Silex Systems Limited

Investor Presentation

(ASX: SLX) (OTCQX: SILXY)

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CEO/Managing Director

25 August 2022

Forward Looking Statements and Risk Factors

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

Silex Systems Limited ABN 69 003 372 067 (Silex) 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 'Zero-Spin Silicon' project remains dependent on the outcomes of the project and the viability of silicon quantum computing and is therefore subject to various risks. The commercial future of the SILEX technology 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 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 and Zero-Spin Silicon production, 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 are strongly cautioned not to place reliance on any forward-looking statements, particularly in light of the current economic climate and the significant volatility, uncertainty and disruption caused by COVID-19 and other economic risk factors, 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. Actual operations, results, performance, targets or achievement may vary materially from any projections and forward-looking statements and the assumptions on which those statements are based.

Except as required by law or regulation (including the ASX Listing Rules and OTCQX Rules for U.S. 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; uncertainties related to the effects of climate change and mitigation efforts; the results of the SILEX uranium enrichment engineering development 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 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; results from IQE's commercialisation program and the market demand 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.

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)

Other potential markets (e.g. medical isotopes)

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

Investment Focus – 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 and disease treatments

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

Uranium and nuclear fuel (via 51% ownership of Global Laser Enrichment):

- Fueling carbon free electricity generation for the world's clean energy needs
- Potential uranium production through a ~150M lb resource – one of the largest in the US
- Potential enrichment of different nuclear fuel products such as LEU, LEU+ and HALEU

Zero-Spin Silicon (via 100% owned internal development project):

- Potential production of Zero-Spin Silicon (ZS-Si) – key enabling material for silicon quantum computing
- Quantum computing is a strategic technology which may drive new industries in AI, medicine, cybersecurity etc

Medical Isotopes (potential project in early stage assessment):

- Enriched Molybdenum can potentially provide new low-cost manufacturing of Technetium-99 – used in over 30 million nuclear medicine procedures each year worldwide and growing
- Enriched Ytterbium may be required for cost effective production of Lutetium-177, a revolutionary new medical radioisotope being trialed in the treatment of several cancers

Recent Highlights and Developments

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

- GLE has unique potential to address (via the SILEX technology) the '***Triple Opportunity***' emerging in the global nuclear fuel market:
    1. *Production of natural UF_6 from DOE[1] tails inventories (supports rising demand for uranium and conversion)*
    2. *Production of LEU[2] (and potentially LEU+) fuel for existing reactor fleet (helps mitigate supply risks for enriched uranium)*
    3. *Production of HALEU[3] fuel for next generation advanced Small Modular Reactors (helps establish HALEU capability in the US)*
- GLE submitted response to the DOE Request for Information regarding its HALEU Availability Program in February 2022
- US Government passed 'Inflation Reduction Act' in August 2022 - includes US$700m support for the HALEU Availability Program
- GLE signed LOIs[4] with US utilities Constellation Energy Generation and Duke Energy to support GLE's commercialisation objectives
- Potential acceleration of GLE's commercialisation program under consideration in view of recent fuel market developments

Zero-Spin Silicon Project and Other Highlights:

- Zero-Spin Silicon (ZS-Si) project Stage 2 completed January 2022 – demonstration of ZS-Si production with prototype facility
- Stage 3 of the project advancing with silicon enrichment pilot demonstration facility construction completed in July 2022
- Stage 3 completion anticipated by end of CY2022 with completion of pilot scale ZS-Si production tests

1. DOE: US Department of Energy; 2. LEU: Low Enriched Uranium; 3. HALEU: High Assay LEU; 4. LOI: Letter of Intent

Nuclear Fuel Supply Chain - Opportunities for GLE and the SILEX Technology

Global Issues Transforming Nuclear Fuel Markets

Climate Change
- Ever increasing energy demand driven by population growth and industrialisation
- Energy transition to de-carbonise (Net-Zero 2050 target) – key role for nuclear
- Electrification of transport sector and clean hydrogen production via nuclear

Energy Security
- Russian invasion of Ukraine has precipitated global energy supply disruptions
- Renewed focus on nuclear - zero emissions, grid stability, sustainability, resilience
- US and European countries moving to revitalise nuclear industries

Nuclear Fuel
- Supply chain risks exposed by dependence on Russian nuclear fuel
- Supply curtailments and under-investment in new resources and capacities
- Conversion services – only 3 western suppliers (Cameco, Orano, Converdyn)
- Enrichment services – only 2 western suppliers (Urenco, Orano)
- HALEU fuel for SMRs – currently no commercial western suppliers
- Major US government initiatives emerging to revitalise domestic nuclear fuel industry

Nuclear Industry Developments

- **US:** Inflation Reduction Act passed August 2022 - supporting nuclear power generation and domestic nuclear fuel supply including US$700 million funding for the DOE's HALEU Availability Program
- **UK:** in April 2022, announced plans to build 8 new nuclear power plants and increase share of nuclear power generation in energy mix from 15% to 25% by 2050
- **Canada:** significant government investment in SMR technologies
- **EU:** EU Taxonomy - nuclear power projects included in the list of sustainable forms of energy
- **France:** recently announced plans to build up to 14 new large reactors and commercialise SMR designs
- **Belgium:** reversal of nuclear phase-out plans and announced plans for 10-year operating extensions
- **Germany**: announced that it may reconsider its nuclear phase-out plans
- **Japan:** stated its commitment to a target of 22% of electricity generation from nuclear by 2030
- **South Korea:** new pro-nuclear President elect stated intention to reverse phase-out plan and reset energy mix with nuclear to account for 30% of electricity generation
- **China:** ambitious nuclear build program continues with 54 operable reactors, 21 under construction and another 199 reactors planned or proposed

Russian Share of US Nuclear Fuel Requirements

	Russian Global Capacity[1]	Current US Imports of Russian Nuclear Fuel[1,2]
Uranium (U_3O_8) [2.]	14%	~14%
Conversion	27%	~18%
Enrichment (SWU)[2.]	39%	~20%

1. UxC, LLC various reports Q1 and Q2, 2022
2. EIA, 2021 Uranium Marketing Annual Report, May 2022

- Concerns regarding reliance on Russia for supply of nuclear fuel
- US currently imports: ~95% of its uranium requirements (including ~14% from Russia)
  100% of its conversion requirements (including ~18% from Russia)
  ~70% of its SWU requirements (including ~20% from Russia)

Potential Implications for GLE and the SILEX Technology

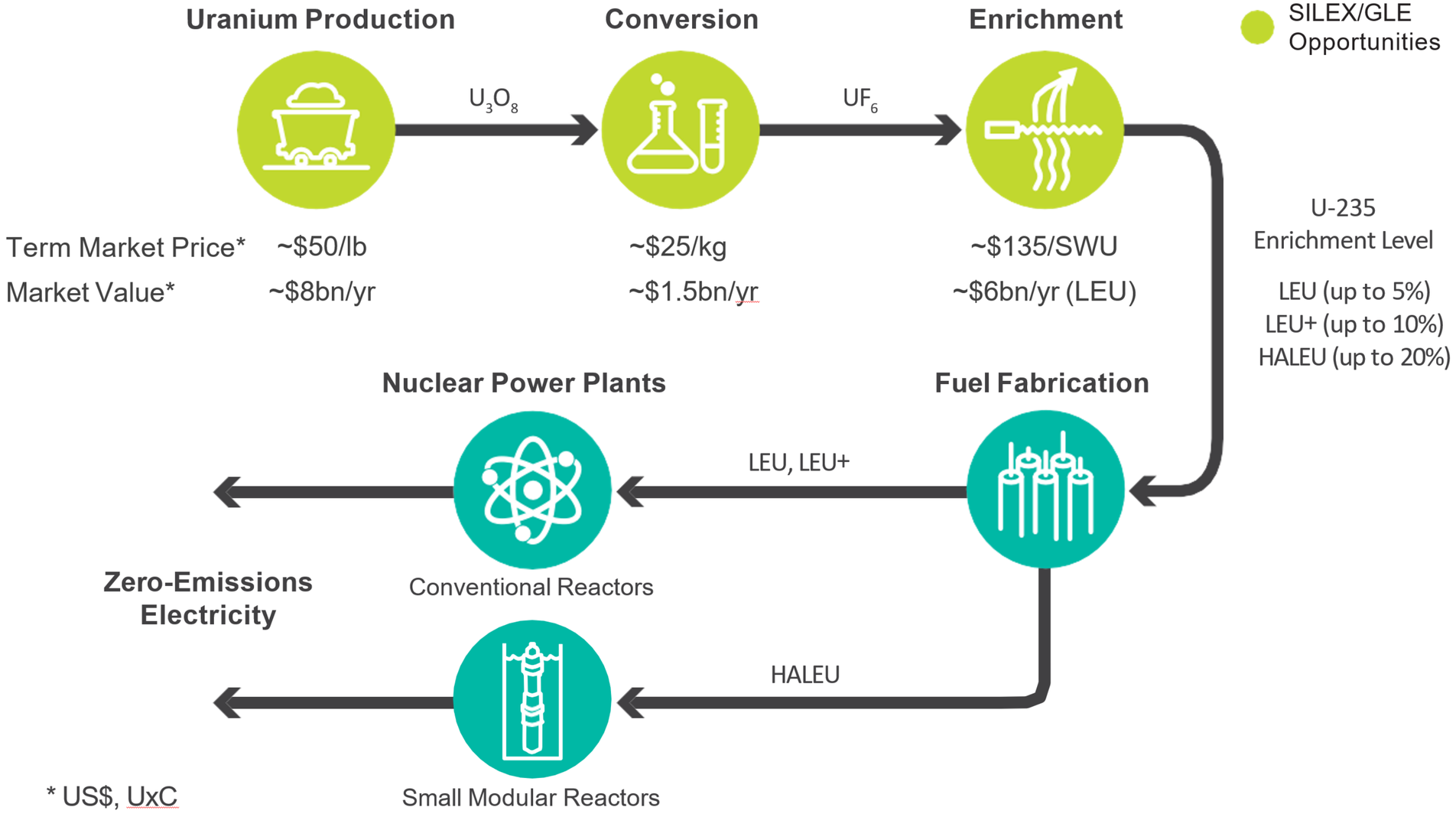
GLE has the unique potential to address the ***'Triple Opportunity'*** emerging in the global nuclear fuel supply chain:

1) Processing of depleted UF_6 tails inventories to produce natural grade UF_6 and help alleviate UF_6 conversion supply pressure
2) Build additional capacity to supply enrichment (SWU) to the market for the production of low enriched uranium (LEU) ($^{235}UF_6$ assay up to 5%) and LEU+ (up to 10% enriched)
3) Build additional capacity to produce high assay LEU (HALEU - fuel up to 20% enriched) for next generation advanced SMRs

- ***Potential to accelerate GLE's commercialisation program* in response to emerging nuclear fuel supply chain opportunities being considered***

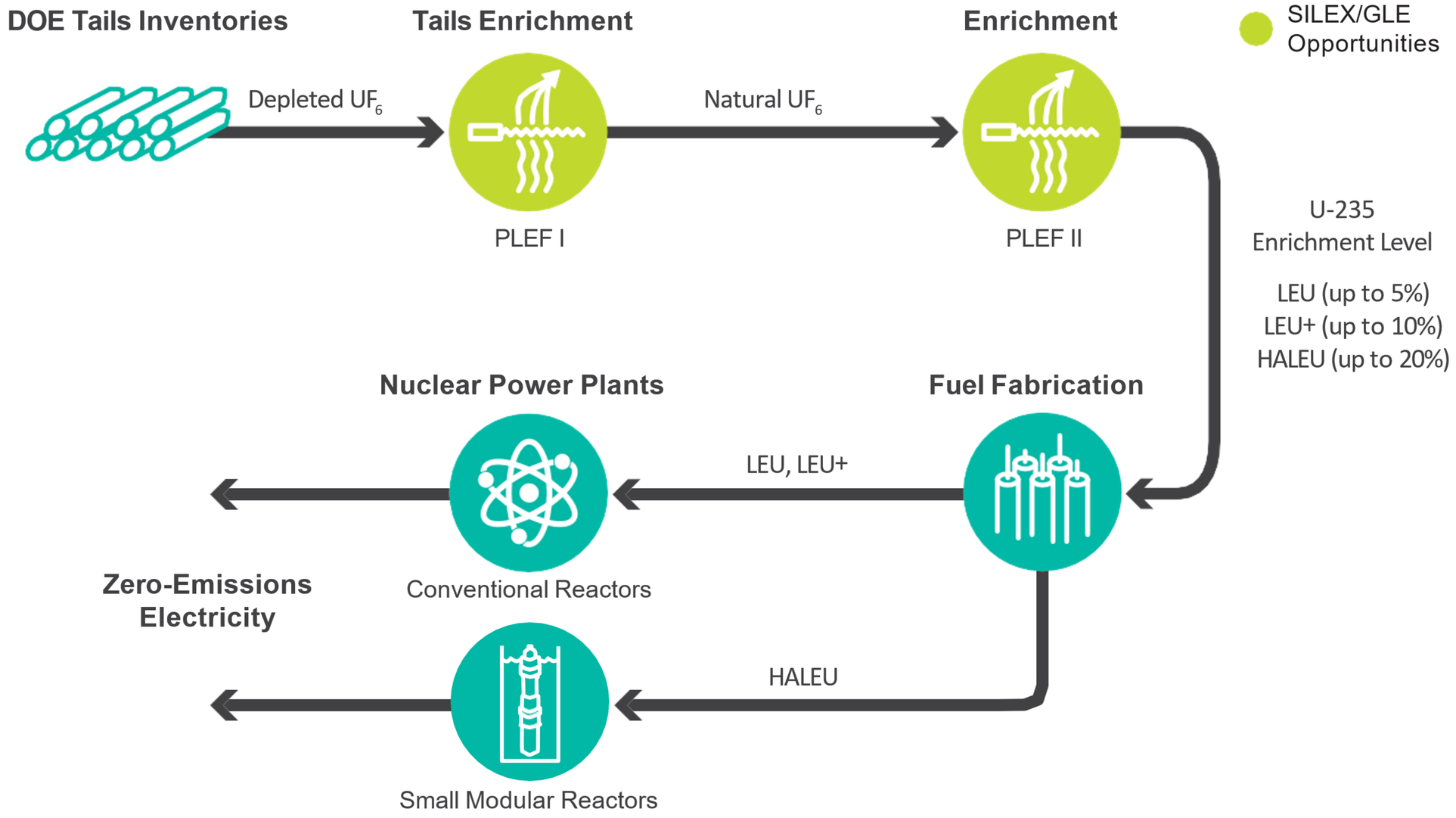
* Timing to be aligned with market conditions and contracting strategy

