Investor Presentation

8 March 2023

Silex Systems Limited (Silex) (ASX: SLX) (OTCQX: SILXY) is providing an updated Investor Presentation to support upcoming Investor Relations activities, including a presentation by Dr Michael Goldsworthy, Silex CEO at the Euroz Hartleys Rottnest Institutional Conference today. The presentation provides highlights and recent progress associated with the SILEX laser-based uranium enrichment technology currently being commercialised for uranium enrichment, in conjunction with exclusive licensee, Global Laser Enrichment LLC (GLE).

GLE's joint venture owners Silex (51%) and Cameco (49%) recently agreed to a plan and budget for CY2023 that accelerates activities in the commercial-scale pilot demonstration project for the SILEX uranium enrichment technology, which creates the potential opportunity to complete the pilot demonstration project as early as mid-2024. The presentation also outlines the emerging 'Triple Opportunity' across various components of the global nuclear fuel supply chain being driven by global climate change and geopolitical issues.

An update on the Company's Zero-Spin Silicon and Medical Isotope Separation Technology Projects is also provided.

Authorised for release by the Silex Board of Directors.

Further information on the Company's activities can be found on the Silex website: www.silex.com.au or by contacting:

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Silex Systems Limited

Investor Presentation

(ASX: SLX) (OTCQX: SILXY)

Dr Michael Goldsworthy
CEO/Managing Director

8 March 2023

Forward Looking Statements and Risk Factors

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

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

Silex is also pursuing additional commercial applications of the SILEX technology, including i) the 'Zero-Spin Silicon' (ZS-Si) Project for production of enriched silicon used in the emerging technology of silicon-based quantum computing; and ii) the Medical Isotope Separation Technology (MIST) Project for the enrichment of isotopes used to produce medical radioisotopes. Each of these projects remain dependent on the outcomes of research and development activities and the commercial viability of the usage of the relevant enriched materials, and are therefore subject to various risks. The commercial future of the SILEX technology in application to uranium, silicon, medical and other isotopes is therefore uncertain and any plans for commercial deployment are speculative.

Forward Looking Statements

The commercial potential of the Company's 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 Company's technologies 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 current economic conditions and the significant volatility and uncertainty associated with climate change, geopolitical and other 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 US Companies), Silex does not intend, and is not obligated, to update the forward-looking statements and Silex disclaims any obligation or undertaking to update forward-looking statements in this Presentation to reflect any changes in expectations.

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

Risk Factors

Risk factors that could affect future results and commercial prospects of Silex include, but are not limited to: ongoing economic and social uncertainty, including in relation to the impacts of the COVID-19 pandemic; geopolitical risks, in particular relating to Russia's invasion of Ukraine and tensions between China and Taiwan which may impact global supply chains among other risks; uncertainties related to the effects of climate change and mitigation efforts; the results of the GLE/SILEX uranium enrichment 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 outcome of the Medical Isotope Separation Technology 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 US, Australia or elsewhere; whether IQE's commercialisation program for cREO® is resumed, the results from the program and the market opportunities for cREO® products; actions taken by the Company's commercialisation partners and other stakeholders that could adversely affect the technology development programs and commercialisation strategies; and the outcomes of various strategies and projects undertaken by the Company.

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

Uranium production and enrichment
(nuclear power)

Silicon enrichment
(silicon quantum computing)

Other potential markets
(e.g. medical isotopes)

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

Investment Focus – Strong ESG Credentials

Investment in three key growth industries with strong ESG credentials:

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

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

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

- Fueling carbon free electricity generation for the world's emergent clean energy needs
- Potential production of nuclear fuel in the form of natural UF_6 and enriched UF_6 (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 – a strategic technology – will drive new frontiers in AI, medicine, cybersecurity etc

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

- Enriched Ytterbium (Yb-176) can potentially provide a new low-cost path to production of Lutetium-177 to diagnose and treat many metastatic cancers – could revolutionise nuclear medicine

Focus on Commercialisation

Uranium production and enrichment
(nuclear power)

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

1. *Natural UF_6*
2. *Low Enriched Uranium (LEU, LEU+)*
3. *High Assay LEU (HALEU)*

Acceleration of GLE's CY2023 Activities for SILEX technology

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

- GLE joint venture owners Silex (51%) and Cameco (49%) have agreed to a plan and budget for CY2023 that accelerates activities in the commercial-scale pilot demonstration project for the SILEX uranium enrichment technology
- The CY2023 plan and budget involves bringing forward activities, approximately doubling project expenditures compared to CY2022 - creating the potential opportunity to complete the commercial-scale pilot demonstration project as early as mid-2024 (previously c.2025)[1]
- Earlier demonstration of the SILEX technology at commercial pilot scale preserves the option of commencing commercial operations at the planned Paducah Laser Enrichment Facility (PLEF) as early as 2027/28 (up to three years earlier than originally planned)[2]

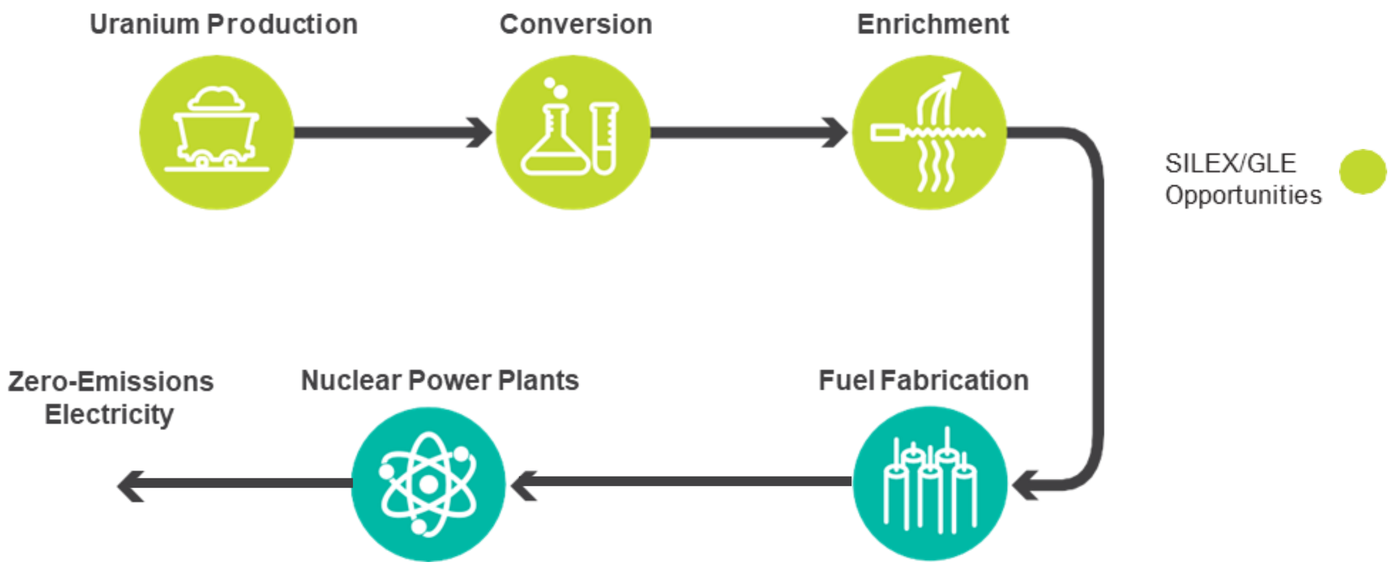
Significant Support Emerging from the US Government and Industry:

- US Government passed 'Inflation Reduction Act' in August 2022 - includes US$700 million support for the HALEU[3] Availability Program
- New Nuclear Fuel Security Act before Congress could provide additional funding support for LEU / HALEU production
- GLE signed LOIs[4] with US utilities Constellation Energy Generation and Duke Energy to support GLE's commercialisation

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

Nuclear Fuel Production and Emerging Threats

The Nuclear Fuel Supply Chain

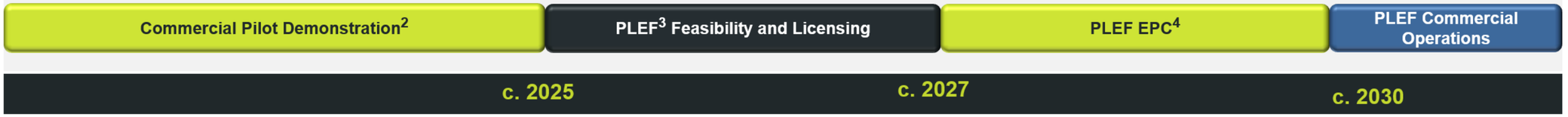


Emerging Threats to the Global Nuclear Fuel Supply Chain:

