Silex Systems Limited
2021 Annual General Meeting

(ASX: SLX) (OTCQX: SILXY)

Dr Michael Goldsworthy
CEO/Managing Director

14 October 2021

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 research and development 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 uranium market conditions and therefore remains subject to associated risks.

Silex is also in the early stages of pursuing 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 ownership of subsidiary Translucent Inc. The cREO® technology developed by Translucent has been acquired by IQE Plc based in the UK. IQE is progressing the cREO® technology towards commercial deployment for 5G mobile handset filter applications. The outcome of IQE's commercialisation program is also 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, 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; 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; decisions made or actions taken by the Company's commercialisation partners that could adversely affect the technology development programs; 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

Silex - Positioning for Commercialisation

- Acquisition of 51% interest in SILEX uranium enrichment technology commercialisation vehicle GLE
- US-based GLE now owned 51% by Silex and 49% by Cameco Corporation
- Cameco is one of the world's leading uranium and nuclear fuel suppliers
- Focus on strengthening the GLE commercialisation plan and building the engineering teams

- Zero-Spin Silicon (ZS-Si) 3-year project remains on schedule following the achievement of key milestones, including construction of prototype test facility
- Positioning for potential sale of initial commercial quantities of ZS-Si from a pilot production facility anticipated to be constructed in CY2022

- Assessment of additional potential applications of the SILEX technology in fields such as medical isotopes underway

Investment Focus – ESG Priorities

Investment in three key growth industries with strong ESG credentials:

1) Clean Energy: Nuclear Power – potential to support Net-Zero 2050 targets
2) Next Generation Quantum Computing – expected to help solve global social and environmental issues
3) Advanced Nuclear Medical 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 GLE):
- Potential uranium production through a ~150M lb resource – one of the largest in the US
- Potential to capture value of conversion of oxide to fluoride (U_3O_8 to UF_6)
- Potential enrichment of distinct nuclear fuel products such as LEU and HALEU

Zero-Spin Silicon:
- 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:
- 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 aggressive cancers

SILEX Technology Commercialisation Overview

Silex

51% Owned	100% Owned	Other Potential Markets
92 U Uranium 238.03	14 Si Silicon 28.0855	

SILEX Uranium Production via GLE

Technology	SILEX laser enrichment Licensed to Global Laser Enrichment (GLE)
Revenue Model	51% ownership of GLE + 7% (min.) perpetual royalty
Partners	Cameco
Market Size[1].	Uranium: US$7bn Uranium Enrichment: US$3bn

1. UxC 2022 estimates, UMO and EMO Q3, 2021

SILEX Zero-Spin Silicon Production

Technology	SILEX laser enrichment
Revenue Model	Producer-based revenues for silicon quantum computing
Partners	UNSW THE UNIVERSITY OF NEW SOUTH WALES; Silicon Quantum Computing
Market Size[2].	Quantum Computing: $50bn (by 2040)

2. CSIRO, Growing Australia's Quantum Technology Industry, May 2020
(Note: raw materials such as ZS-Si would represent a very small fraction of this)

E.g. Medical Isotopes

Technology	SILEX laser enrichment
Revenue Model	Producer-based revenues TBD
Partners	TBC
Market Size	TBD

Highlights of the Year in Review

SILEX Uranium Enrichment Technology / GLE Highlights:

- US Government approvals for the GLE acquisition were received in January 2021
- GLE acquisition completed - resulting in Silex acquiring 51% interest in GLE (Cameco 49%)
- Silex and Cameco strengthen the GLE commercialisation plan and build the engineering teams
- GLE recruits key executives – Chief Executive Officer and Chief Commercial Officer with extensive technical and commercial acumen to lead GLE to market

Other highlights:

- Zero-Spin Silicon project achieves key milestones, including construction of prototype test facility

- Assessment of several other applications of the SILEX technology, potentially in the fields of medical radioisotopes

- IQE Plc achieved key demonstration milestone for 5G mobile filter device built on cREO®

Equity Raise ($33m) and Share Purchase Plan ($7m)

Advancing the SILEX Technology towards commercialisation:

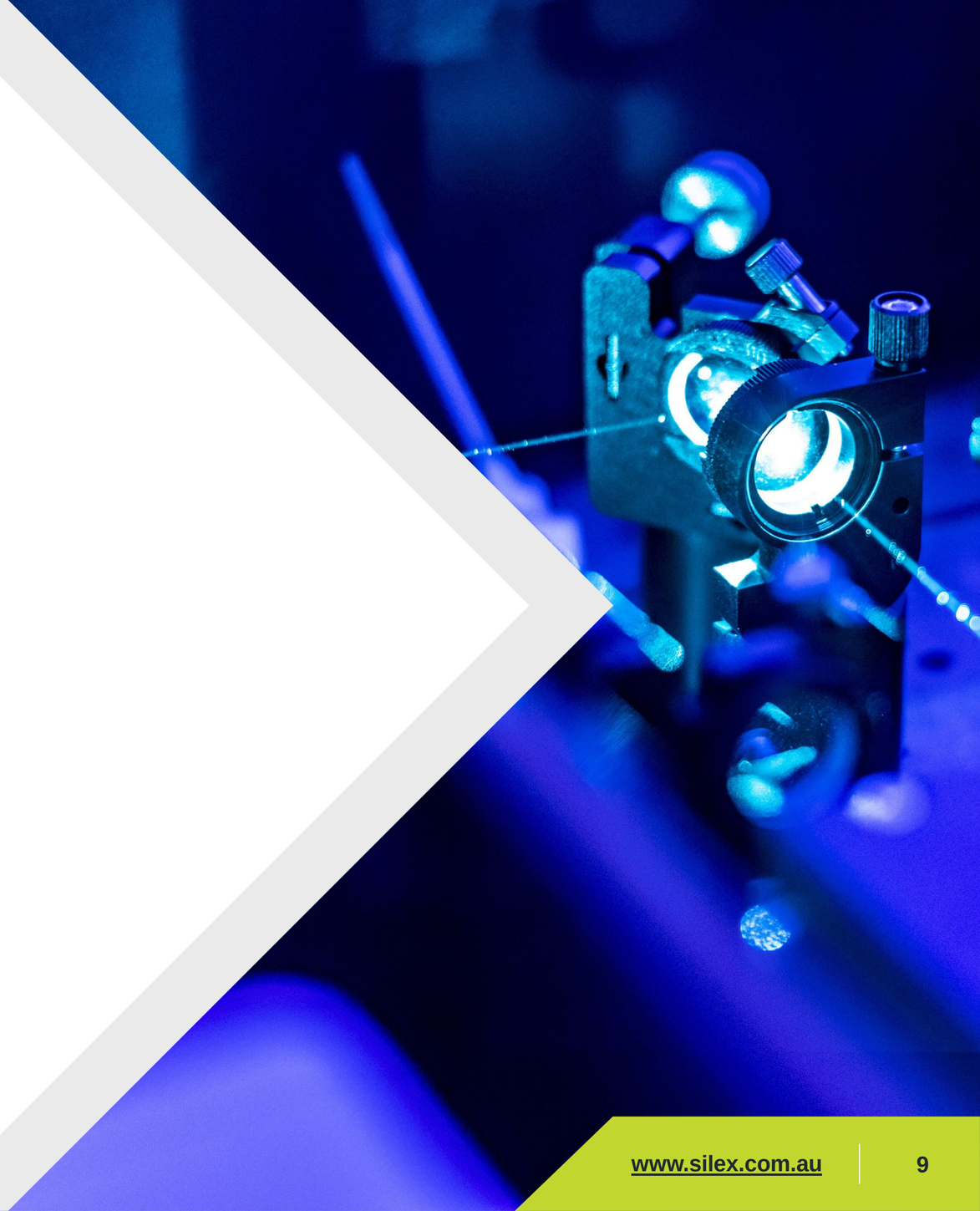
Equity raise completed 1 October 2021

- Approximately $33 million raised at $1.27 per share with ~26 million shares issued
- Strong interest from high quality domestic, international and uranium specialist institutions
- Use of proceeds focused on advancing SILEX technology applications towards commercialisation:
    - Advance the commercial pilot demonstration of the SILEX uranium enrichment technology in the USA via GLE
    - Development of opportunities for advanced nuclear fuel production with GLE (e.g. HALEU fuel for next-generation SMR's)
    - Scale-up of Zero-Spin Silicon production capacity – a key enabling material for silicon quantum computing
    - Develop additional potential applications of the SILEX technology (e.g. medical isotopes)
    - General working capital requirements and strengthen the Company's balance sheet

