to: technology maturation 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

Paducah, KY, preliminary PLEF site activities[1]:





PLEF site, Paducah, KY

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GLE's Commercialisation Activities for the SILEX technology

GLE HQ and classified manufacturing facility in Wilmington, NC – establishing an advanced US domestic manufacturing base and supply chain:

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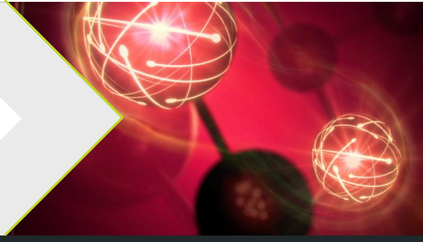
GLE HQ and Classified Manufacturing Facility – Wilmington, NC

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Additional Growth Opportunities for Silex



Silex Q-Si Production Project for Quantum Computing



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- Construction of the world's first laser-based silicon enrichment plant completed in June 2026, with final plant commissioning activities underway
- Project leverages the successful pilot demonstration of 'Zero-Spin Silicon' production – up to ~99.998% enriched silicon-28 (Si-28)
- 3.5-year Project (total ~$16m) awarded $5.1m funding from the *Defence Trailblazer Program* (partnership between The University of Adelaide and UNSW Sydney) supported by the Australian Government, and $4.35m from initial offtake partner, Silicon Quantum Computing Pty Ltd (SQC)
- First full-scale production plant is expected to produce up to 20kg of highly enriched silicon-28 (Quantum Silicon (Q-Si)) annually, which will be converted to multiple product forms of Q-Si for potential customers in the global quantum computing industry, including:
    1. **Quantum Silicon gas** – for chemical vapour deposition (CVD) – the primary process used for quantum chip fabrication
    2. **Quantum Silicon solid** – for molecular beam epitaxy (MBE) – the alternative process used for quantum chip fabrication
- A new emerging opportunity also is being explored – using enriched Si-28 in advanced conventional silicon chips – potential to overcome power density and thermal overload issues, with Si-28-based nano-wires ('heat pipes') being developed by designers and nano-fabricators of hyperscale chips being deployed for AI, cloud computing, and data centre applications

Silex Q-Si Production Project for Quantum Computing

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Silex Q-Si Production Module – Lucas Heights, Sydney, NSW

Summary

- Silex represents unique leverage into the nuclear fuel supply chain, with significant potential value through equity ownership in GLE (currently 51%), in addition to perpetual royalty flows under the SILEX uranium enrichment technology licence
- GLE's path to market is underpinned by the PLEF Project for cost effective production of natural uranium (in the form of UF_6) and the significant value of conversion contained in the feedstock - 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, helping to alleviate Western dependence on Russian-sourced nuclear fuel
- Silex and GLE stand to benefit from significant global tailwinds spurring the nuclear renaissance, and strong US Government support
- Key de-risking milestone – TRL-6 Pilot Demonstration – successfully completed in October 2025, and independently validated

Significant Additional Opportunities – Summary

- ***Quantum Silicon (Q-Si) Production Project*** – construction of the world's first laser-based silicon enrichment plant recently completed, with final plant commissioning activities underway. Project will result in a sovereign capability and secure supply chain to produce highly enriched silicon in support of the emerging global quantum computing industry
- ***Stable Isotope Project*** – focused on process validation for potential enrichment of several additional isotopes of interest in the semiconductor and medical industries – currently at an early stage

As at 30 June 2026, the Company had cash and term deposit holdings of ~$180.7m and no corporate debt

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Thank you