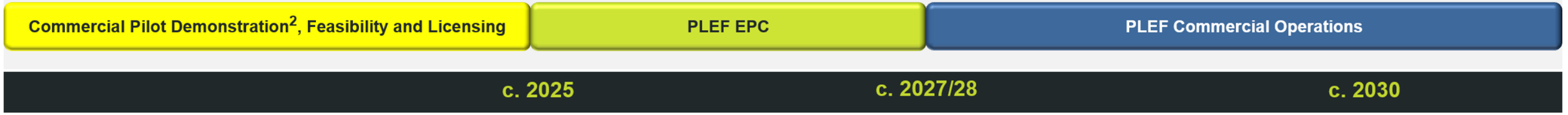
- Supply chain risks exposed by over-dependence on Russian-sourced nuclear fuel
- Western supply - curtailments and under-investment in resources and production capability
- Conversion services – only 3 Western suppliers (Cameco, Orano, Converdyn) excluding Russia
- Enrichment services – only 2 Western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

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

Baseline - GLE Commercialisation Timeline:



Potential Acceleration - GLE Commercialisation Timeline[5]:



Up to 3 years earlier than originally planned

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

GLE Value Proposition for Silex*

1) GLE Equity – Minimum 25%:

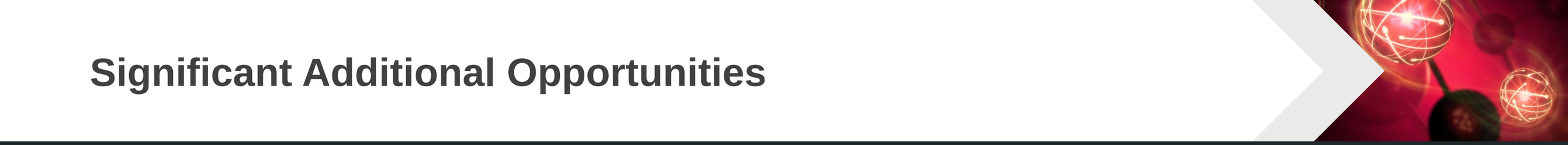
- Currently 51% - potentially 25% post-Cameco Option, with payment for 26% at fair market value
- Significant equity stake in GLE as a potential major nuclear fuel supplier
- Attractive business case with Triple Opportunity and very high entry barriers

2) SILEX Technology Licence and Perpetual Royalty:

- Technology classified by Australian and US Governments with no patent disclosures permitted
- Technology kept as Trade Secret under strictest security mandates → no IP sunset
- Perpetual SILEX royalty of 7% to 12% on GLE's enrichment SWU revenues could potentially reach, for example, ~US$75m per yr for 8 MSWU PLEF operations (at 7% royalty rate and current SWU price)

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

Significant Additional Opportunities



Silicon enrichment
(silicon quantum computing)

- SILEX technology proven capable of producing highly enriched silicon in the form of ZS-Si (December 2022)
- ZS-Si project transitioning from engineering demonstration to initial commercial production during 2023

Zero-Spin Silicon (ZS-Si) Commercialisation Project:

- Initial ZS-Si project achieved target milestones, including 99.995% pure enriched Si-28 with the pilot demonstration facility
- Production scalability path identified – to be implemented in 2023 as focus transitions to initial commercial production activities
- New project focuses on initial commercial production and product conversion capability for solid ZS-Si and gaseous ZS-Si silane required by various potential customers

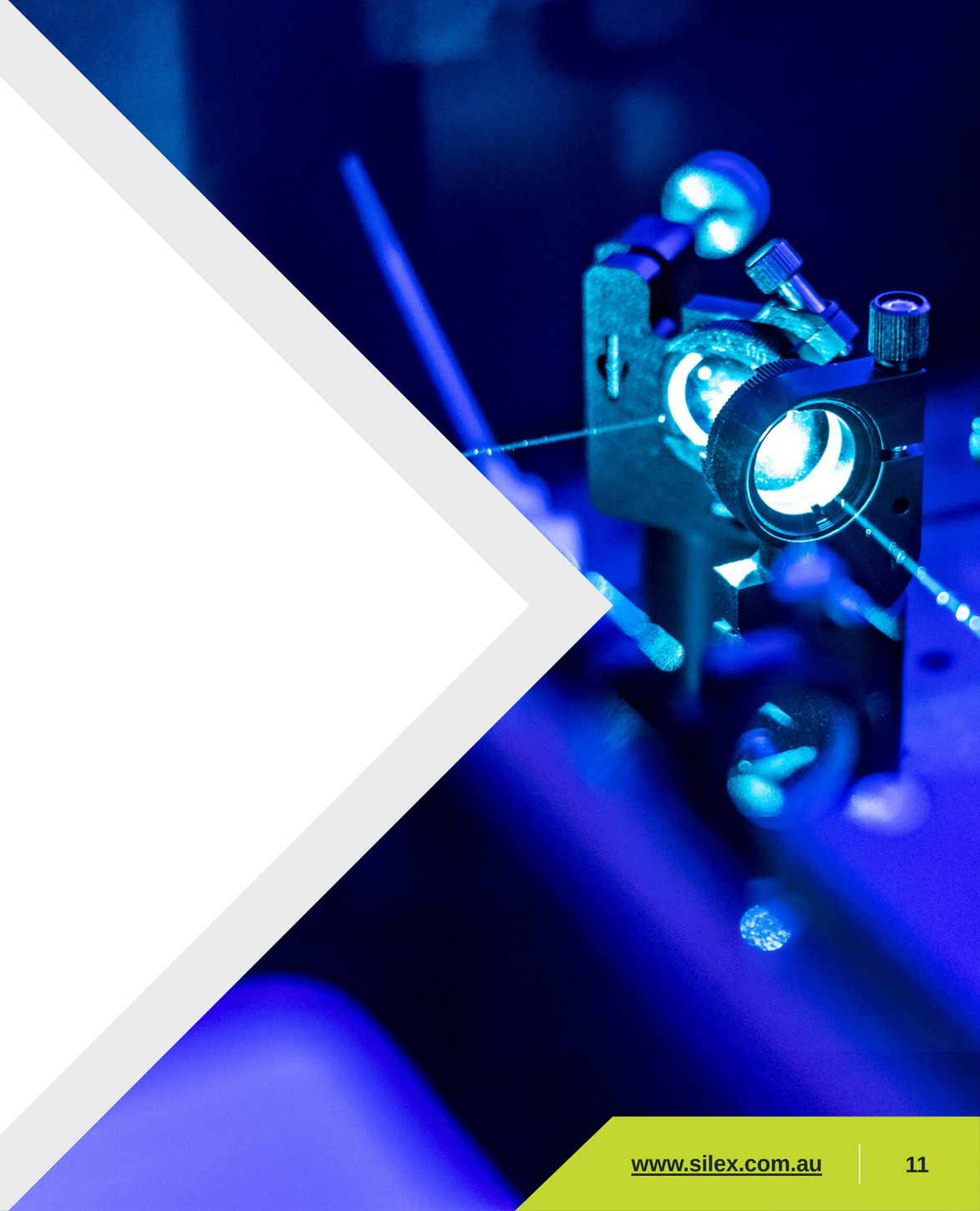
Other potential markets
(e.g. medical isotopes)

- Newly commenced Medical Isotope project aiming to develop and demonstrate technology for enriched Ytterbium (Yb-176) – a key enabling material for revolutionary nuclear medicine cancer treatment

Medical Isotope Separation Technology (MIST) Project:

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

Nuclear Power Outlook – Key Drivers for Growth of Enrichment of Nuclear Fuel



Nuclear Power Imperatives

Response to Climate Change:

- Population growth and industrialisation → surging increase in energy demand
- Urgent climate action (Net-Zero 2050) → driving rapid global energy transition
- De-carbonisation and electrification → increasing importance of nuclear power

Energy Security:

- Russian invasion of Ukraine → precipitating global energy supply disruptions
- Renewed focus on energy security → supply chains, stability, resilience
- New geopolitical landscape (Russia, China…) → nuclear offers path to energy independence

Nuclear Power Renaissance:

- US moving to regain nuclear energy leadership → several USG funding initiatives
- European energy supply upheaval → driving renewed interest in nuclear power
- Asia (China, India, Japan, South Korea …) → undertaking largest nuclear build in history

92
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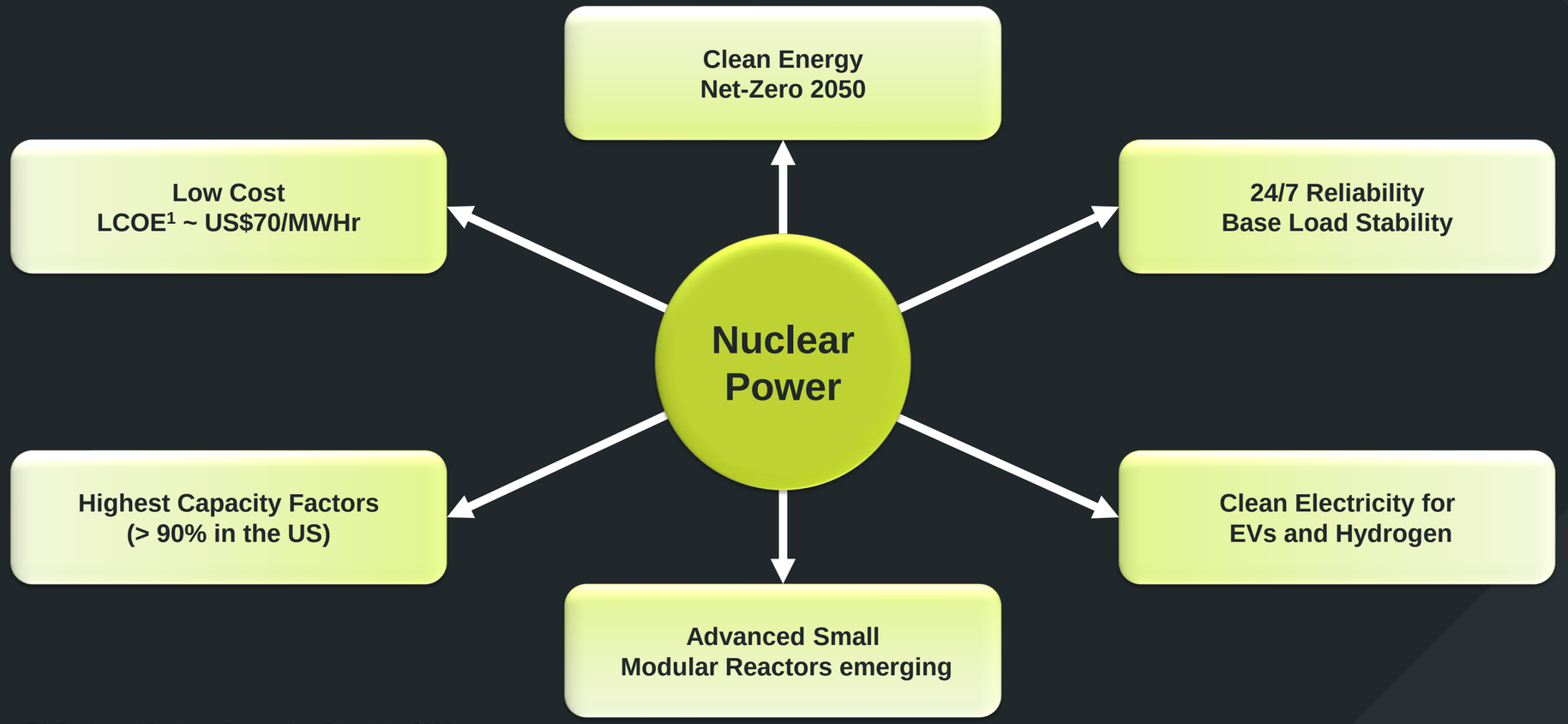
Why Nuclear Power is important to achieving Net-Zero

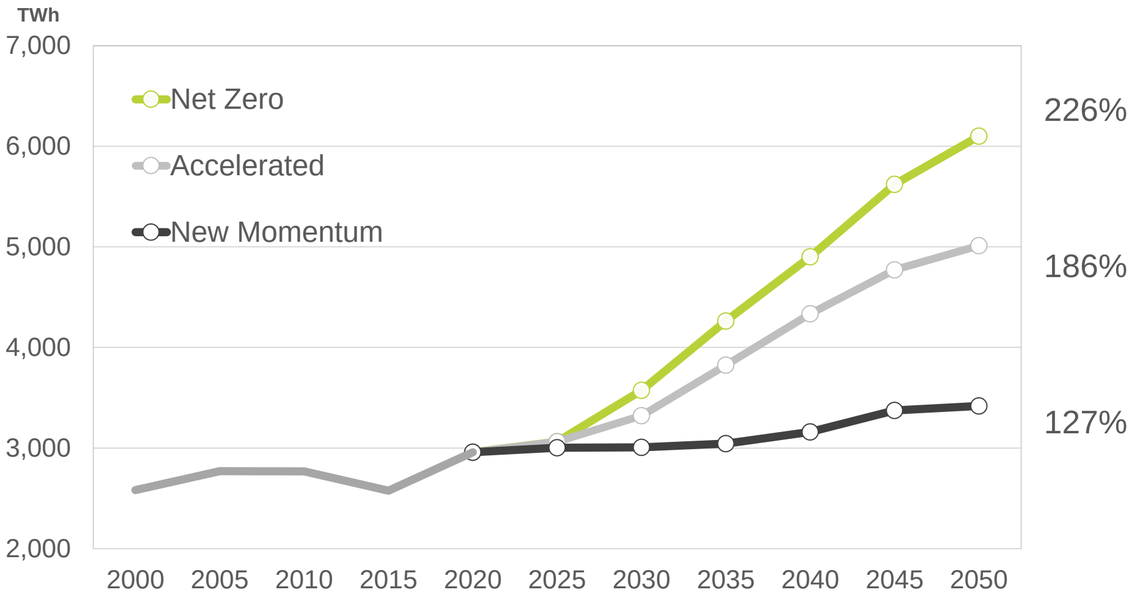
Nuclear power is currently the only economic source of zero-emissions base load electricity



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

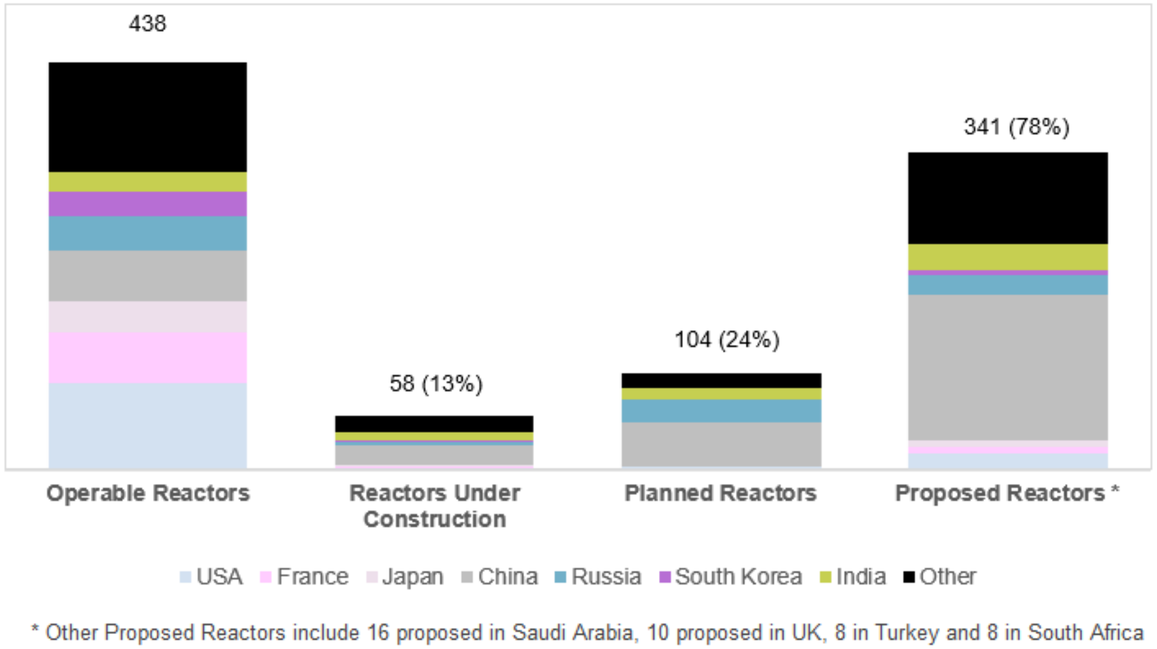
Significant Nuclear Power Growth to achieve Net-Zero 2050