Share Purchase Plan (SPP) underway – closing 22 October 2021

- Offer to eligible shareholders to raise up to $7 million at $1.31 per share – subject to T&C's set out in SPP Offer Booklet
- SPP Closing Date for applications 5pm Friday, 22 October 2021 (AEDT)
- Eligible Shareholders invited to invest up to a maximum of $30,000 per shareholder in the SPP, subject to any scale back

Uranium Production and Enrichment for Nuclear Fuel



SILEX Uranium Production Opportunity

Global demand for Uranium is set to rise:

A significant potential uranium supply shortage is forecast

- Structural supply deficit could occur without a timely increase in production
- Demand could grow significantly as zero-emissions nuclear is embraced
- There are few low cost resources to supply increasing demand from the mid 2020's
- Uranium prices need to keep increasing to provide stimulus for increased production

The Flagship Paducah uranium project planned by Global Laser Enrichment (GLE)

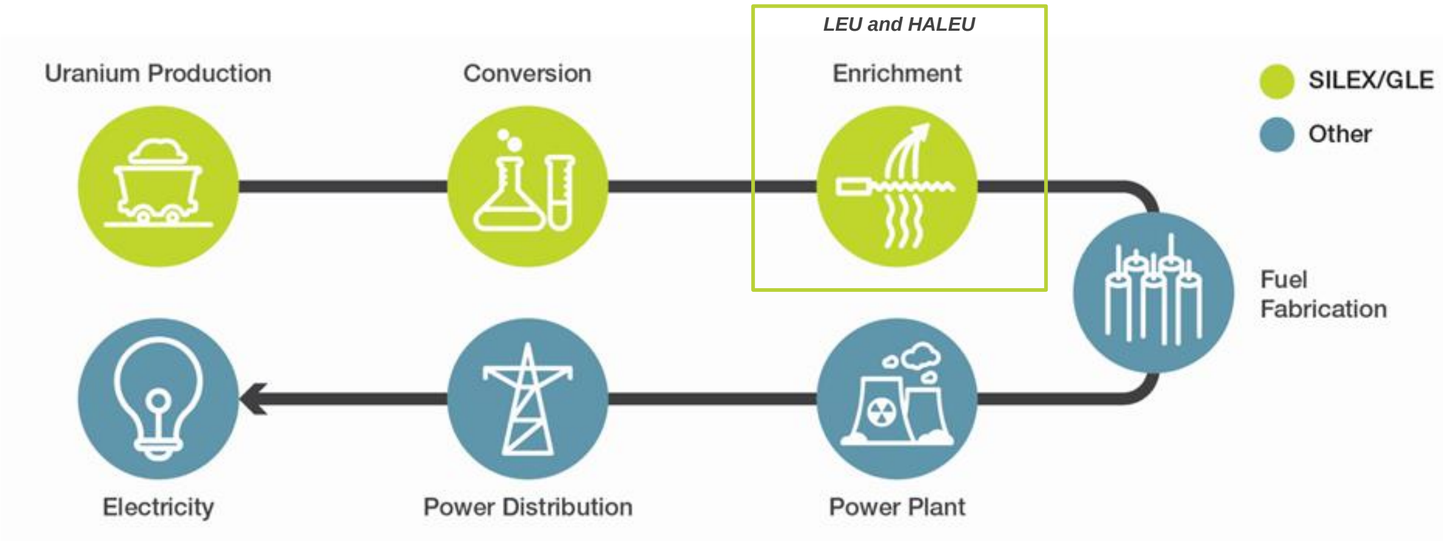
- Silex owns 51% equity interest in GLE with Cameco Corporation owning the balance of 49%
- GLE has an agreement with US DOE[1] to purchase tails inventories owned by the US Government
- GLE's Paducah project aims to enrich the tails using the SILEX technology to produce natural uranium

1. US Department of Energy

SILEX and Nuclear Fuel Production

The SILEX technology provides GLE with multiple opportunities in the production of nuclear fuel:

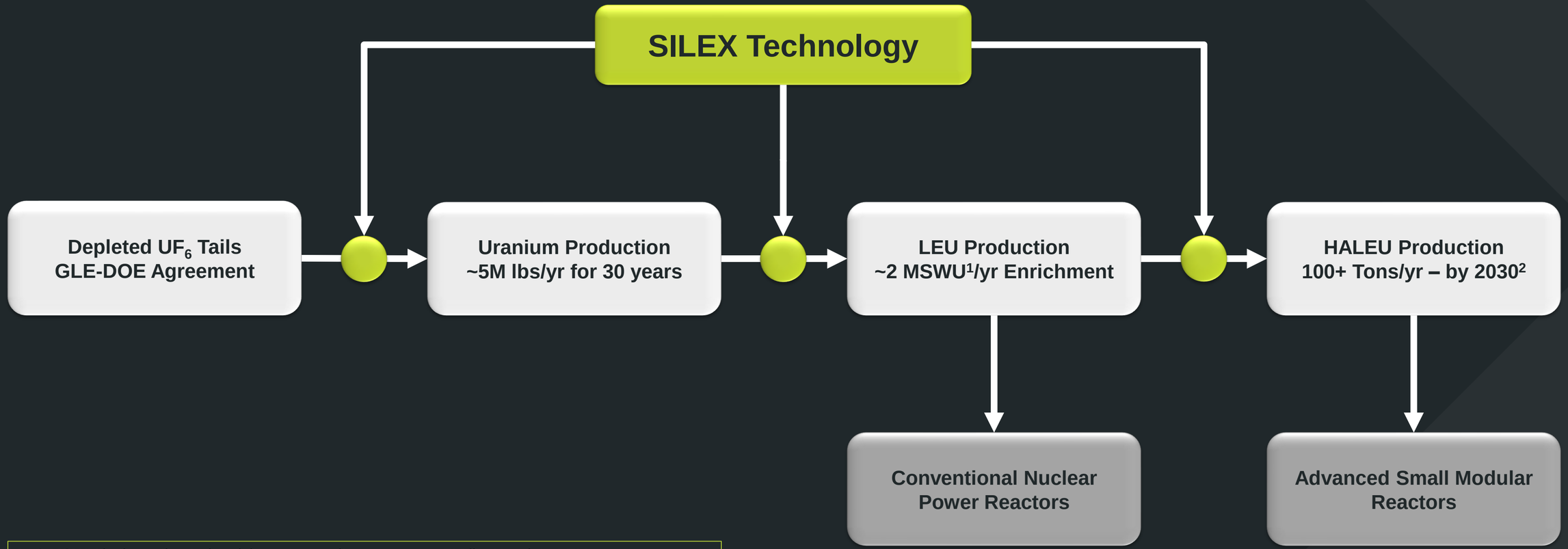
- produce natural grade uranium via enrichment of depleted tails inventories (Paducah project)
- capture the value of conversion contained in the depleted UF_6 tails material (Paducah project)
- enrich natural uranium to produce LEU - $^{235}UF_6$ assay increased up to 5%
- enrich uranium up to 20% - HALEU to fuel advanced Small Modular Reactors