Nuclear Fuel Opportunities for GLE and the SILEX Technology

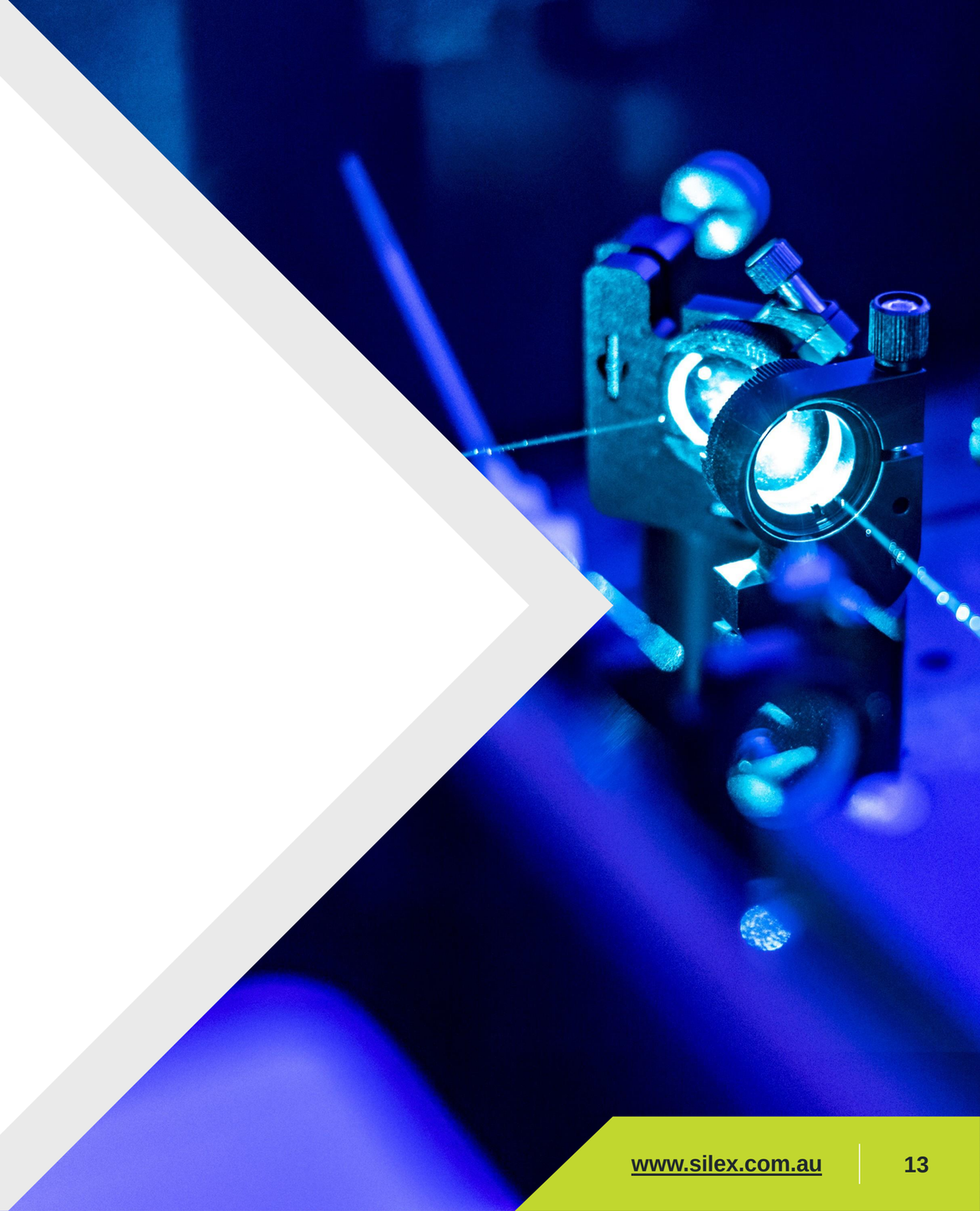


* US$, UxC

Nuclear Fuel Opportunities for GLE and the SILEX Technology



The Paducah Opportunity



Evolution of Enrichment Technology

1st Generation Technology

Gaseous Diffusion

Very low efficiency – tails legacy

High cost

Obsolete

2nd Generation Technology

Centrifuge

Modest efficiency

Lower cost

Current technology

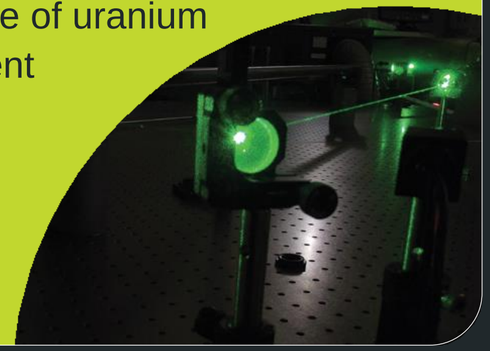
3rd Generation Technology

SILEX Laser

High efficiency

Anticipated to be lowest cost

The future of uranium enrichment



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

The Paducah Opportunity – Foundation Commercial Project

The Paducah Laser Enrichment Facility (PLEF):

- GLE's flagship Paducah project aims to enrich depleted tails with SILEX technology to produce natural grade UF_6
- Paducah project is underpinned by GLE's 2016 agreement with US DOE to purchase legacy tails inventories
- Over 200,000 metric tons tails to be processed to produce over 50,000 metric tons of uranium (as UF_6)
- Planned production rate is up to 5 million pounds (equivalent) of U_3O_8 per year for ~30 years
- Potential to add enrichment (SWU) capacity to respond to LEU demand and emerging LEU+ and HALEU needs

GLE's Multi-Purpose PLEF Project

The PLEF Triple Opportunity

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

- PLEF I - Opportunity for low-cost production of ~5 million pounds natural grade uranium (as UF_6) annually for around 30 years
- PLEF II - Add-on opportunity to enrich PLEF output to produce Low Enriched Uranium (LEU)/LEU+ for nuclear reactor fuel
- PLEF III - Additional opportunity to enrich to High Assay LEU (HALEU) for next generation Small Modular Reactors (SMRs)

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%

LEU / 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%

HALEU

High Assay LEU (HALEU)

fuel for next generation advanced SMRs currently under development

includes U^{235} assays up to 19.9%

PLEF I: Uranium Production Opportunity

(Natural UF_6 production)

Target Commercial Operation Date

Baseline: c. 2030

(With potential acceleration: c.2027)

Akin to a 'Tier 1' Uranium Resource*

Based on low cost and longevity of production

(Silex estimate of all-in cost currently < US$25/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$25/kg)

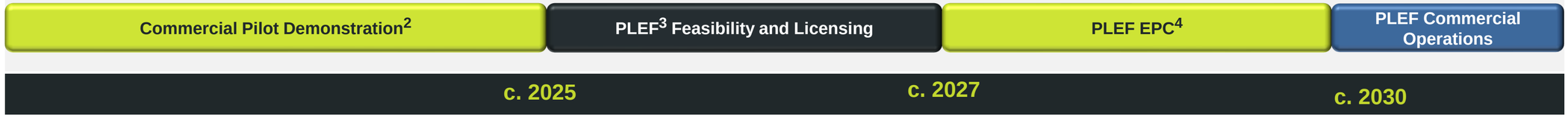
Potential to enrich further

From natural grade (0.7%)
to LEU (up to 5%)
to LEU+ (up to 10%)
& HALEU (up to 19.9%)

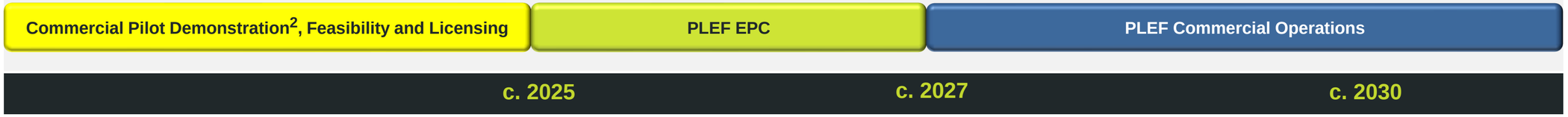
* All production estimates are based on preliminary modelling by Silex of project economics and longevity. Actual production output will depend on prevailing uranium market prices and other factors.

GLE / SILEX Technology Commercialisation Timelines[1]

Baseline - GLE Commercialisation Timeline:



Potential Acceleration - GLE Commercialisation Timeline[5]:



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

SILEX Technology License and Cameco Equity Option

Technology License:

- GLE holds exclusive worldwide license for use of SILEX laser technology for uranium enrichment
- License agreement includes US$20 million in payments to Silex triggered by commercialisation milestones
- Perpetual royalty of 7% (min.) on GLE's enrichment SWU revenues from use of SILEX for production of natural and enriched uranium
- Royalty and milestone payments are in addition to any equity-based distribution of profits payable from GLE's commercial operations (currently Silex holds 51% ownership)

Cameco Equity Option:

- Current GLE JV ownership is Silex 51% and Cameco 49%
- Cameco holds an option to purchase an additional 26% of GLE equity from Silex at fair market value
- Window for option exercise is from February 2023 until completion of PLEF feasibility study
- Cameco's transition to majority ownership subject to US Government approvals

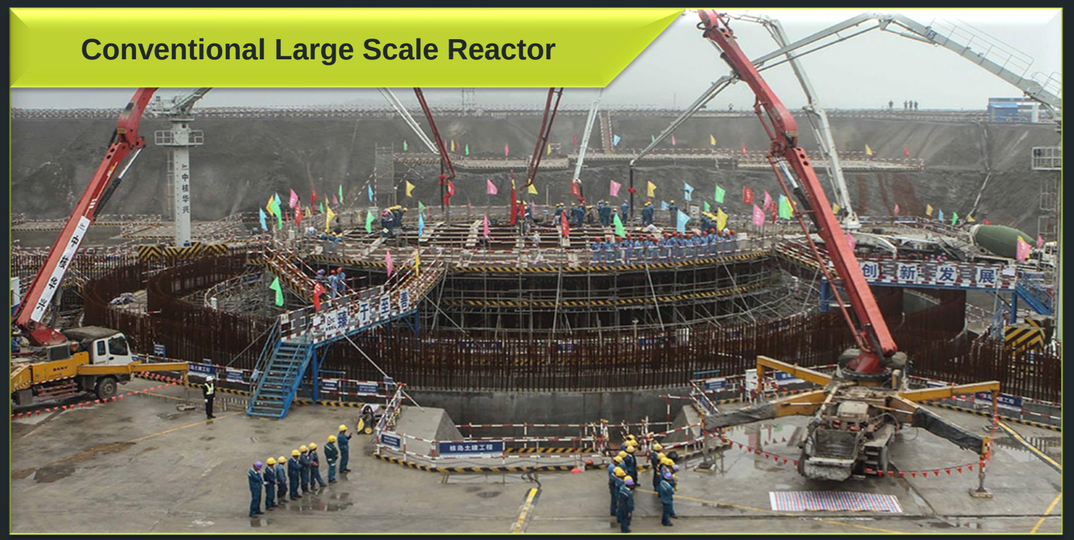
Emerging Opportunity – HALEU for Small Modular Reactors* (SMRs)

- Several next generation advanced SMR designs will use High Assay Low Enriched Uranium (HALEU)
- SILEX technology may provide a flexible low cost alternative to produce HALEU for advanced SMRs
- SMRs are modular, smaller size (50 MWe to 300 MWe) reactors allowing greater flexibility in deployment
- SMRs are designed for production-line manufacturing rather than conventional custom built capital projects
- SMRs are anticipated to provide significant reductions in capital costs (per MWe installed) and shorter construction times
- Leading SMR contenders are anticipated to be introduced commercially from the early 2030's in the US and Canada

Small Modular Reactor (concept)