Nuclear Generation Growth Scenarios



Source: BP Energy Outlook 2022 Edition

Conventional Large-Scale Reactor Population



Source: World Nuclear Association January 2023

Nuclear Fuel Supply Chain – Emerging Threats lead to Opportunities

US and EU Nuclear Fuel Requirements Supplied by Russia

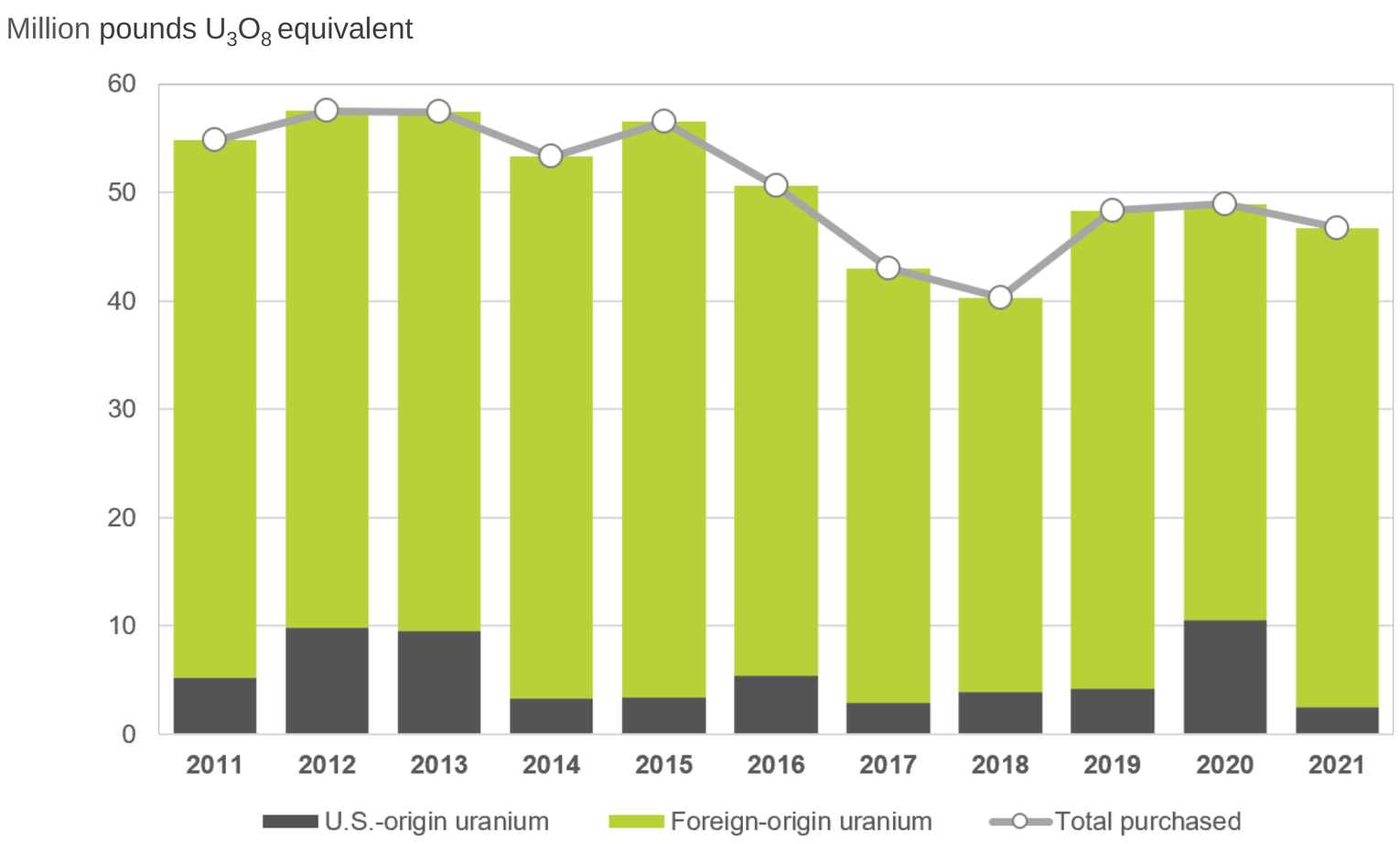
	Russian Share of Global Production Capacity[1]	EU Nuclear Fuel Supplied by Russia[2]	US Nuclear Fuel Supplied by Russia[1,3]
Uranium (U_3O_8)	~14%	~20%	~14%
Conversion	~27%	~24%	~18%
Enrichment (SWU)	~45%	~31%	~20%

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

- Major concerns regarding Western reliance on Russia for supply of nuclear fuel
- US is the largest market for nuclear fuel with ~25% of world's nuclear reactor fleet
- US currently imports the vast majority of its nuclear fuel:
  - 95% of its uranium requirements (including ~14% from Russia)
  - 100% of its conversion requirements (including ~18% from Russia)
  - 70% of its enriched uranium requirements (including ~20% from Russia)

PLEF Opportunity may help address US Uranium Vulnerability

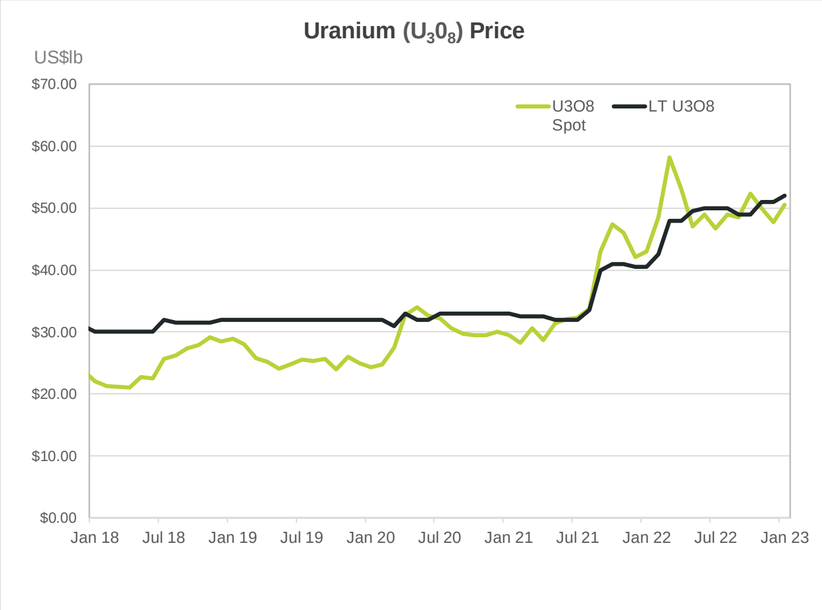
Uranium purchased for US nuclear power reactors, 2011 - 2021