The Nuclear Fuel Supply Chain

The Paducah Opportunity Potential Value Chain

‘Full Service’ Nuclear Fuel Materials Concept



1. 2 MSWU is the estimated enrichment capacity to process ~5M lbs U_{nat} into LEU;
   SWU – Separative Work Unit - is the unit of enrichment traded in the market;
2. US Nuclear Energy Institute estimates demand of 137 tons/yr by 2030 (2020 Letter to US DOE)

Paducah Uranium Production Opportunity

Target Commercial Operation Date

Anticipated to be late 2020's

Akin to a 'Tier 1' Uranium Resource*

based on low cost and longevity of production

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

Equivalent U_3O_8 Production

Planning for ~5 million lbs p.a. for approximately 30 years

Potential capture of Conversion Value

Feed and Product is UF_6 (current conversion value ~US$10/lb)

Potential to enrich further

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

* Per current estimates by Silex of project economics and longevity

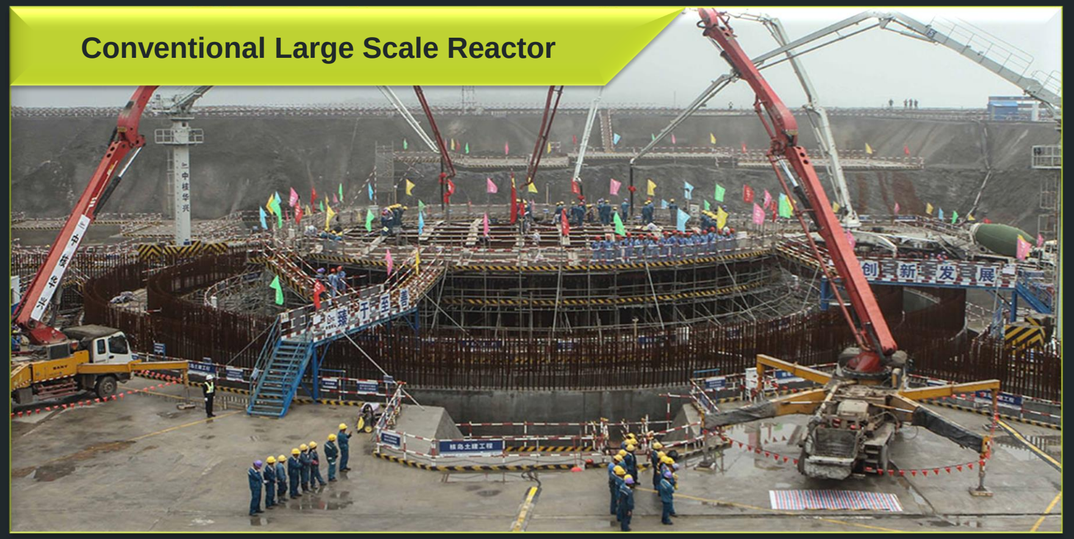
Emerging Opportunity - Small Modular Reactors (SMR's)

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

Small Modular Reactor (concept)

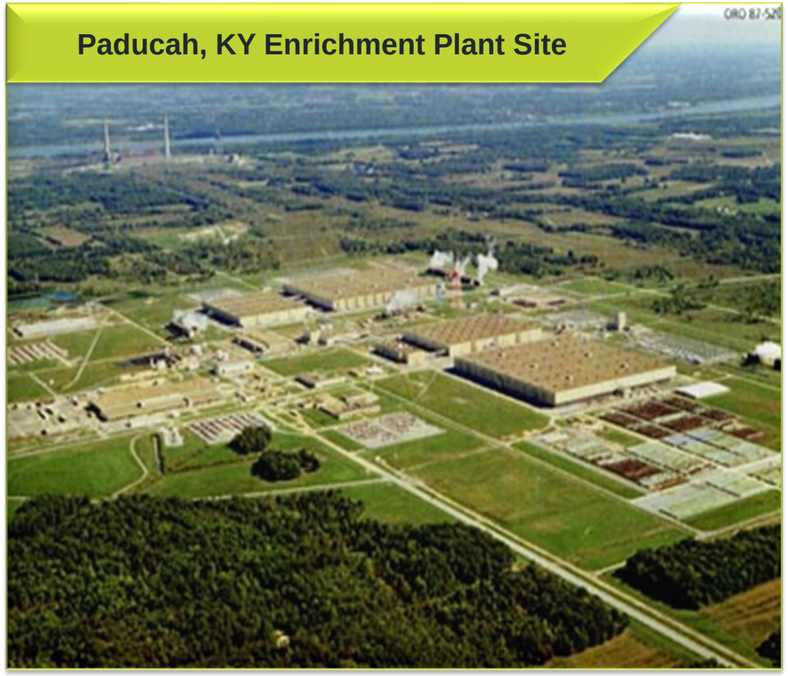
VS

Conventional Large Scale Reactor



SILEX Commercialisation and Royalty Agreement

- GLE holds exclusive worldwide license for use of SILEX laser technology for uranium
- License agreement includes US$20 million in payments to Silex triggered by commercial development milestones:
  - US$5 million: Commercial pilot demonstration (c.2025)
  - US$5 million: Commencement of PLEF[1] EPC (c. 2027)
  - US$10 million: PLEF commercial operations (c. late 2020's)
- 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 potential equity-based distribution of profits payable from GLE's commercial operations (currently Silex holds 51% ownership)
- Cameco holds an option to purchase 26% of GLE equity from Silex at fair market value



1. PLEF: Paducah Laser Enrichment Facility

SILEX Uranium Technology Target Commercialisation Timeline*:

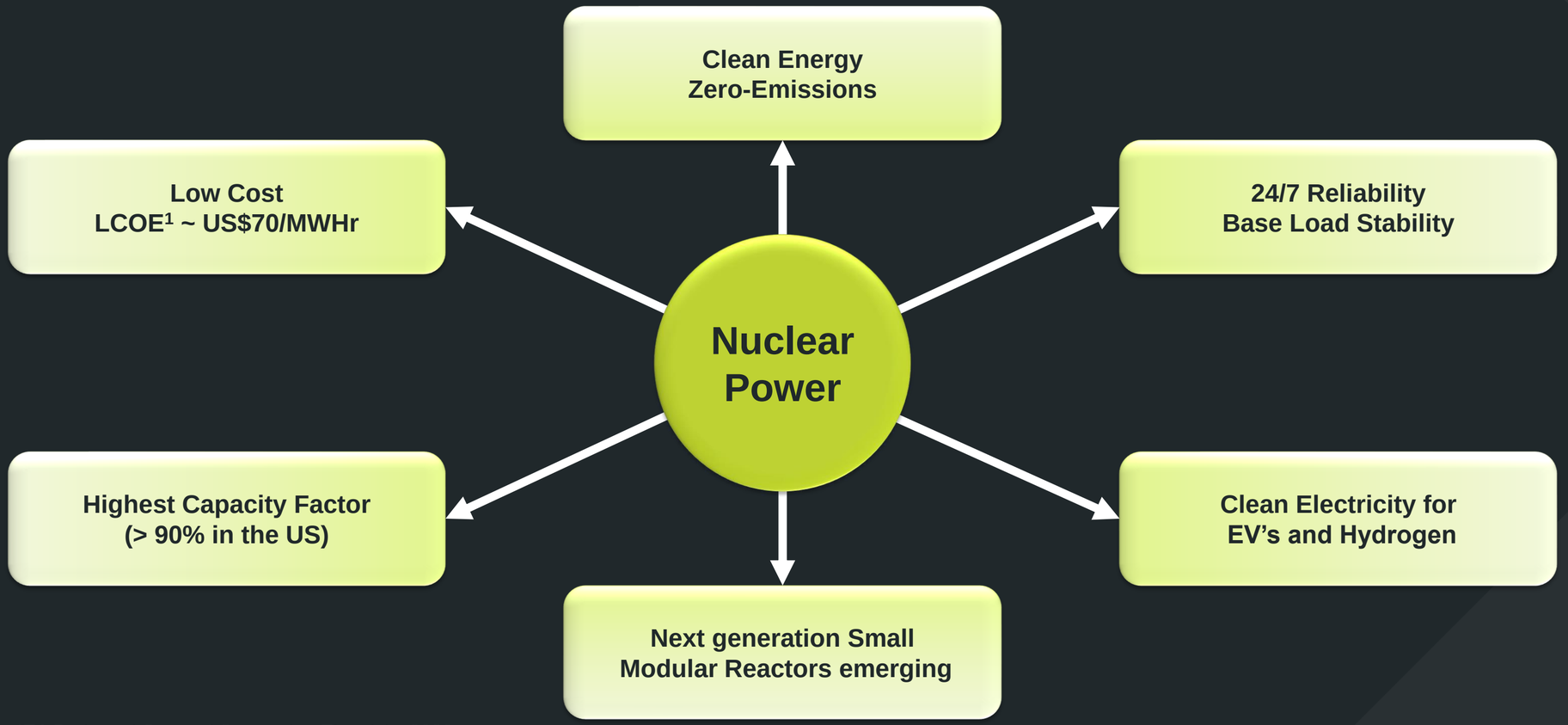
Commercial Pilot Demonstration	PLEF Feasibility	PLEF EPC**	PLEF Commercial Operations
c. 2025	c. 2027	c. late 2020's	