VS

Conventional Large Scale Reactor

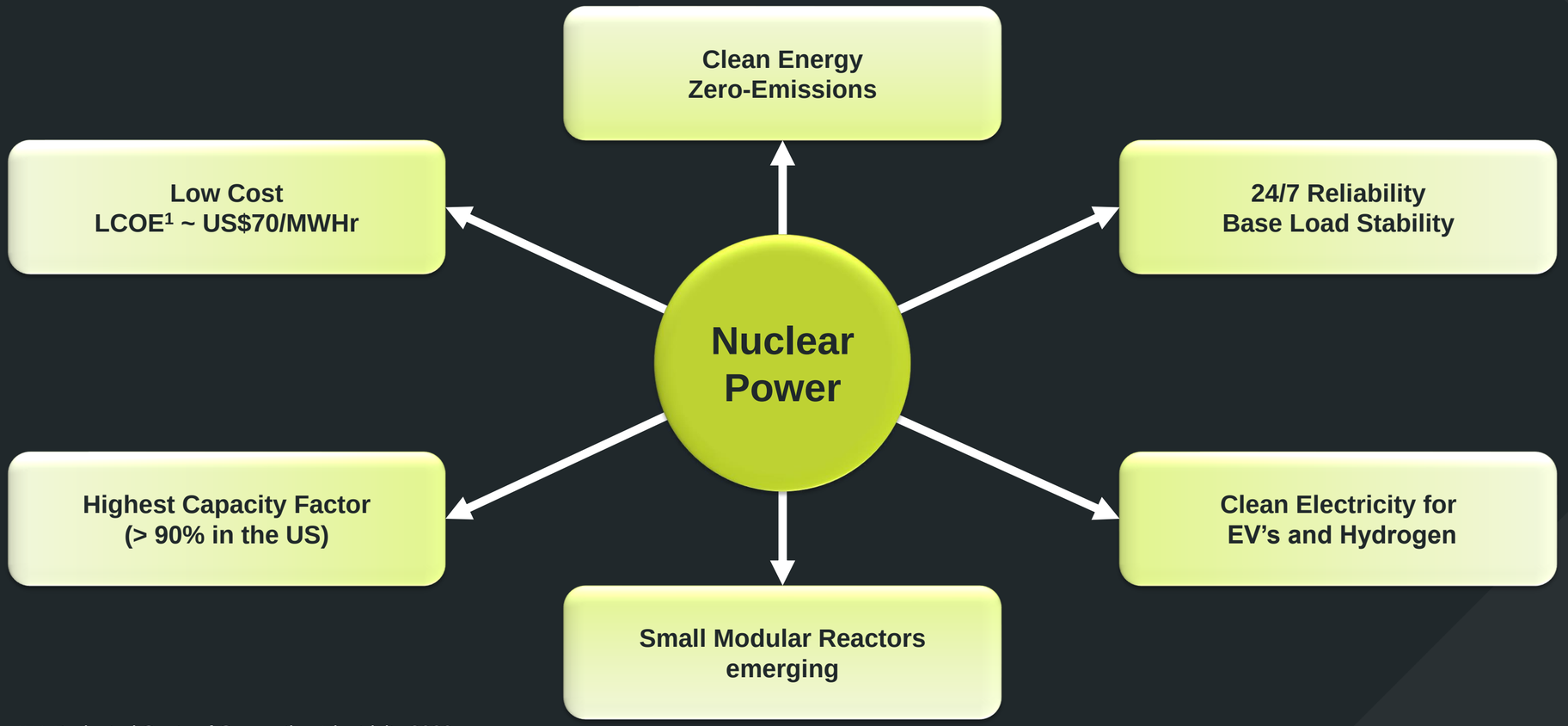


* SMRs include conventional water-cooled small modular reactors which will consume LEU and LEU+ fuels, and 'advanced' small modular reactors which will consume HALEU or other non-LEU fuels

Nuclear Power and the Nuclear Fuel Market Opportunity

Why Nuclear Power is important to achieving Net-Zero

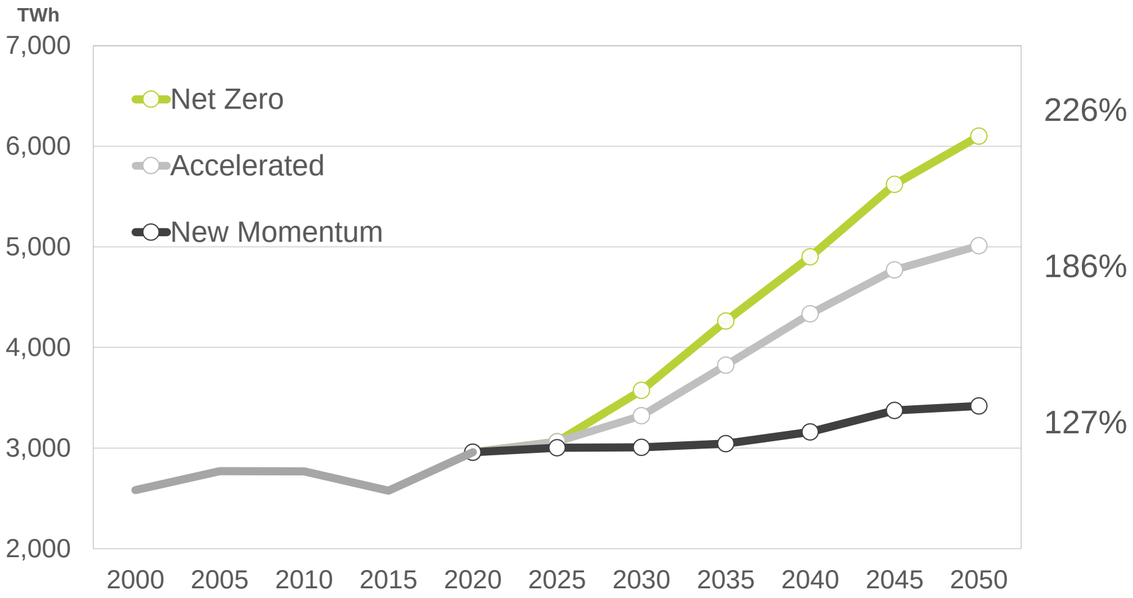
Nuclear power is currently the only economic source of zero-emissions base load electricity



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

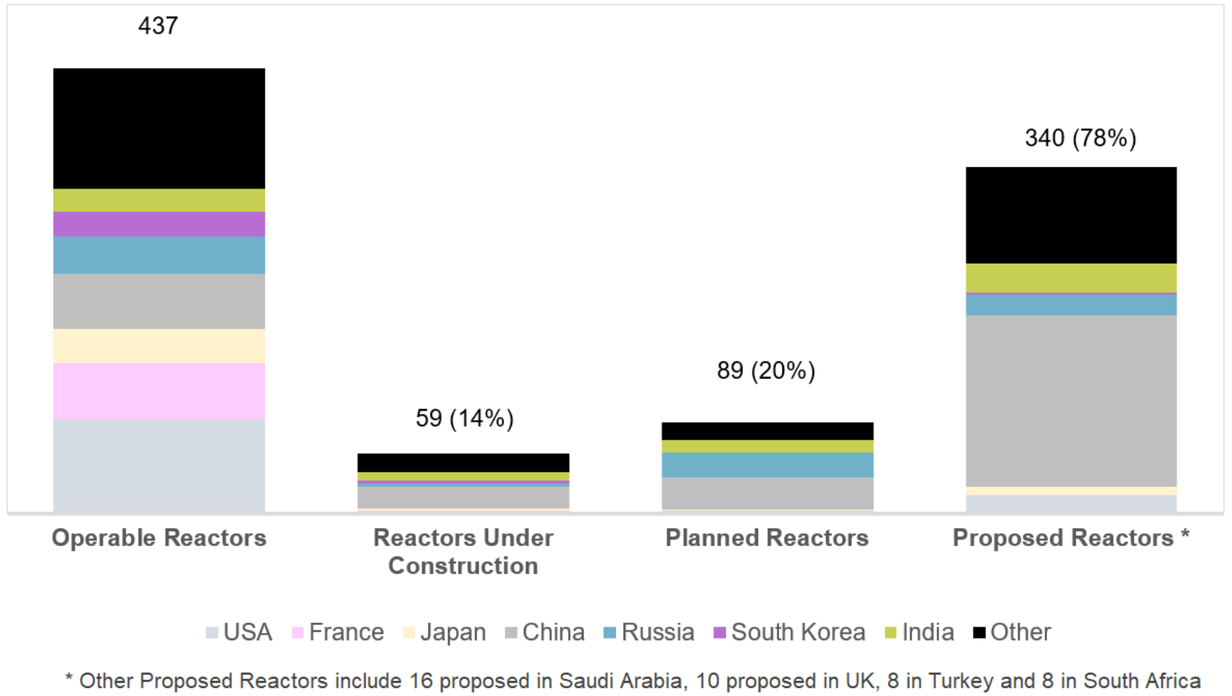
Significant Nuclear Power Growth for Net Zero 2050