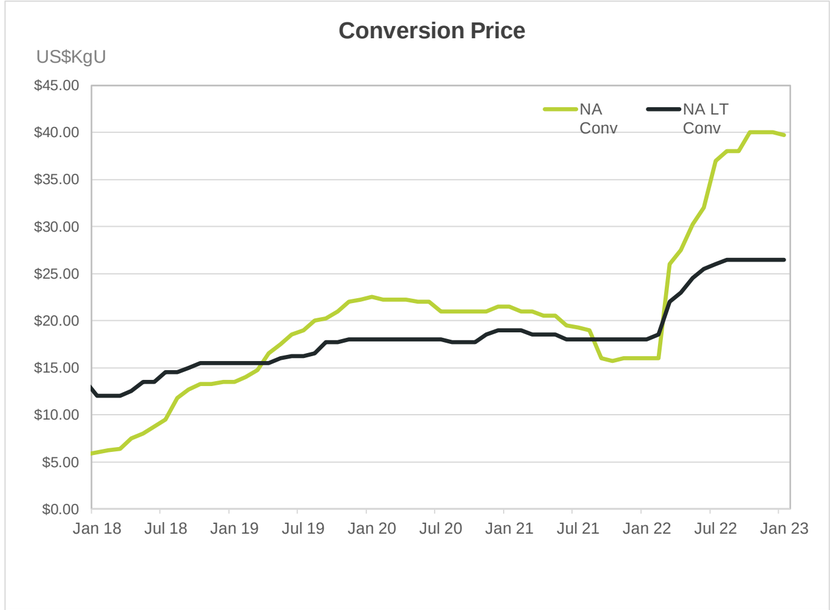


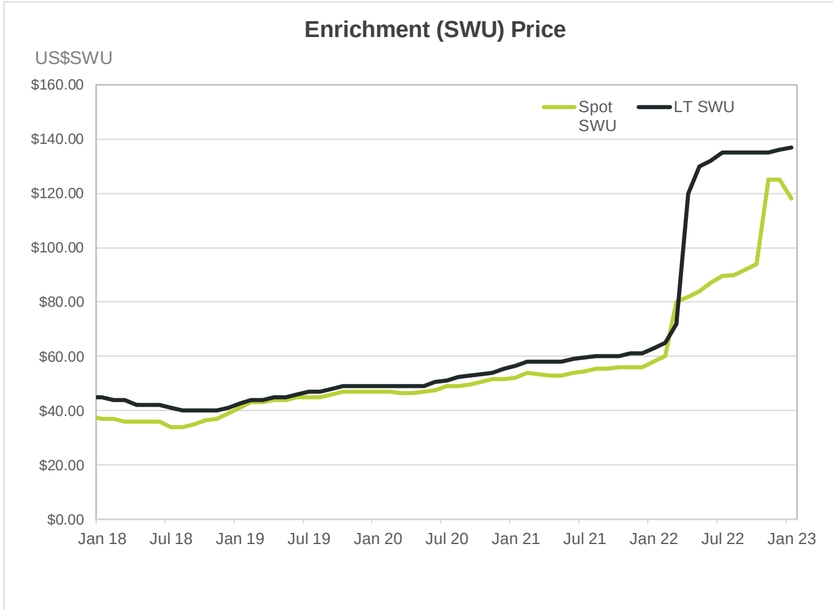
US imported ~95% of Uranium purchased in 2021

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

Recent Nuclear Fuel Market Price Trends



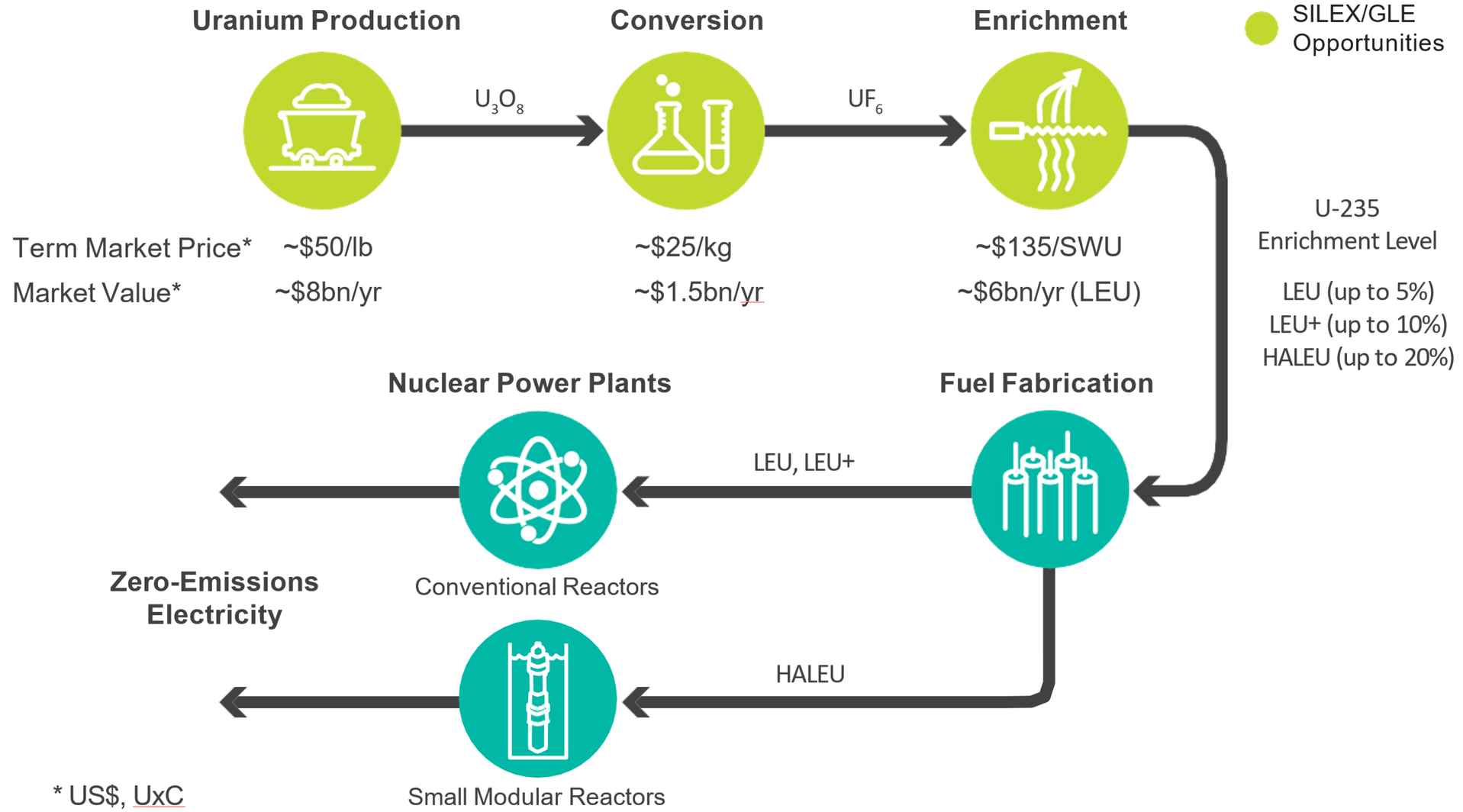




- Global nuclear fuel markets are pricing in the impact of a bifurcating market precipitated by looming Russian fuel sanctions
- According to UxC, Uranium spot price has increased by ~200% from ~US$18/lb (2016) to ~US$55/lb (2022)
- Conversion term prices have increased ~100% over the same period to ~US$25/kg
- Enrichment term prices have increased ~240% over the same period to ~US$135/SWU

Nuclear Fuel Supply Chain – Triple Opportunity for GLE and SILEX Technology

Nuclear Fuel Opportunities for GLE and the SILEX Technology



GLE's Multi-Purpose PLEF Production Plant Opportunity

The PLEF Triple Opportunity

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

- ***PLEF UF_6 Production:*** Production of up to 5 million pounds natural grade uranium (as UF_6) annually for up to 30 years - underpinned by GLE's 2016 agreement with US DOE to purchase over 200,000 metric tons of legacy tails inventories
- ***PLEF LEU Production:*** Add-on opportunity to enrich PLEF output to produce Low Enriched Uranium (LEU/LEU+) for nuclear reactor fuel
- ***PLEF HALEU Production:*** Additional opportunity to enrich High Assay LEU (HALEU) for next generation Small Modular Reactors (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)