* Subject to technology development program outcomes, market conditions and other factors ** Engineering, Procurement and Construction (EPC)

Nuclear Power and the Nuclear Fuel Market Opportunity

Why Nuclear Power is important to achieving Net-Zero

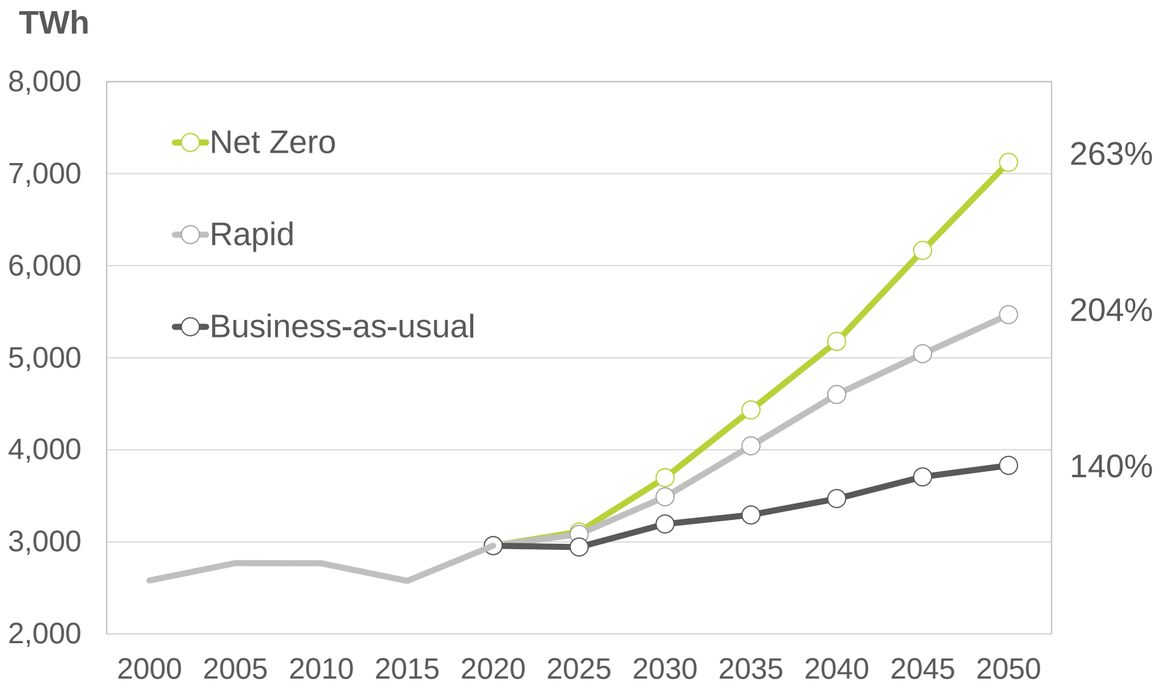
Nuclear power is currently the only economic source of zero-emissions base load electricity



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

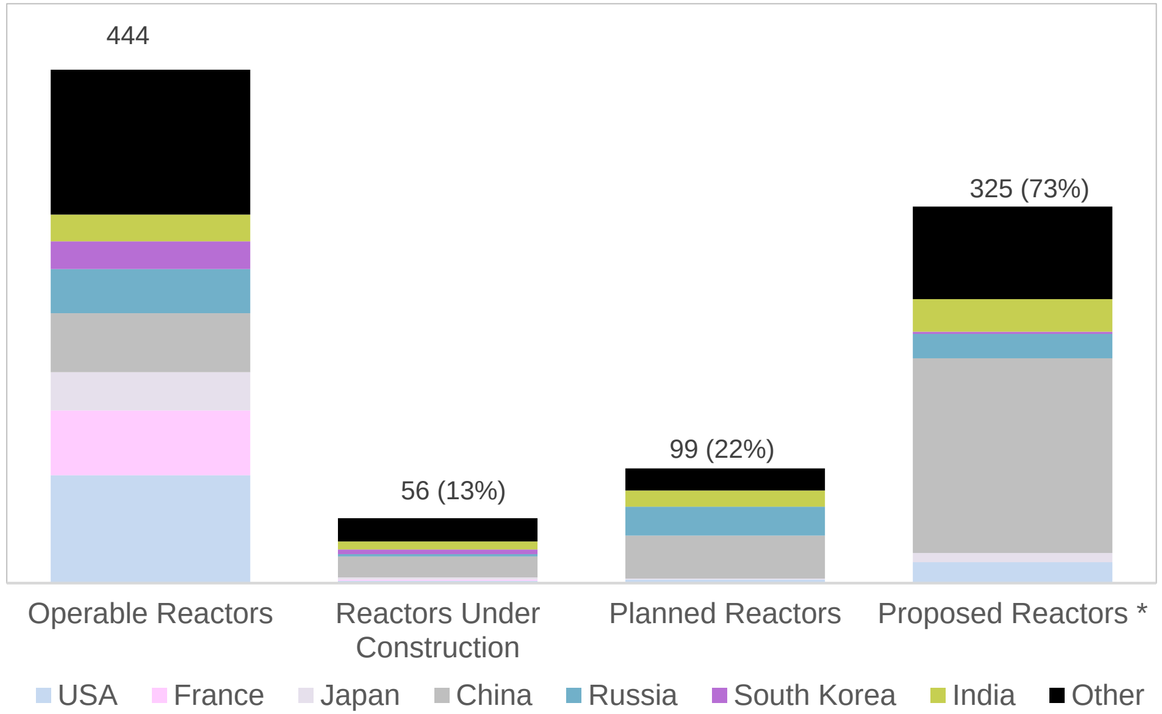
Significant Nuclear Power Growth Essential for Net Zero 2050