Nuclear Generation Scenarios



Source: BP Energy Outlook 2022 Edition

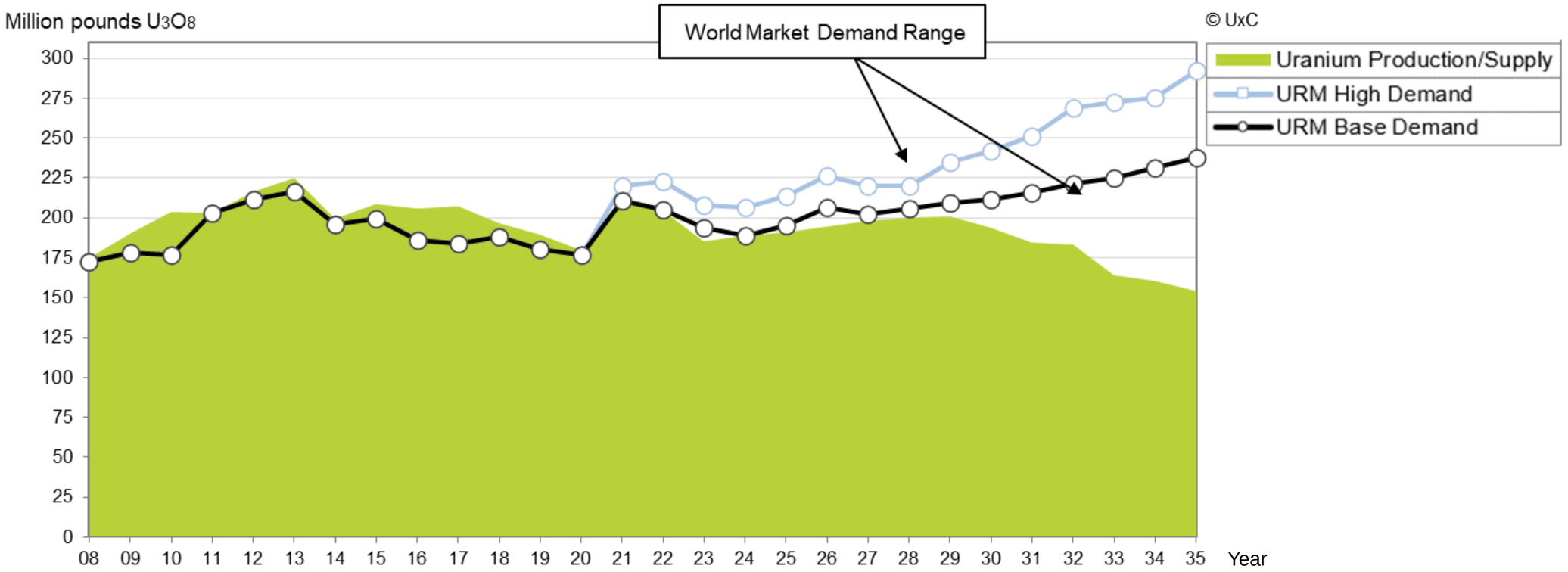
World Nuclear Reactor Population



Source: World Nuclear Association August 2022

Uranium Market Outlook – Supply Shortage Forecast

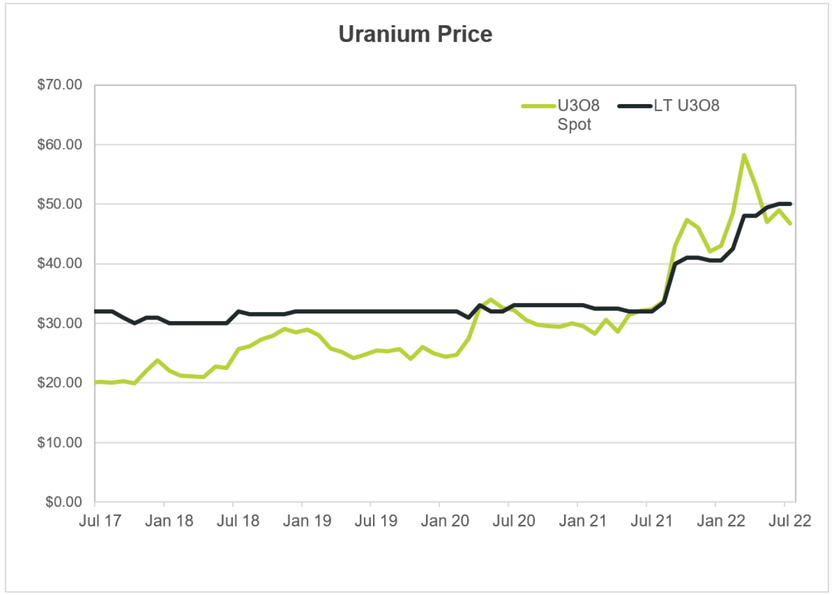
Mid-Case Uranium Supply and Demand Forecast

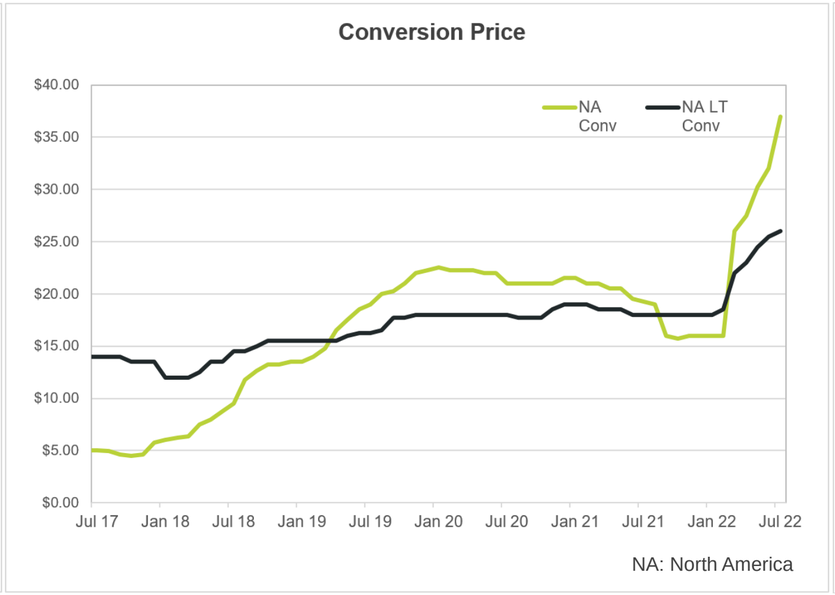


Source: UxC Uranium Market Outlook, Q2 2022

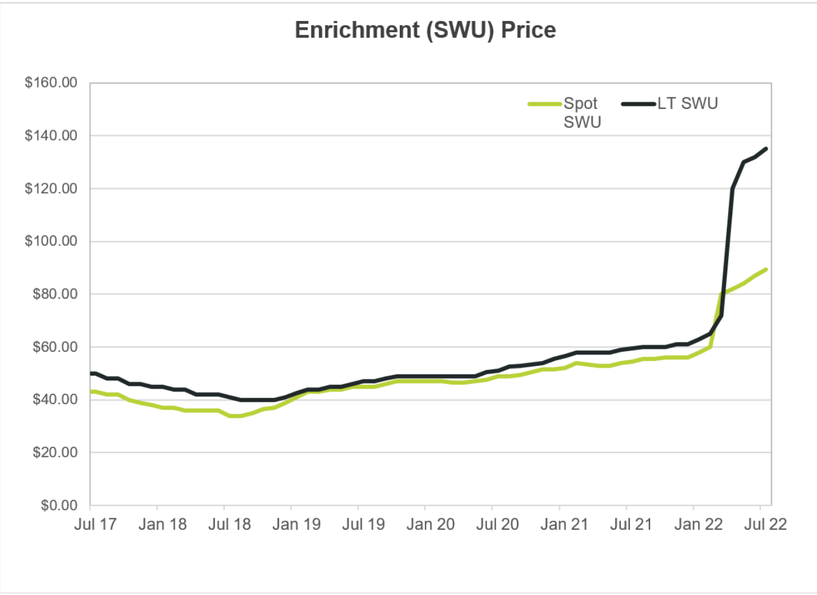
- Uranium supply forecasted to be insufficient to meet demand from mid-2020's

Key Components of Nuclear Fuel – Price Recovery





NA: North America

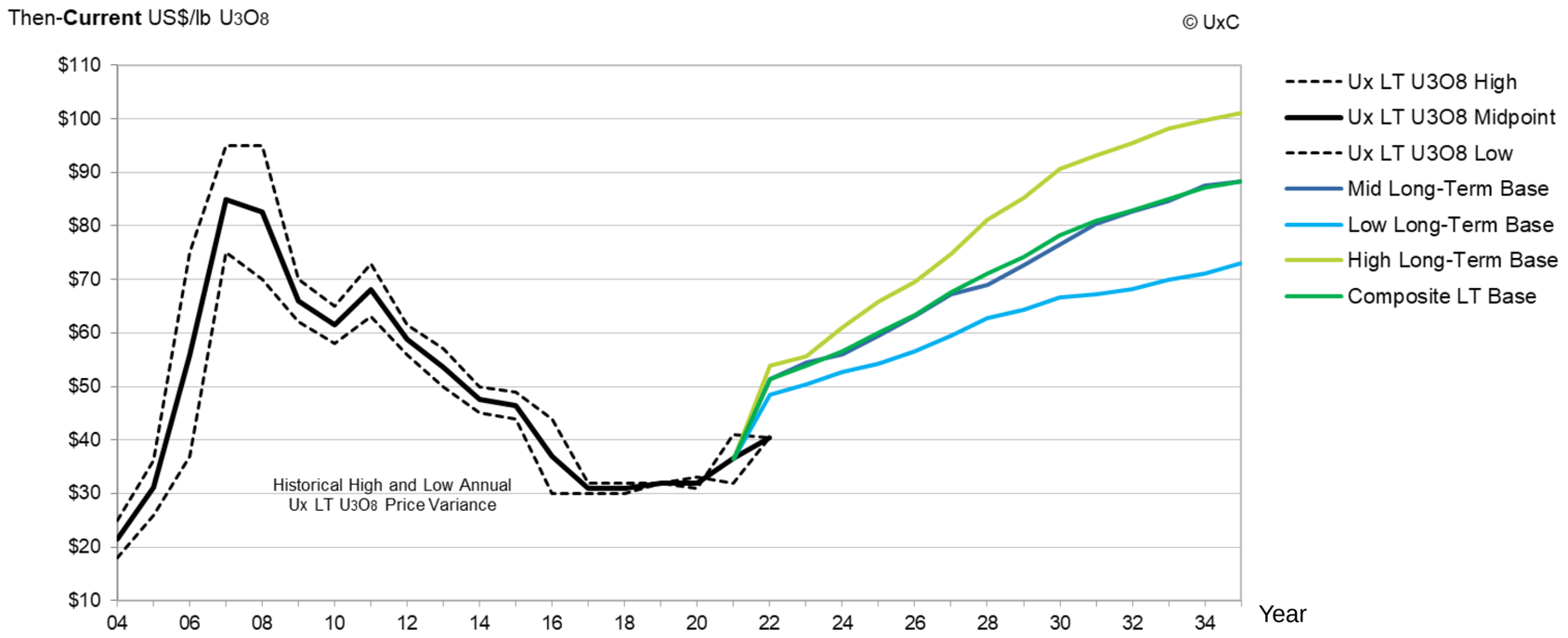


Source: UxC, LLC - Historical Price Data (in US$)

