Zero-Spin Silicon Project: Stage 2 Completion and Stage 3 Commencement

1 February 2022

Highlights:

- **The second stage of the Zero-Spin Silicon (ZS-Si) project has been successfully completed with silicon enrichment demonstrated at prototype-scale**
- **The third stage of the ZS-Si project has commenced, involving industrial-scale process verification with a commercial pilot demonstration plant and the potential production of initial commercial quantities of ZS-Si from 2023 onwards**
- **ZS-Si is a key enabling material for the next generation of silicon-based processor chips being developed to power silicon quantum computers**
- **The project is supported by collaboration partners SQC and UNSW, with funding from the Federal Government's Cooperative Research Centres Projects**

Silex Systems Limited (Silex) (ASX: SLX) (OTCQX: SILXY) is pleased to announce the successful completion of the second stage of the Zero-Spin Silicon (ZS-Si) project being undertaken in conjunction with project partners Silicon Quantum Computing Pty Ltd (SQC) and UNSW Sydney (UNSW). ZS-Si, a high purity form of enriched silicon, is a key enabling material for the emerging silicon quantum computing industry.

The second stage of the project demonstrated scaled-up production of ZS-Si using a prototype facility constructed 2021. The key Stage 2 activities achieved include:

- Construction and operation of the prototype demonstration facility, to conduct rigorous enrichment testing focused on characterising performance, optimising throughput and improving the efficiency of the SILEX laser isotope separation (LIS) technology for the production of ZS-Si; and
- Accumulation of positive test results and production of small quantities of ZS-Si which confirmed the functionality and scalability of the technology to produce ZS-Si, and provide a firm basis to proceed to Stage 3.

Silex Systems Limited | ABN 69 003 372 067
LHSTC, New Illawarra Road, Lucas Heights NSW 2234
Telephone: +61 2 9704 8888 | Facsimile: +61 2 9704 8851 | Website: www.silex.com.au

With the third stage of the project now underway, the focus is on implementing modifications to, and scaling-up of the prototype facility to increase process throughput and incorporate design improvements for efficient production of high purity ZS-Si. The resulting pilot demonstration facility is aiming to achieve production of up to 5 kilograms of ZS-Si annually. The first batches of commercial ZS-Si product are planned to be purchased by SQC under an Offtake Agreement that was executed in December 2019. The Agreement includes SQC making three annual payments of $300,000, all of which have been received to date, as an offset against future purchases of ZS-Si produced by Silex.

The overall Project objective is to apply the SILEX LIS technology to produce high purity ZS-Si with sufficiently attractive economics, and to establish the manufacturing technology and capability to scale-up production in line with anticipated increasing demand for ZS-Si as silicon-based quantum computing continues to develop over the next decade.

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:

Michael Goldsworthy
CEO/Managing Director
T +61 2 9704 8888
E investor.relations@silex.com.au

Julie Ducie
CFO/Company Secretary
T +61 2 9704 8888
E investor.relations@silex.com.au

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 Announcement 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 Announcement 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 statements expressed herein do not necessarily reflect the views of the Company's various commercialisation partners and stakeholders. The Company's management believes that there are reasonable grounds to make such statements. 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 Announcement 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 Announcement 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.