Nuclear Generation Scenarios



Source: BP Energy Outlook 2020 Edition

World Nuclear Reactor Population

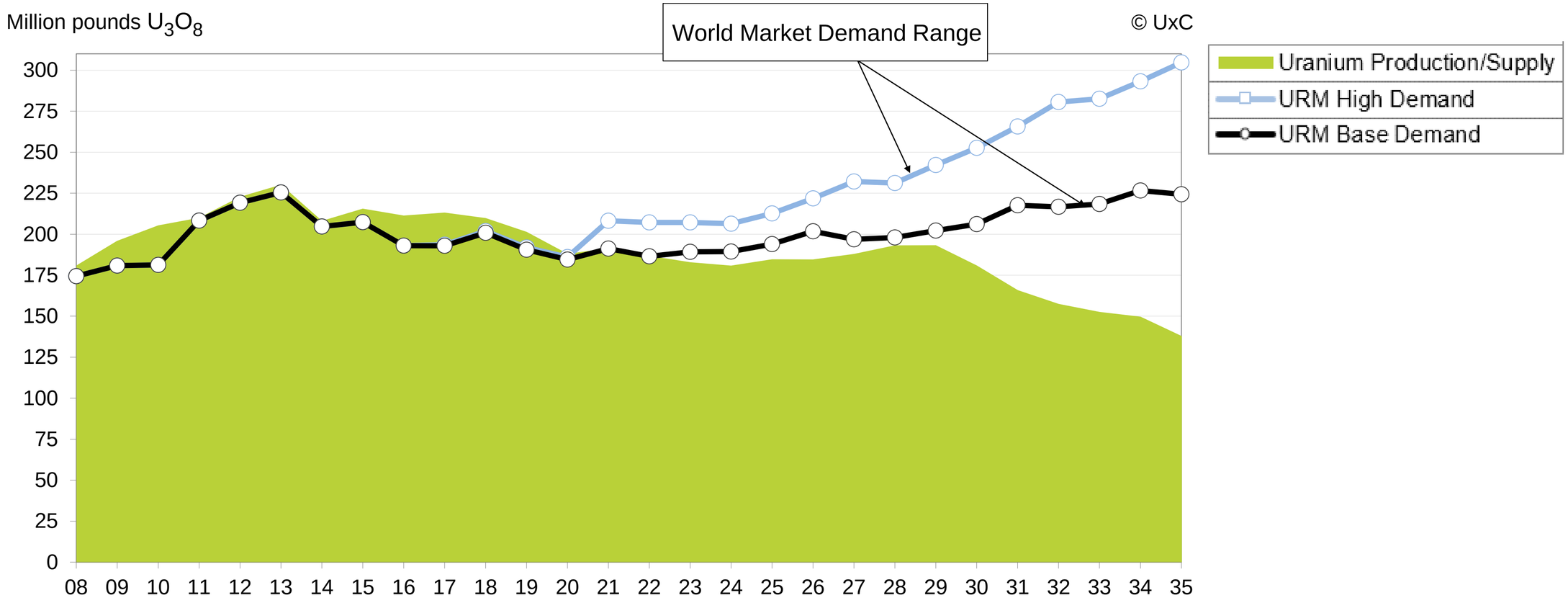


* Other Proposed Reactors include 16 proposed in Saudi Arabia, 8 in Turkey and 8 in South Africa