- Significant market price increases across key components of nuclear fuel
- Enrichment term price (SWU) increase of ~$70/SWU to ~$135/SWU in response to Russia/Ukraine conflict and nuclear fuel supply uncertainties

Uranium Price – Price Recovery Underway

Long-Term Uranium Base Price Forecast

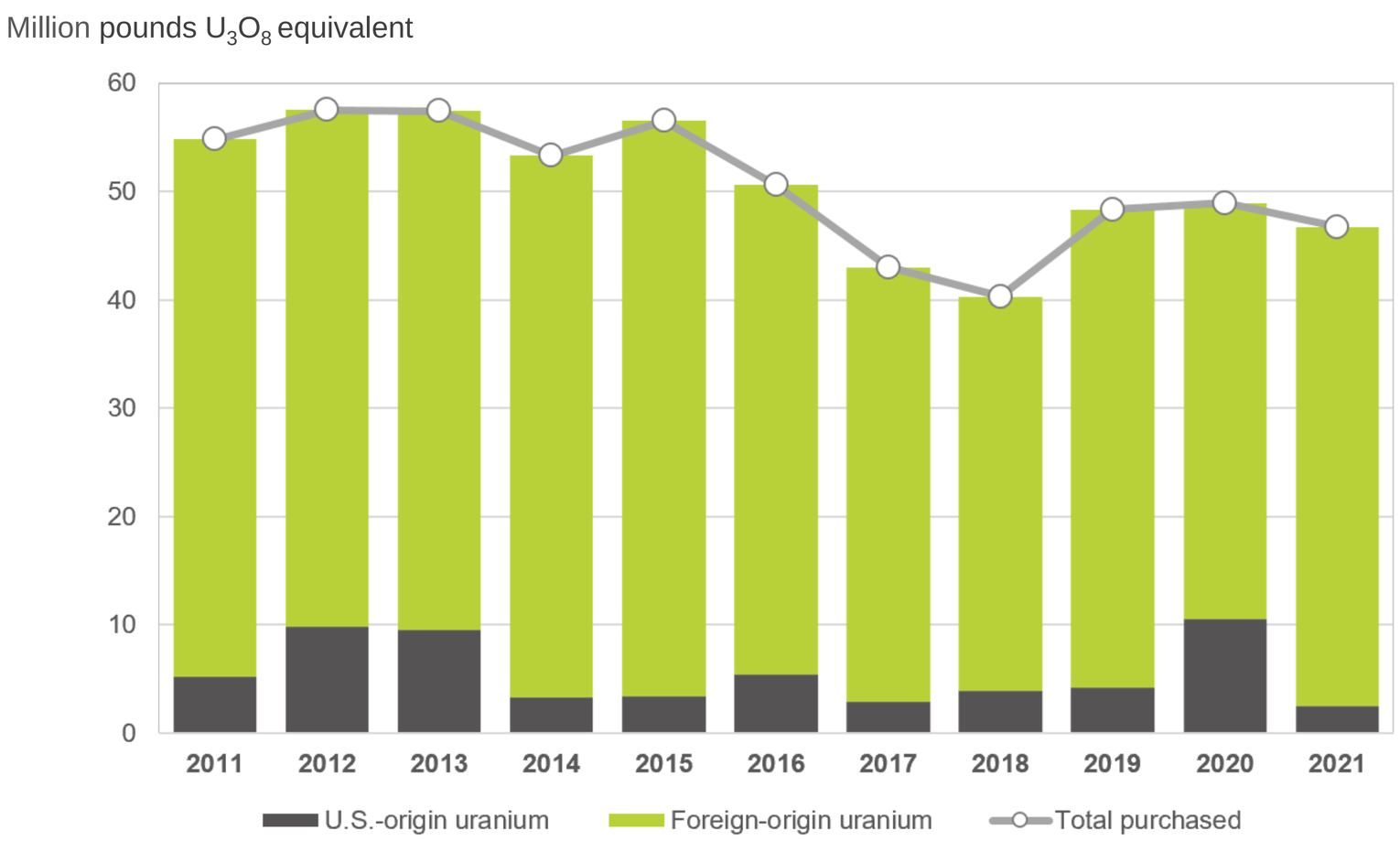


Source: UxC Uranium Market Outlook, Q2 2022

- UxC forecasts mid-case term uranium price ~$60/lb by 2025 and ~$77/lb by 2030
- Spot price currently ~$48/lb (as at 15 August 2022) – up from a low of ~$18/lb in 2016

Paducah Opportunity may help address US Uranium Vulnerability

Uranium purchased for US nuclear power reactors, 2011 - 2021

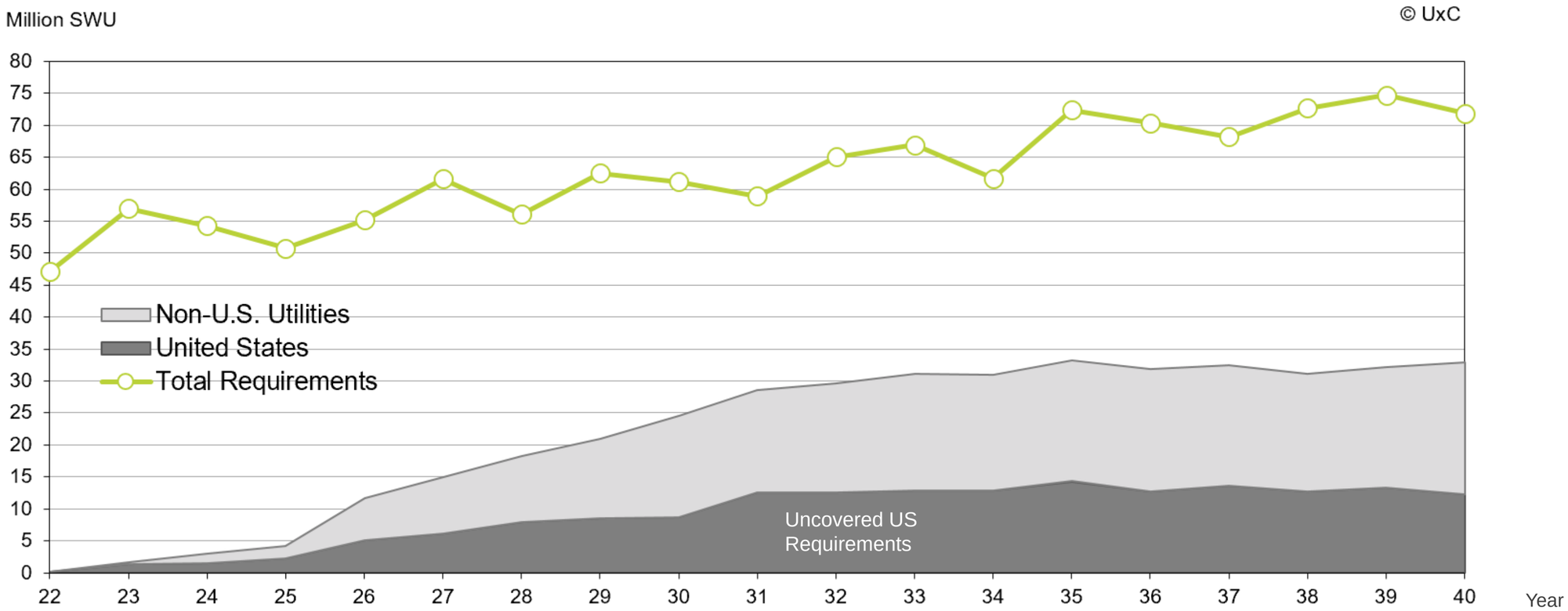


US imported ~95% of Uranium purchased in 2021

Source: 2021 EIA Uranium Marketing Annual Report
(Released May 2022)