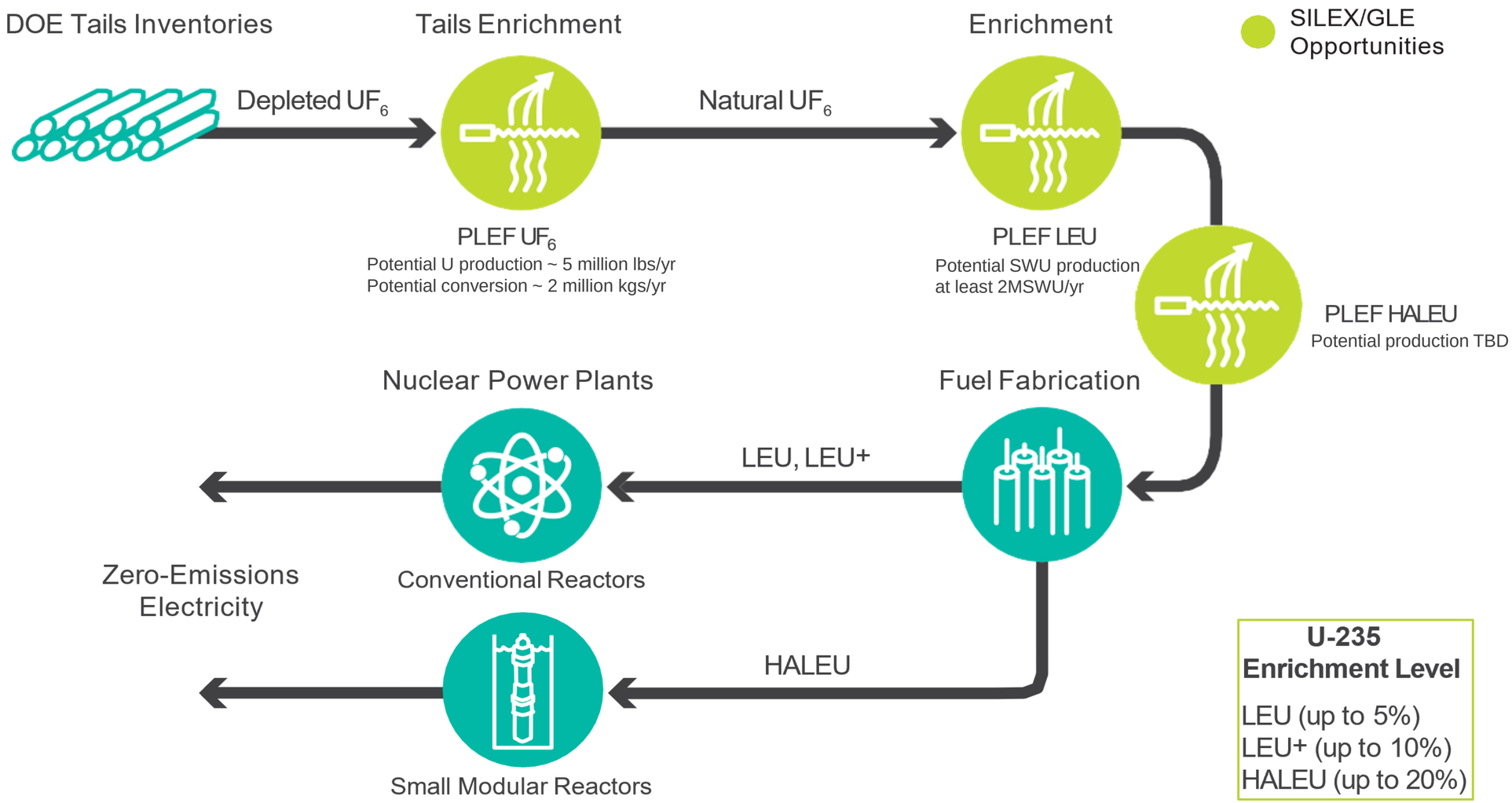
for conventional nuclear power reactors
LEU includes U^{235} assays of 3% to 5%
LEU+ includes U^{235} assays of 5% to 10%

PLEF HALEU

High Assay LEU (HALEU)

fuel for next generation advanced SMRs currently under development
includes U^{235} assays up to 19.9%

Nuclear Fuel Opportunities for GLE and the SILEX Technology



PLEF UF_6 Production Opportunity

(Natural UF_6 production from tails)

Target Commercial Operation Date

Baseline: c. 2030

(with potential acceleration by up to 3 years)

Akin to a 'Tier 1' Uranium Resource*

Based on low cost and longevity of production

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

Equivalent U_3O_8 Production

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

Potential capture of Conversion value

Feed and Product is UF_6 (current conversion value ~US$25/kg)

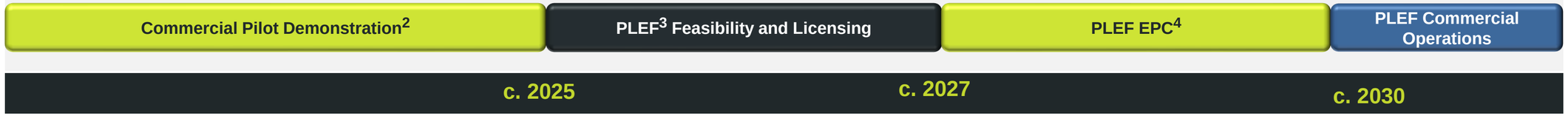
Potential to enrich further

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

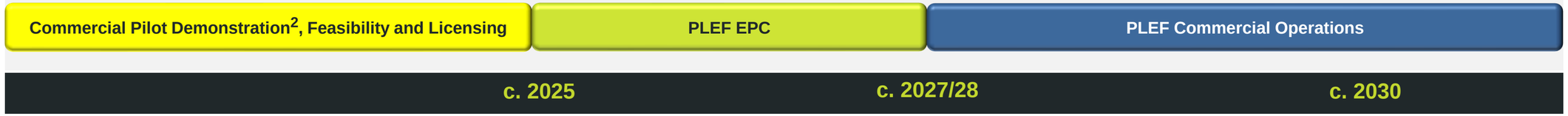
* All production estimates are based on preliminary modelling by Silex of project economics and longevity. Actual production output will depend on prevailing uranium market prices and other factors.

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

Baseline - GLE Commercialisation Timeline:



Potential Acceleration - GLE Commercialisation Timeline[5]:



Up to 3 years earlier than originally planned

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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

Cameco Equity Option and Perpetual SILEX Technology Licence

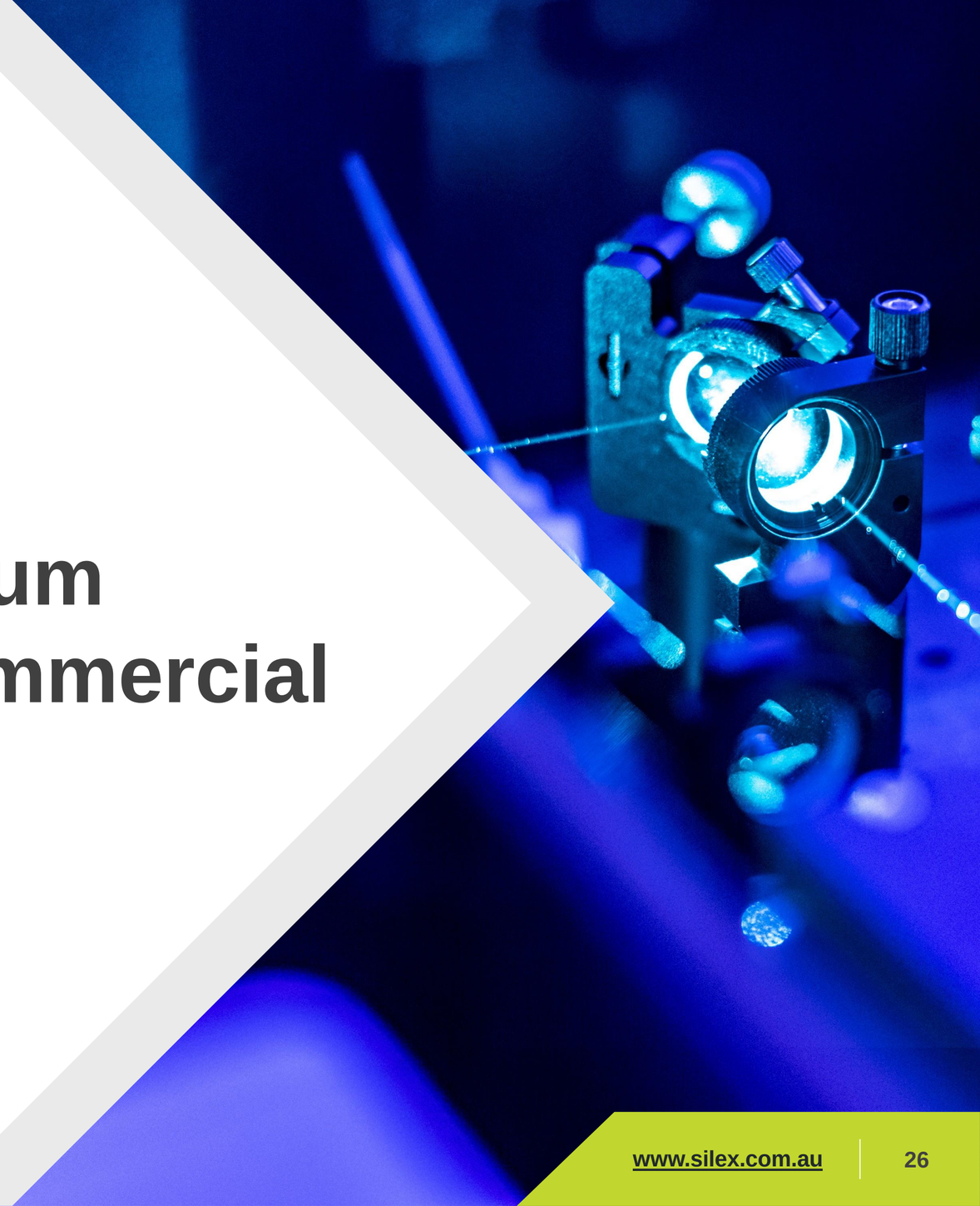
Cameco Equity Option:

- 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 open February 2023 until completion of PLEF feasibility study
- Cameco's transition to majority ownership (and payment for transaction) subject to US Government approvals

Technology licence and Perpetual Royalty:

- GLE holds exclusive worldwide licence for use of SILEX laser technology for uranium enrichment
- Licence agreement includes US$20 million in payments to Silex triggered by commercialisation milestones
- Perpetual royalty of 7% to 12% on GLE's enrichment SWU revenues from use of SILEX technology for production of natural and enriched uranium

Zero-Spin Silicon for Quantum Computing – scaling for commercial production



SILEX Zero-Spin Silicon Opportunity

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

- QCs expected to be many times more powerful than today's conventional computers
- QCs will create new opportunities in medicine, AI, defence, cybersecurity, finance, logistics, etc
- Governments and corporates (e.g. Intel, Google, IBM, Microsoft) are vying for leadership in QC technology
- QC and the associated ecosystem is a key Australian Government priority

Silicon Quantum Computing (QC) is a leading contender

- 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 timely commercialisation

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

- SILEX technology proven capable of producing highly enriched silicon (~99.995%) in the form of ZS-Si
- ZS-Si project also recently confirmed production scalability path – aiming to implement in 2023
- Initial commercial production will include two product formats: solid ZS-Si and gaseous ZS-Si silane
- Project partners Silicon Quantum Computing (SQC) and UNSW Sydney are initial offtake customers
- Silex aims to engage with other potential customers, including major semiconductor and QC companies

Original SILEX Project for ZS-Si Production

- 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 (incl. pilot plant capex), supported by $3m Federal CRC-P grant and $1.8m from SQC (including $0.9m in advanced ZS-Si purchases)
- Project demonstrated capability for reliable and cost effective production of ZS-Si for potential sale in the emerging global QC industry
- ***Target enrichment objectives achieved in December 2022 - confirmed target purity of ~99.995% and verified production scalability***

3-stage project demonstrated production of ZS-Si in increasing purity and quantity:

- **Stage 1 –** Completed June 2020

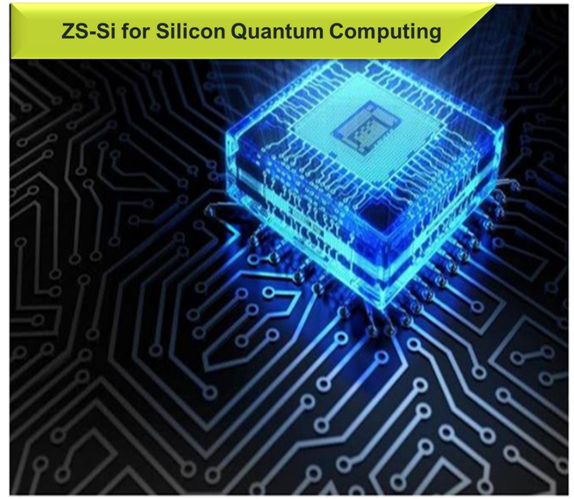
  Established lab-scale ‘proof-of-concept’ for the SILEX process
- **Stage 2 –** Completed January 2022

  Prototype validation of SILEX technology and scalability for ZS-Si production
- **Stage 3 –** Testing and validation completed February 2023, final reporting requirements being completed

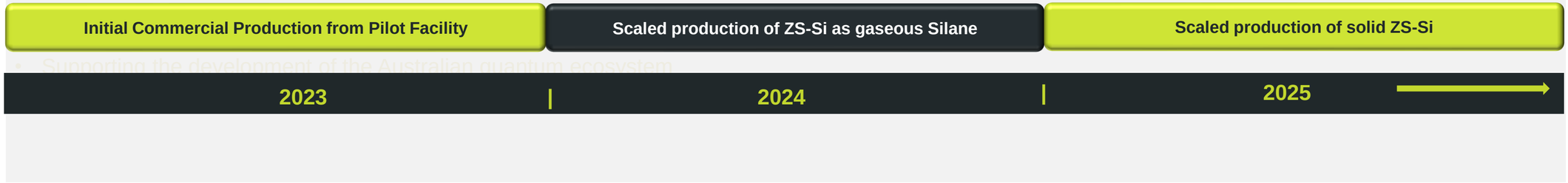
  Full technology demonstration of ZS-Si production at commercial pilot scale

Scaling for Initial Commercial ZS-Si Production

- SQC and UNSW Sydney first offtake customers as ZS-Si production scaled
- Commercial production targeting two product formats:
  - solid elemental silicon (Polysilicon and Monosilicon) – for SQC/UNSW and other customers
  - gaseous silane – for chemical vapour deposition (CVD) processing – for new potential customers
- Focus on increasing production capacity - initially up to 10kg p.a. – potentially higher subject to market demand
- Increasing engagement with domestic and international customers to develop revenue streams
- Delivering an end-to-end, high technology manufacturing process for a critical enabling material
- Providing a path to a secure and resilient supply chain - free of dependence on Russian-sourced material



Scaled ZS-Si Production and Commercialisation Timeline*:



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

SILEX Zero-Spin Silicon Production Opportunity

Aim

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

2023 - Commercial Pilot Operation

To produce initial commercial quantities of ZS-Si

(up to 5kgs per annum)