Source: World Nuclear Association September 2021

US Uranium Market Outlook – Supply Shortage Forecast

Mid-Case Uranium Supply and Demand Forecast

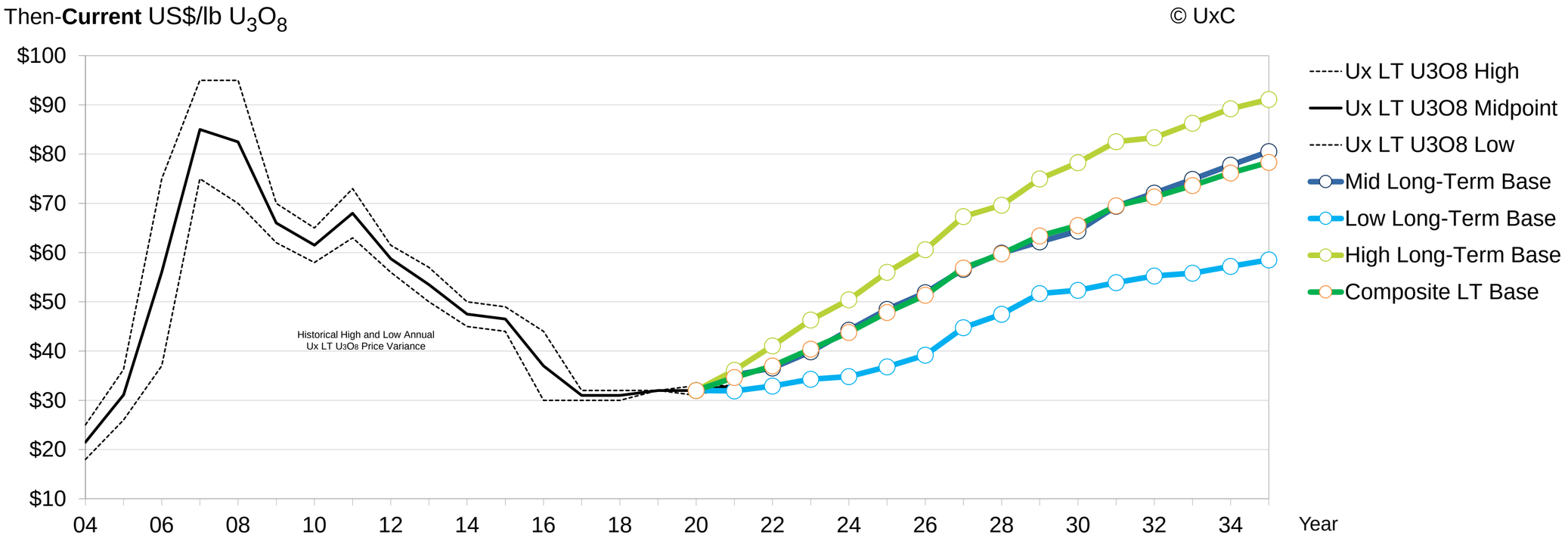


Source: UxC Uranium Market Outlook, Q3 2021

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

Uranium Price – Price Recovery Underway

Uranium Long-Term Base Price Forecast

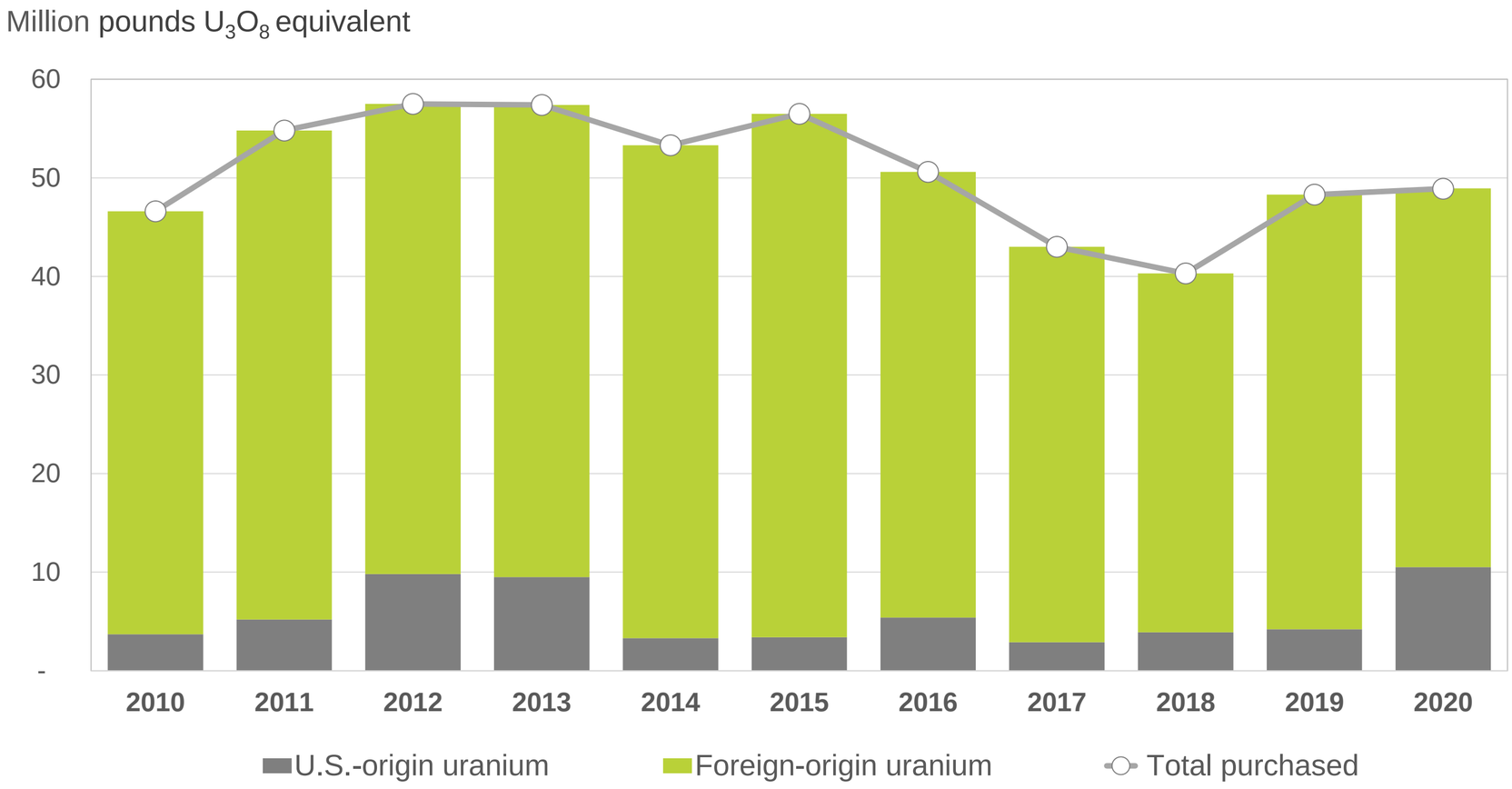


Source: UxC Uranium Market Outlook, Q3 2021

- UxC forecasts mid-case term uranium price ~$50/lb by 2025 and ~$65/lb by 2030
- Spot price now around $40/lb – up from a low of ~$18/lb in 2016
- Sprott Physical Uranium Trust (SPUT) purchasing Q3 2021 accelerated spot price rise

Paducah Opportunity may help address US Uranium Vulnerability

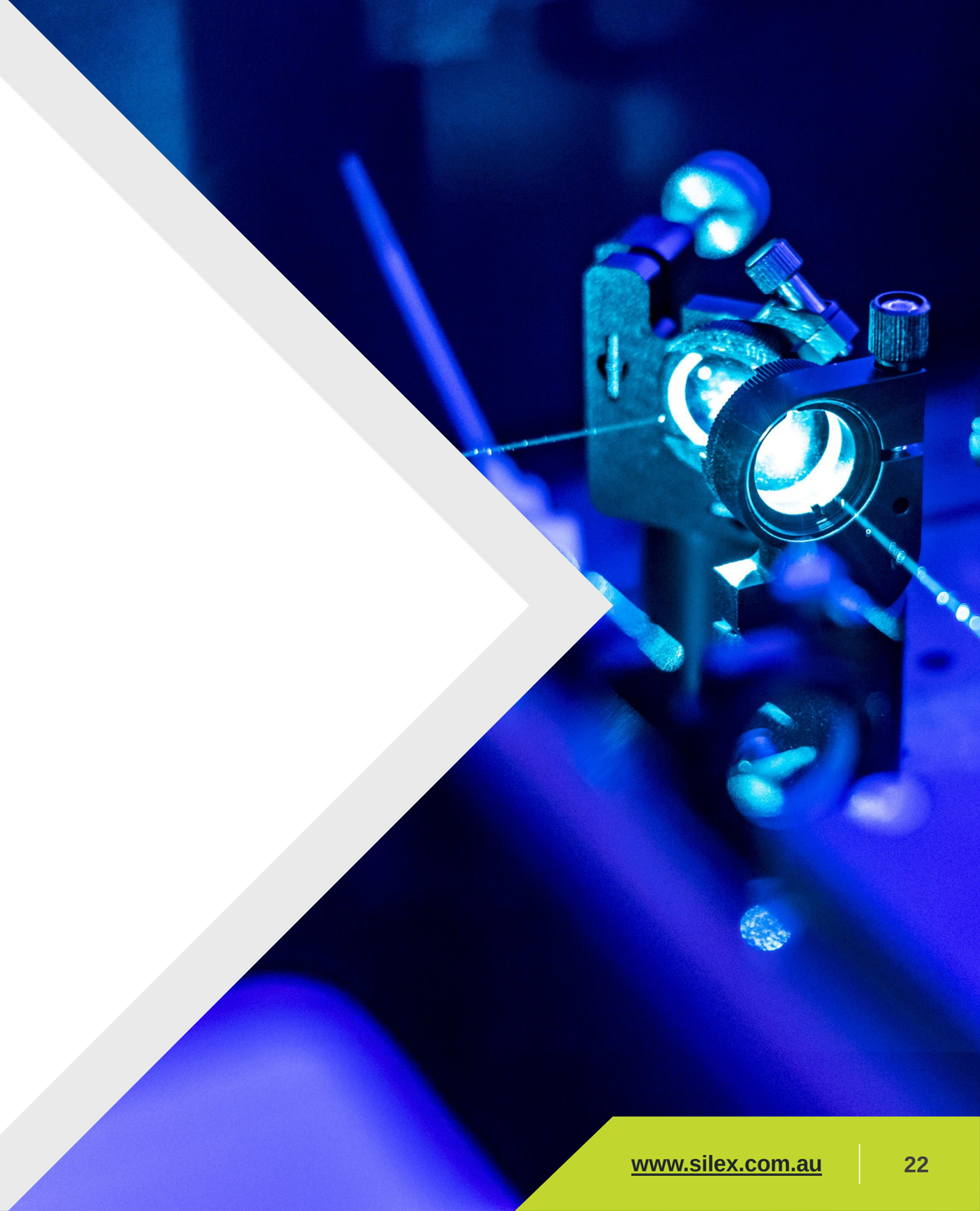
Uranium purchased for U.S. nuclear power reactors, 2010 - 2020



US Imports ~90% (avg.) of Uranium purchased

Source: 2020 EIA Uranium Marketing Annual Report
(Released May 2021)

Zero-Spin Silicon for Quantum Computing



SILEX Zero-Spin Silicon Opportunity

Global race to develop world's first Quantum Computers

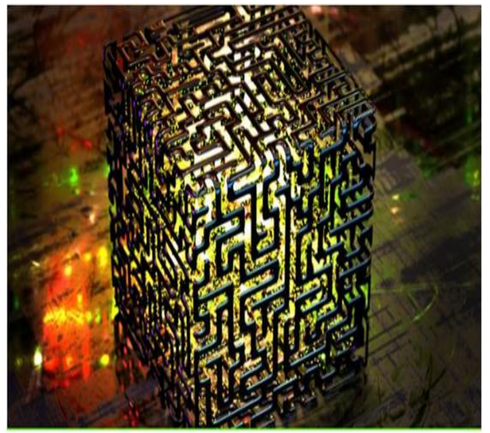
- QC's expected to be 1000's of times more powerful than today's conventional computers
- QC anticipated to create new opportunities in medicine, AI, cybersecurity, finance, logistics etc
- Governments around the world and corporates such as Intel, Google, IBM, Microsoft are vying for leadership in QC 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 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 scale-up to pilot commercial production by end of 2022
- Project partners Silicon Quantum Computing (SQC) and UNSW Sydney are initial customers
- Silex aims to engage with other potential customers, including major semiconductor companies