Emerging Enrichment (SWU) Supply Opportunity for GLE

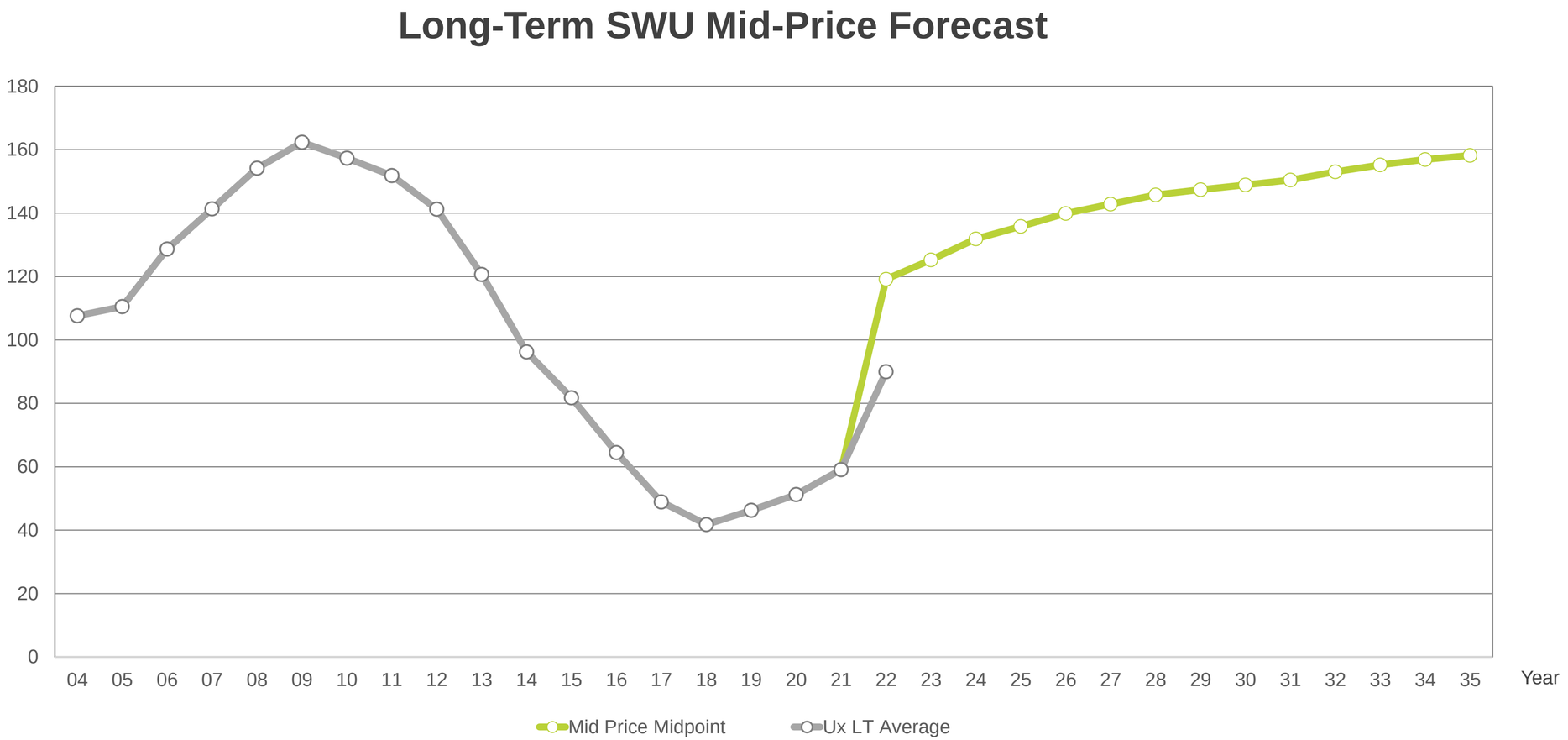
Base Case Uncovered Demand Forecast for LEU Supply



Source: UxC *Enrichment Market Outlook*, Q2 2022

- Forecast uncovered US SWU demand from 2027 is in excess of ~5 million SWU per year
- Significant enrichment (SWU) opportunity for LEU supply extends from the mid 2020's

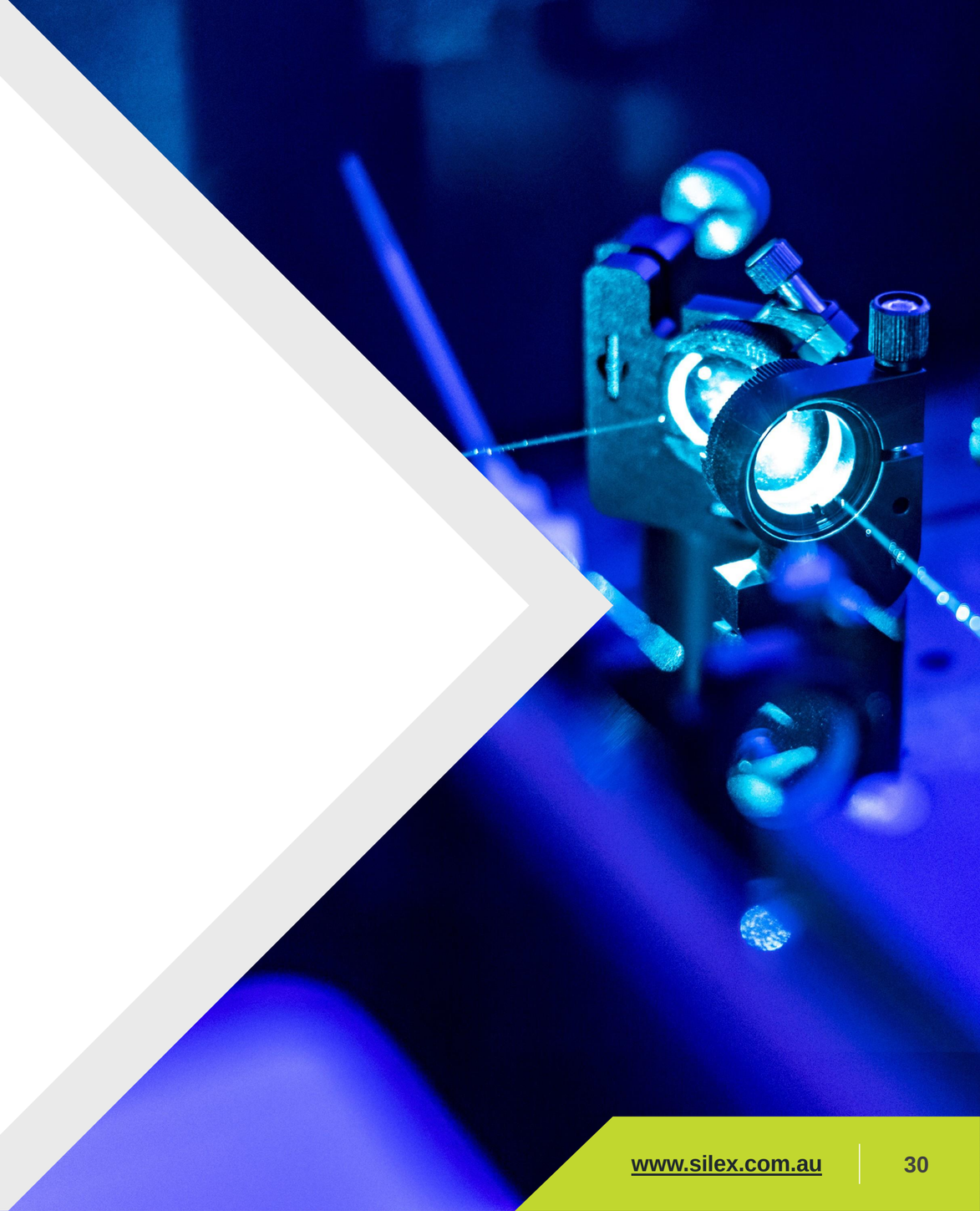
SWU Price – Significant Price Increase



Source: UxC *Enrichment Market Outlook*, Q2 2022

- UxC forecasts mid-case term SWU price to return to previous highs of $160/SWU
- Sustained price increases may support investment in new SWU capacity

Zero-Spin Silicon for Quantum Computing



SILEX Zero-Spin Silicon Opportunity

Global race to develop world's first Quantum Computers (QCs)

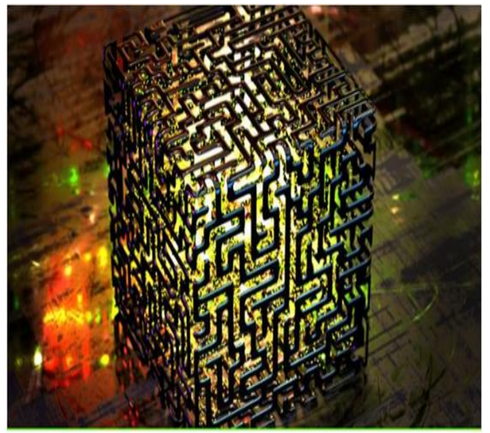
- QCs expected to be 1000's of times more powerful than today's conventional computers
- QC anticipated to create new opportunities in medicine, AI, cybersecurity, finance, logistics etc
- Governments around the world and corporates such as Intel, Google, IBM, Microsoft are vying for leadership in QC development

Silicon Quantum Computing (QC) is a leading contender for QC technology

- Silicon QC is well placed to leverage off the existing global silicon semiconductor industry
- Silicon QC requires highly enriched silicon, currently in limited supply (Russia) and high cost
- A reliable enriched silicon supply chain needs to be established to support commercial path
- With timely commercialisation of stable supply chain - silicon may potentially lead global QC efforts