2024 - Commercial Production Scale-up

Commercial production of up to 10 kgs per year, depending on demand

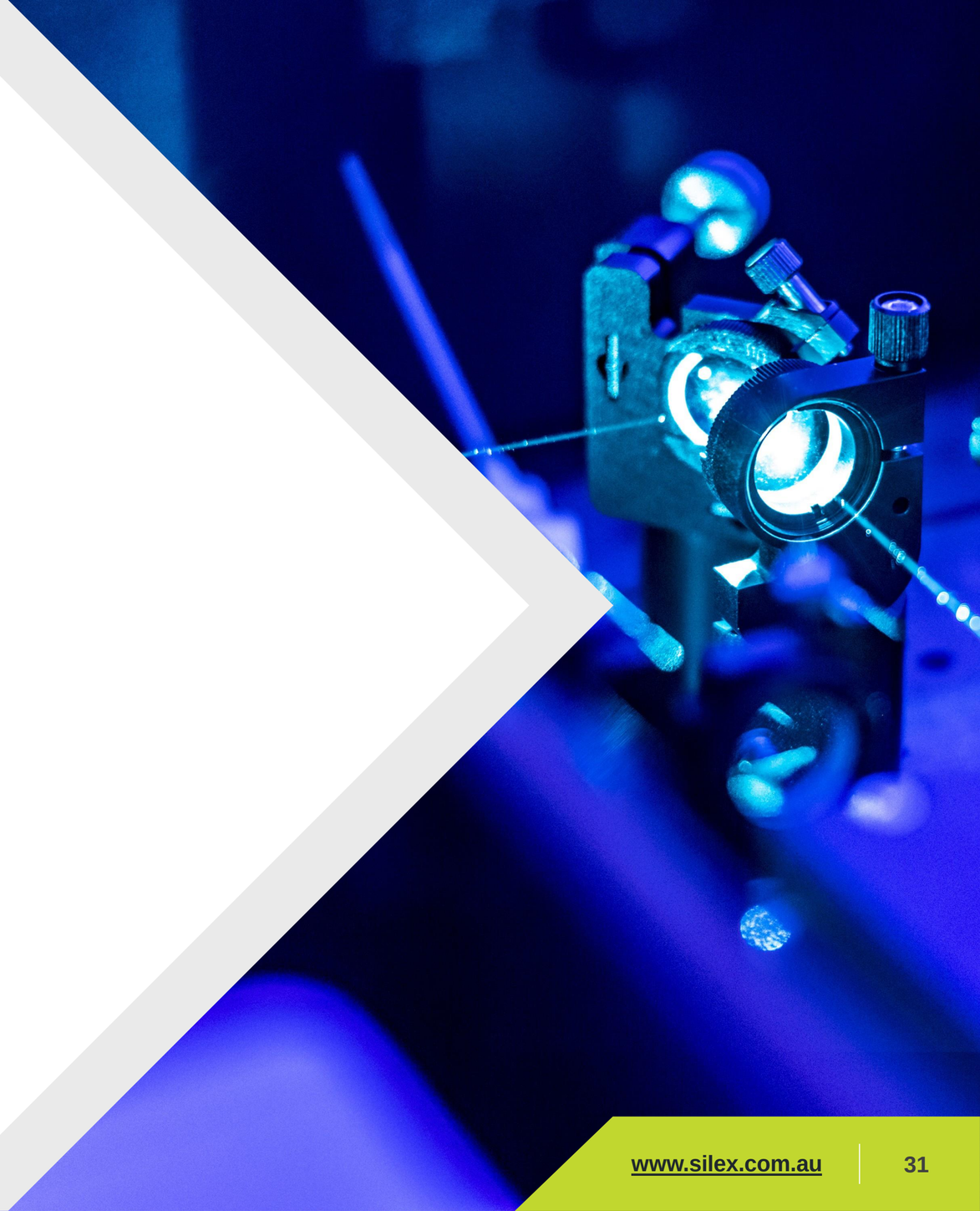
Product Conversion Capability

Converting from ZS-Si to solid ZS-Si and silane ZS-Si gas

Marketing and Commercial Offtake Agreements

Other potential offshore customers to be engaged

Medical Isotope Separation Technology (MIST) Project



Medical Isotope Separation Technology (MIST) Opportunity

Opportunity to become a vital cog in a revolution in nuclear medicine

- Lutetium (Lu-177) is a breakthrough development for the diagnosis and treatment of aggressive metastatic cancers
- Lu-177 has been approved in the UK and US for advanced prostate cancer and is in clinical trials for other cancers
- Lu-177 is produced from enriched Ytterbium (Yb-176) in nuclear reactors or accelerators
- Previous supply of enriched Yb-176 was met by Russia, with high costs and significant supply risks
- The Russian invasion of Ukraine has disrupted the supply of this critical medical isotope precursor
- A stable supply chain for Yb-176 is critical for the ongoing development of Lu-177-based diagnostics and treatments
- Silex has commenced a proof-of-concept assessment to investigate economic production of high purity Yb-176

The SILEX MIST opportunity

- Stable isotopes provide the opportunity to diversify and leverage our core asset – the SILEX technology – in new markets
- MIST Project draws on technical and project execution expertise established over the last 20+ years
- Potential to partner with major players in the radiopharmaceutical and broader nuclear medicine industries
- Over 40 million nuclear medicine procedures performed yearly – with radioisotope demand increasing at up to ~5% annually
- Production of other medical radioisotopes may be investigated in future (Molybdenum-100, Oxygen-18, Thallium-201 etc.)

The Importance of Lutetium-177 in Nuclear Medicine

How Lu-177 is utilised in nuclear medicine procedures:

- Lu-177 is an important radioisotope introduced only recently – now approved for several cancer treatments
- Lu-177 is expected to become one of the most widely used therapeutic radionuclides in the near future
- The combination radiopharmaceutical attaches to cancer cells and uses low energy beta particles to irradiate and kill the cells
- The treatment allows the accurate localised irradiation of cancer cells with minimal collateral damage to healthy adjacent cells
- Lu-177 also emits low-energy photons that can be used to diagnose cancerous growths through external imaging
- Serves both a therapeutic and diagnostic function – and is a true ‘theranostic’ isotope

Supply chain disruption provides unique long term opportunity:

- Unfolding global supply disruption for the precursor isotope enriched Yb-176 – previously sourced from Russia
- Potential to partner with the global pharmaceutical industry if viable economic enrichment of Yb-176 can be demonstrated
- Economics being driven by lack of supply and growing demand from the nuclear medicine industry
- Current prices ($1000’s per gram) increasing as inventories are consumed – long term economics expected to remain attractive

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

3-year, stage-gated project aims to to develop production technology to produce enriched Yb-176:

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

Yb-176 Production Commercialisation Timeline*:

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

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

Medical Isotope Separation Technology Project: Yb-176

Aim

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

Project Outline

Stage 1: Proof of Concept - 2023

Stage 2: Prototype Validation - 2024

Stage 3: Pilot Demonstration - 2025

Initial Commercial Production

Enriched Yb-176 (~99%) in 2026

(with potential to accelerate)

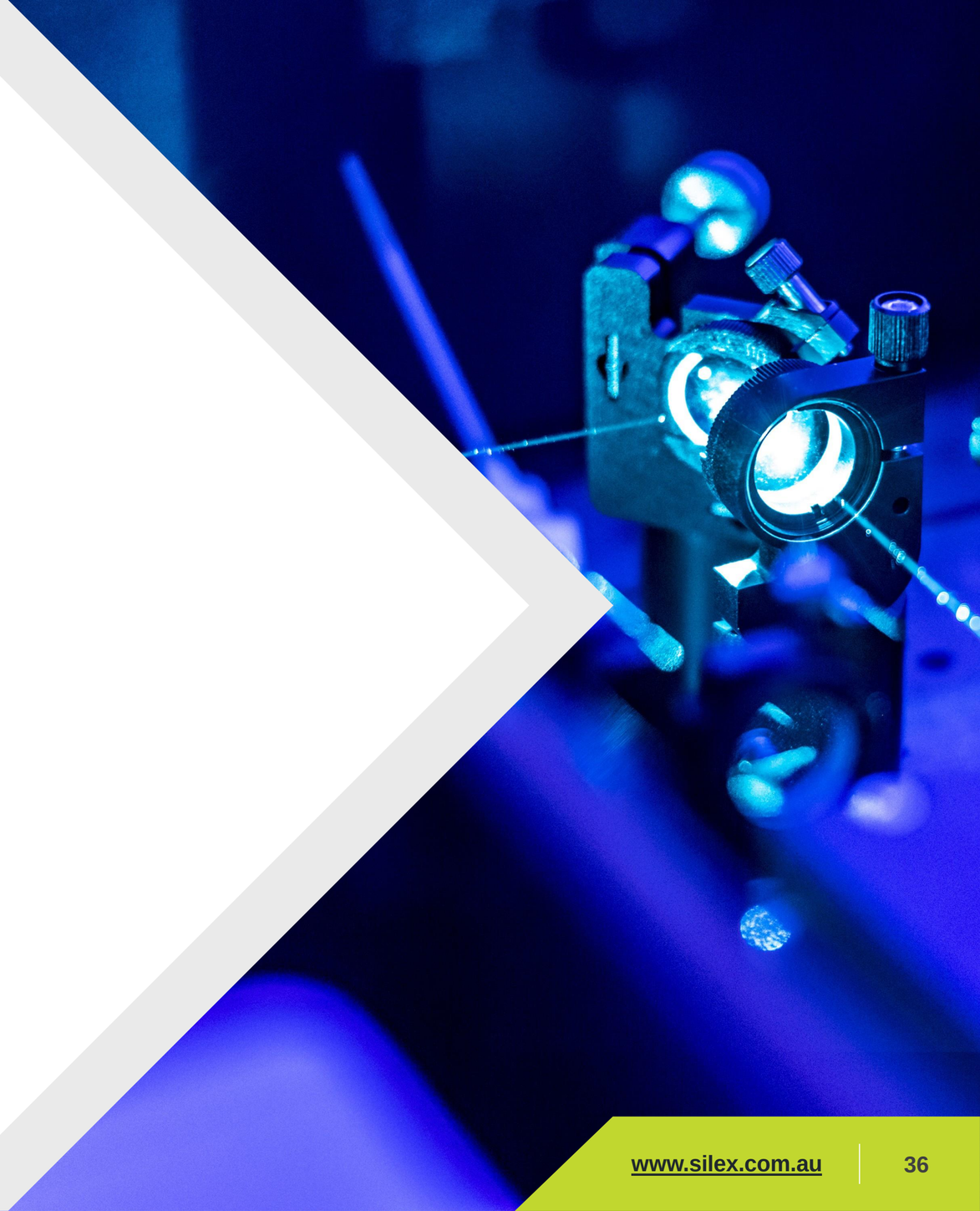
Commercial Engagement

With potential customers and development partners to commence in 2023

MIST Technology Platform

Potential to apply to other medical isotopes, e.g. Mo-100

Summary



Summary

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

As at 8 March 2023, the Company has cash and term deposit holdings of ~$145m and no debt

Thank you