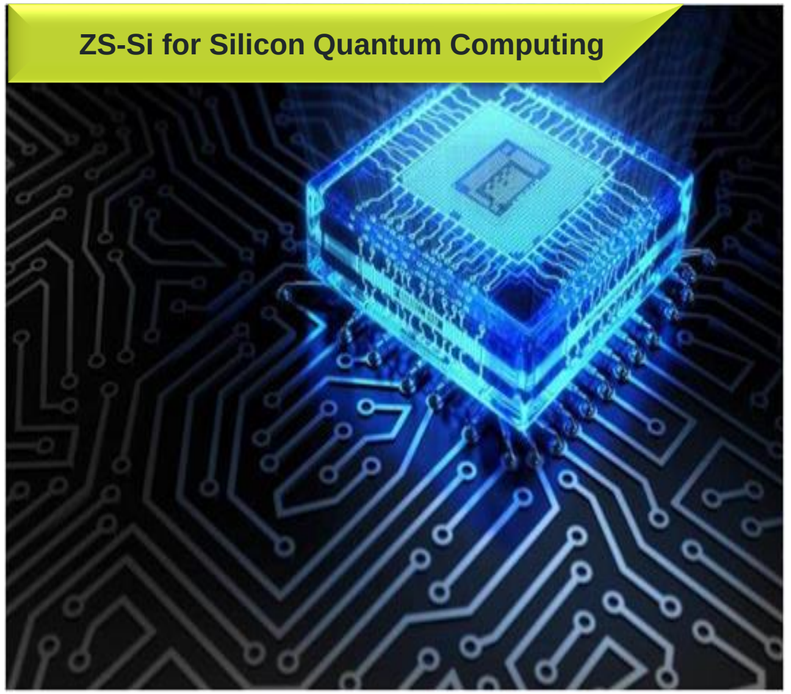


SILEX Project for ZS-Si production gathering momentum

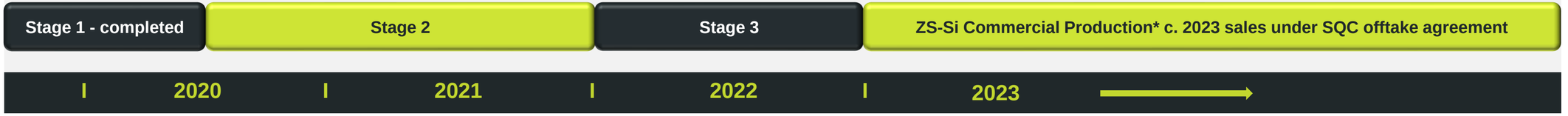
- Project partners SQC and UNSW part of the Federally funded ‘CQC2T Centre of Excellence’ – a world leader in silicon-based QC technology development
- 3-year project cost ~$8m (includes pilot plant capex) supported by $3m Federal CRC-P funding grant and $1.8m from SQC (including $0.9m in advanced ZS-Si 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:** (Current) Prototype validation of SILEX technology and scalability for ZS-Si production
- **Stage 3:** 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.

ZS-Si for Silicon Quantum Computing

Silex ZS-Si Project

Front-end process

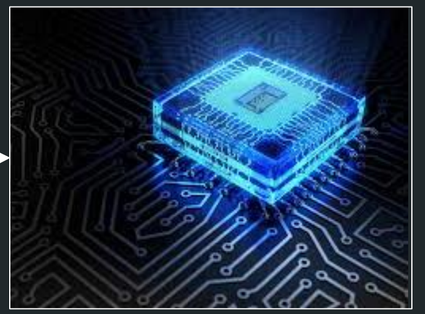
Raw silicon

SILEX ZS-Si production

SILEX enrichment

Back-end process

Pure ZS-Si



ZS-Si Quantum chips

SILEX Zero-Spin Silicon Production Opportunity

Aim

establish a reliable and economic supply of high purity ZS-Si

Target Commercial Operation Date

2023

Production

Commercial pilot scale production up to 5 kgs per year, anticipated to increase over the next decade

ZS-Si Target Purity

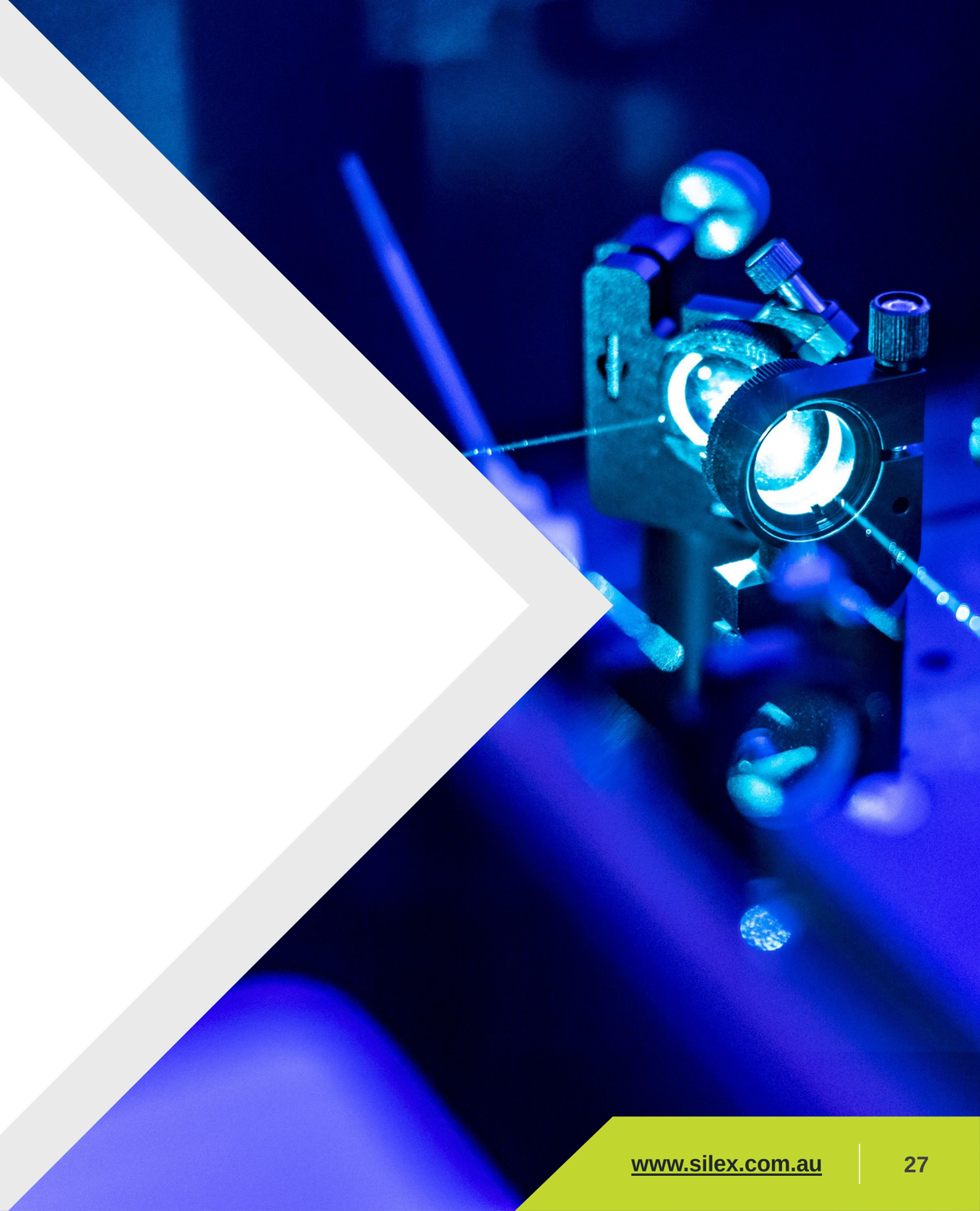
99.995% or higher

Commercial Offtake Agreement with SQC

Other potential customers to be engaged

cREO® Advanced Semiconductor Technology

(Nb. Not related to the SILEX enrichment technology)