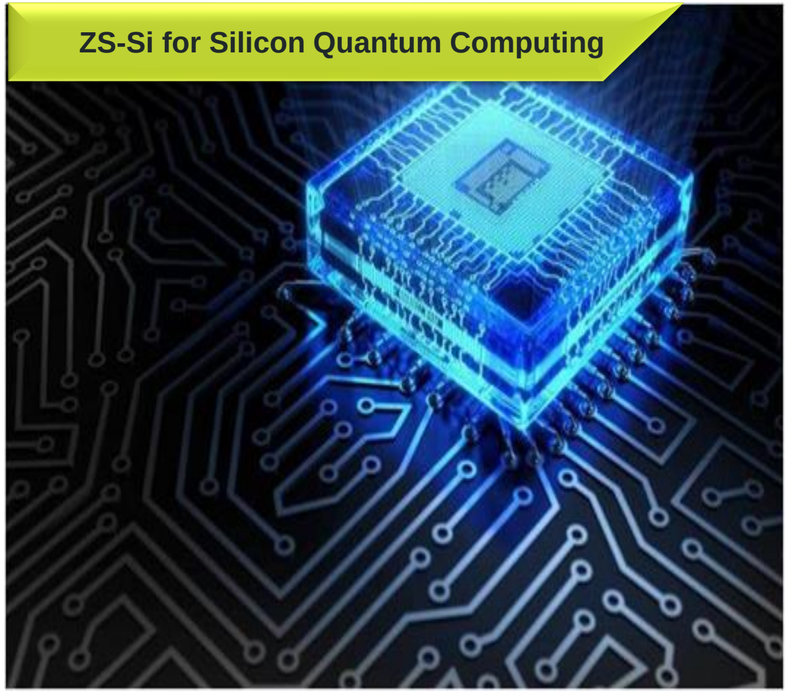
The SILEX Zero-Spin Silicon (ZS-Si) production opportunity

- SILEX technology already proven capable of producing enriched silicon in the form of ZS-Si
- Current ZS-Si project aims to demonstrate pilot commercial production by end of CY2022
- Project partners Silicon Quantum Computing (SQC) and UNSW Sydney are initial customers
- Silex aims to engage with other potential customers, including major semiconductor companies



SILEX Project for ZS-Si production gathering momentum

- Project partners SQC and UNSW part of the Federally funded ‘CQC2T Centre of Excellence’ – a world leader in silicon-based QC technology development
- 3-year project cost ~$8m (includes pilot plant capex) supported by $3m Federal CRC-P funding grant and $1.8m from SQC (including $0.9m in advanced ZS-Si purchases)
- Project objective is to establish reliable and cost effective production of ZS-Si for potential sale to domestic and offshore consumers in the emerging global QC industry



3-stage project aims to produce ZS-Si in increasing purity and quantity:

- **Stage 1 –** Completed June 2020

  Established lab-scale ‘proof-of-concept’ for the SILEX process

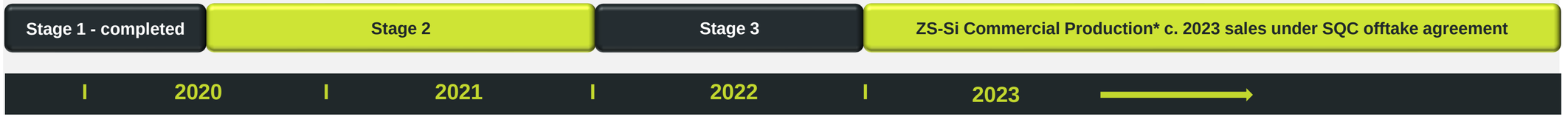
- **Stage 2 –** Completed January 2022

  Prototype validation of SILEX technology and scalability for ZS-Si production

- **Stage 3 –** Ongoing

  Full technology demonstration for ZS-Si production at commercial pilot scale

ZS-Si Production Commercialisation Timeline*:



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

SILEX Zero-Spin Silicon Production Opportunity

Aim

Establish a reliable and economic process for production of high purity ZS-Si

Commercial Pilot Operation Date

2023

Production

Commercial pilot scale production of up to 5 kgs per year, depending on demand

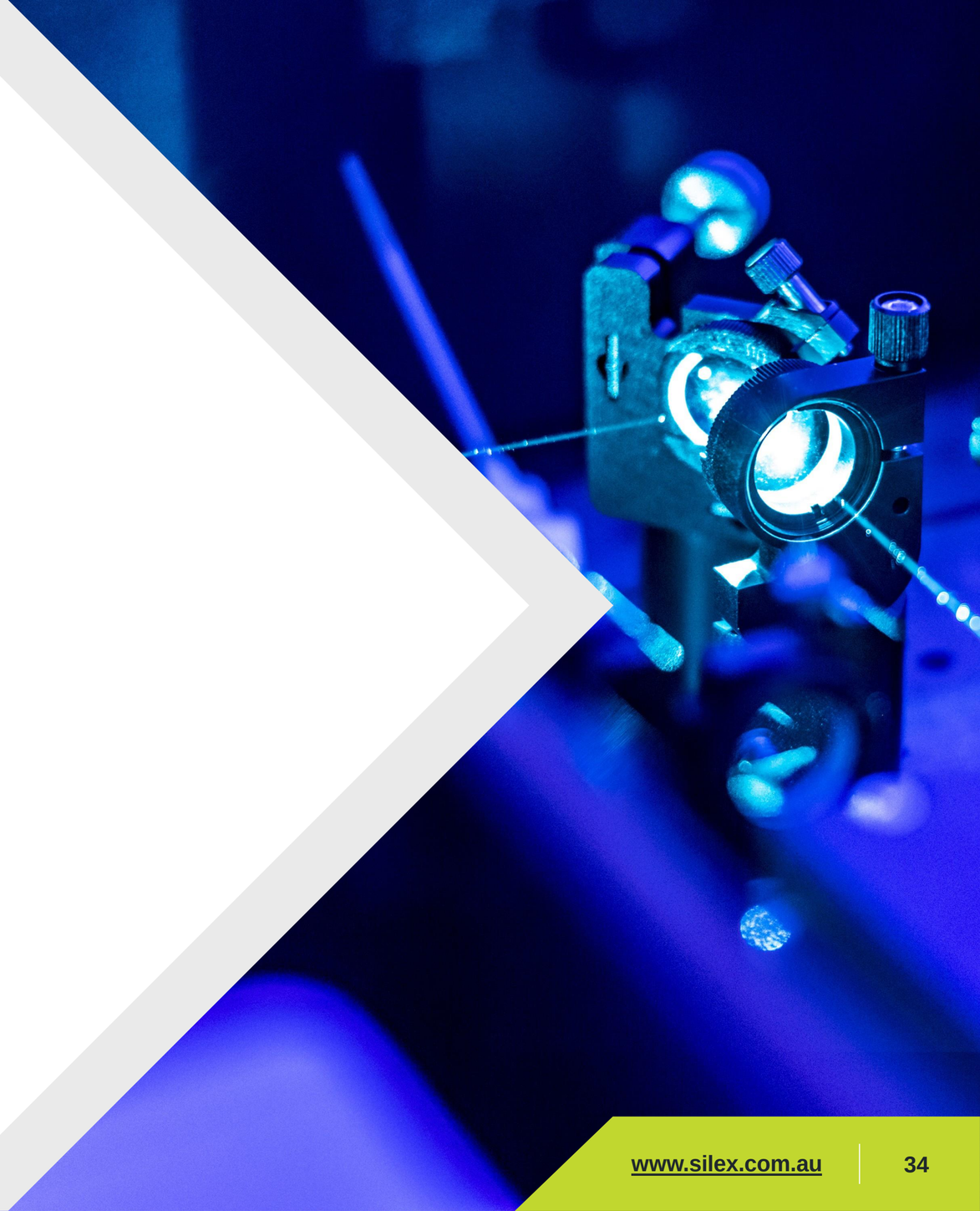
ZS-Si Target Purity

99.995% or higher

Commercial Offtake Agreement with SQC

Other potential customers to be engaged

Summary



Summary

- GLE's path to market initially focused on the PLEF I project for cost effective production of natural uranium and significant value of the contained conversion component
- Consideration of accelerating deployment of SILEX uranium enrichment technology and GLE's commercial strategy in view of emerging 'Triple Opportunity' to help replace Russian-sourced nuclear fuel
- Triple opportunity involves adding more SILEX production modules to produce LEU, LEU+ and HALEU nuclear fuels, with the PLEF potentially becoming a multi-purpose nuclear fuel production facility
- Long-term fundamentals for global growth in nuclear power strengthening, with climate change mitigation measures and emerging global energy supply disruptions energizing the nuclear fuel markets
- SILEX silicon enrichment technology being developed to produce Zero-Spin Silicon (ZS-Si) in support of global efforts to commercialise silicon quantum computing
- Silex assessing other applications of SILEX technology, potentially in the field of medical radioisotopes

As at 30 June 2022, the Company had net assets of ~$50.5m, including ~$42.5m in cash and term deposits and approximately ~$4.0m in IQE shares

Thank you