



Silex
Systems Limited

Silex and SQC Sign Expanded Commercial Arrangements for Quantum Silicon Production

23 January 2024

Silex Systems Limited (Silex) (ASX: SLX) (OTCQX: SILXY) is pleased to announce that an amendment to the 2019 Offtake Agreement has been signed with Silicon Quantum Computing Pty Ltd (SQC). The amendment increases SQC's product offtake commitment for Quantum Silicon (Q-Si) products to be produced from high purity Zero-Spin Silicon (ZS-Si) using the Company's proprietary SILEX laser enrichment technology.

The total value of SQC's offtake commitment is now \$2.25m, an increase of \$1.35m under the amended agreement, which will shortly be prepaid by SQC as an offset against future purchases of Q-Si products.

SQC has also executed a Subscription Agreement with Silex, which will result in SQC acquiring up to 493,827 fully paid ordinary shares in the capital of Silex for \$2m. Furthermore, SQC is making other cash and in-kind contributions to the total Project budget of ~\$16m in line with the Defence Trailblazer Program, resulting in Silex's contribution being ~\$6m over the 3.5 year Project period, ending 31 December 2026. The Project was recently awarded \$5.1m in grant funding from the Federal Government's Defence Trailblazer Program.

Michael Goldsworthy, Silex's CEO/Managing Director said:

"We are very pleased with this increased commitment from SQC, which will help fund the construction of the first commercial production module for Quantum Silicon, currently underway at our Lucas Heights facility. The Project aims to establish a secure supply chain for the critical enriched silicon materials required to enable SQC and UNSW Sydney to continue development of their world-leading silicon-based quantum computing technology. The new deal strengthens our commercial partnership, and builds on the successful relationship established over the past four years through our initial ZS-Si demonstration project, which resulted in production of sample quantities of ZS-Si with enrichment of silicon-28 up to 99.998% purity."

"This funding contribution follows the award of \$5.1m by the Federal Government through the Defence Trailblazer for Concept to Sovereign Capability program to support the Quantum Silicon Production Project, which we announced in August 2023. We now look forward to transitioning the SILEX technology into commercial production with the construction of the first Quantum Silicon Production Plant to produce both gaseous silane and solid Q-Si products that are essential enabling materials for taking silicon quantum computing to market", he added.

Professor Michelle Simmons AO, CEO of SQC, said:

“We are extremely pleased to extend our commercial relationship with Silex based on the success shown, and capabilities being developed with the SILEX technology to produce this critical enabling material for silicon-based quantum computing. The establishment of a secure supply chain for enriched silicon will be of enormous benefit to SQC’s technology development program, and to the broader Australian quantum technology ecosystem. Our aim is to maintain global leadership in the commercialisation of silicon quantum computing, which promises to deliver profound and positive impacts across multiple sectors of the economy and to society.”

About the Quantum Silicon Production Project:

The launch of the new Quantum Silicon Production Project was announced on 17 August 2023, and is being undertaken in conjunction with partners SQC and UNSW Sydney. The Project’s objective is to establish the first Quantum Silicon Production Plant and to develop the skills and capability to manufacture commercial Q-Si products, produced from highly enriched ZS-Si halo-silane, in two product forms at commercial scale. The current 3.5-year Project has a total budget of approximately \$16m.

The Quantum Silicon Production Project aims to establish an end-to-end manufacturing facility at the Company’s Lucas Heights technology centre. It is anticipated that the first production module will produce between 5kg to 10kg annually of ZS-Si (in the form of halo-silane), which will then be converted to two Q-Si product forms required by customers in the global silicon-based quantum computing industry. The Production Plant will include significant additional equipment for conversion of ZS-Si into gaseous and solid product forms that are compatible with quantum chip fabrication technologies utilised by manufacturers, namely:

- 1) Quantum Silane gas** – used in chemical vapour deposition (CVD) based fabrication processes utilised for quantum chip fabrication.
- 2) Quantum Silicon solid** – used in molecular beam epitaxy (MBE) based processes utilised for quantum chip fabrication, and which is required by SQC and UNSW Sydney.

A key benefit of the SILEX laser isotope separation technology is its modular nature, allowing for the Production Plant to be scaled up with additional modules, based on market demand and other factors. Silex will retain ownership of the Q-Si production technology and related IP developed through the Project.

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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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 'Quantum Silicon' project remains dependent on the outcomes of the project and the viability of silicon quantum computing and is therefore subject to various risks. Silex is also conducting research activities in its Medical Isotope Separation Technology (MIST) Project, which is early-stage and subject to numerous 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.

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 very 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, Zero-Spin Silicon production, medical and other isotope separation projects, 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 should not place reliance on any forward-looking statements as actual results could be materially different from those expressed or implied by such forward-looking statements as a result of various risk factors. Further, the forward-looking statements contained in this 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 Company's management believes that there are reasonable grounds to make such statements as at the date of this Announcement. Silex does not intend, and is not obligated, to update the forward-looking statements except to the extent required by law or the ASX Listing Rules.

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 pilot demonstration 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 MIST 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 USA, 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.