cREO® Advanced Semiconductor Opportunity

IQE's 5G Filter Solution – IQepiMo™ based on cREO®

Silex's cREO® Advanced Semiconductor materials for 5G Mobile Applications

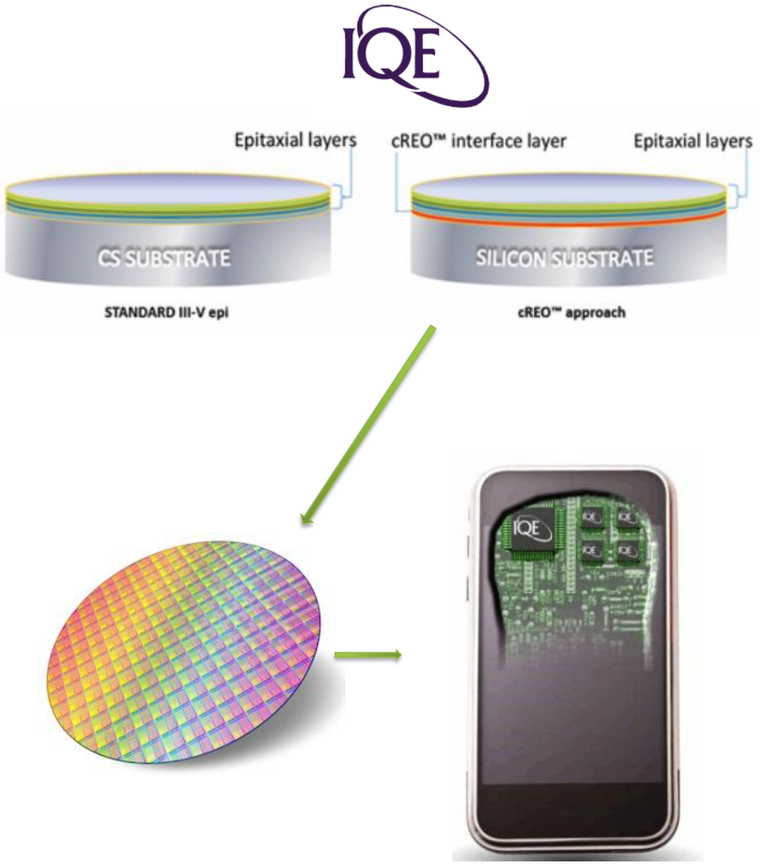
- cREO® technology purchased by IQE (AIM: IQE) in 2018 with US$5m payment
- IQE is global leader in supply of advanced wafer products for wireless devices
- Purchase includes a perpetual royalty of at least 3% on revenues derived from use of cREO®
- Currently receiving minimum annual royalties – second annual payment (US$0.4m) received February 2021

5G Handset Filter Technology Experiencing High-end Frequency Challenges

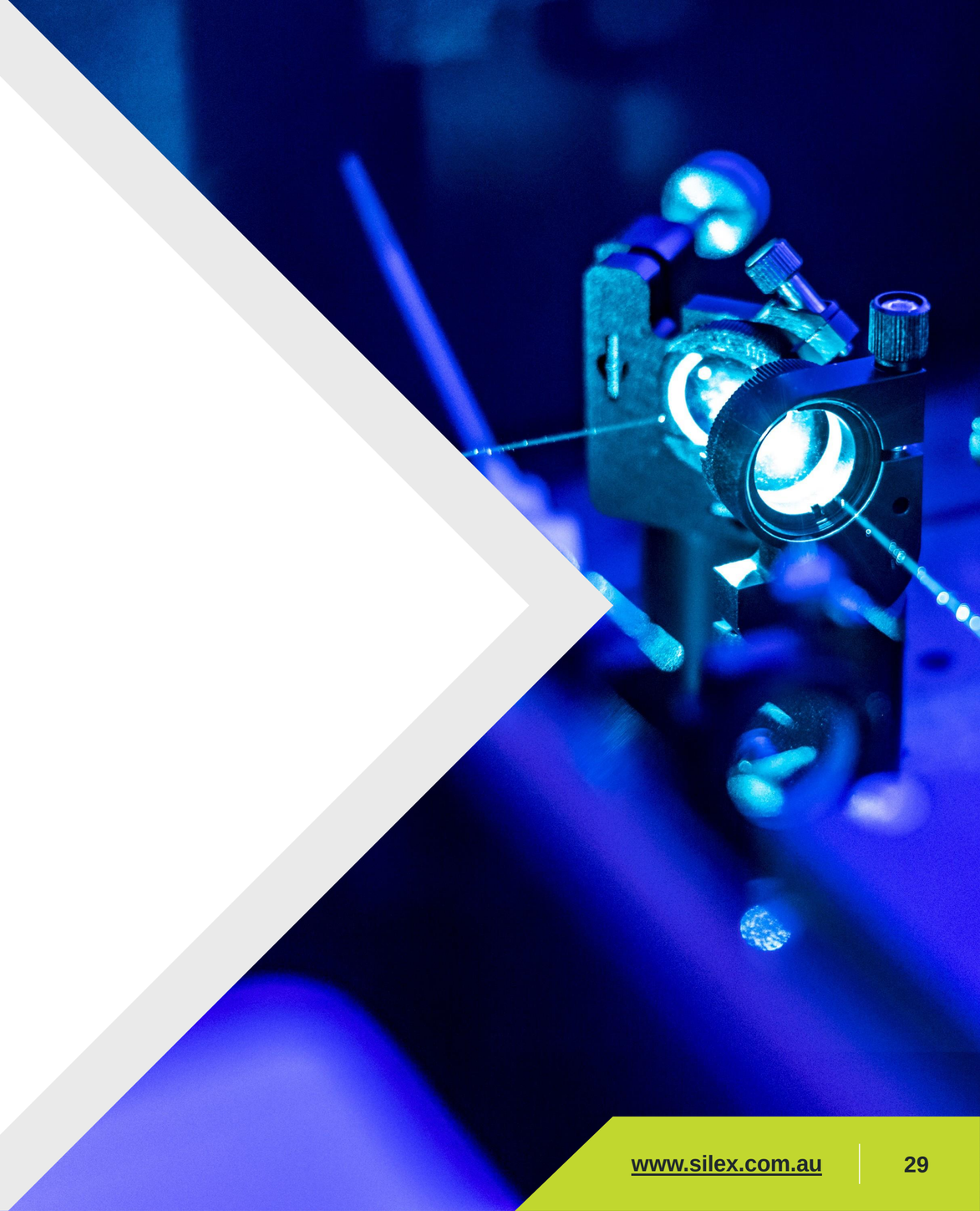
- Conventional signal processing filters experience problems at higher 5G frequencies
- 5G industry is looking for solutions compatible with 5G infrastructure and processes

IQepiMo™ based on cREO® Template Technology

- IQE's new filter device using its proprietary IQepiMo™ technology mitigates this issue
- IQE's IQepiMo™ device is enabled by use of the cREO® template technology
- cREO® may also apply to other opportunities beyond 5G filters including Power Electronics



Summary



Summary

- GLE JV (Silex 51% and Cameco 49%) aiming to demonstrate SILEX uranium enrichment technology at pilot commercial scale by the mid 2020's
- GLE's path to market focused on the Paducah opportunity - a large, low cost uranium production project with additional potential for uranium enrichment to produce LEU and HALEU nuclear fuels
- Long-term fundamentals for global growth in nuclear power remain positive, however a significant uranium supply deficit is looming in the absence of a timely increase in production
- 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 several other applications of the SILEX technology, potentially in the fields of medical radioisotopes

As at 30 September 2021, the Company had net assets of ~$51.8m, including ~$43.5m in cash and approximately ~$5.8m in IQE shares

Thank you