



Silex
Systems Limited

Silex Systems, Silicon Quantum Computing and the University of NSW Awarded \$3 million CRC-P Funding Grant

10 February 2020

Commonwealth Cooperative Research Centres Projects (CRC-P) funding will support a project announced in December 2019, to produce ‘Zero-Spin Silicon’ – a key enabling material for silicon-based quantum computers – using SILEX laser isotope separation technology

Silex Systems Limited (Silex) (ASX: SLX) (OTCQX: SILXY) is pleased to announce that, in collaboration with UNSW Sydney (UNSW) and Silicon Quantum Computing Pty Ltd (SQC), a funding grant of \$3 million has been awarded in support of a Research and Development project to develop a process for the commercial production of high-purity ‘Zero-Spin Silicon’ using a variant of the SILEX laser isotope separation technology. The launch of this project was announced to the ASX on 12 December 2019. Zero-Spin Silicon (ZS-Si) is a unique form of isotopically enriched silicon required for the fabrication of next-generation processor chips which will power silicon-based quantum computers.

Quantum computers are expected to be thousands of times more powerful than the best of today’s conventional computers, opening new frontiers and opportunities in many industries, including medicine, artificial intelligence, cybersecurity and global financial systems. Further background to quantum computing technology and the abovementioned collaborators can be found in the appendix to the Company’s December ASX announcement.

“Together with our collaboration partners, we are very pleased to be awarded the full \$3 million funding grant from the CRC-P,” Dr Michael Goldsworthy, Silex CEO said today. “This clearly demonstrates the Federal Government’s strong support for silicon-based quantum computing technology, and allows Silex and our project partners to pursue the project with optimum resources. As stated in our December 2019 announcement, we are excited to be part of the global silicon-based quantum computing opportunity and look forward to working with UNSW and SQC. We greatly appreciate the support of the CRC-P” he added.

“Isotopically pure silicon is an essential ingredient for quantum computer processors and it is extraordinarily fortuitous that Australia, through Silex, has the expertise to develop the manufacturing capability for ZS-Si. The potential supply of this critical component of our supply chain will greatly improve the quality of our devices and allow us to manufacture our quantum processor products here in Australia”, Professor Michelle Simmons, Director of SQC and 2018 Australian of the Year said today.

Professor Nicholas Fisk, Deputy Vice-Chancellor, Division of Research and Acting Division of Enterprise commented “UNSW is a world leader in quantum computing and is excited to partner with Silex and UNSW spin-out SQC in the development and delivery of cutting-edge technologies that will make silicon-based quantum computers a reality. UNSW is committed to driving impact through collaboration and is delighted to be co-investing in the project together with Silex, SQC and the CRC-P.”

The \$3 million project funding from CRC-P remains conditional on the signing of a Partners Agreement currently being negotiated between Silex, UNSW and SQC. The total project is anticipated to cost (including cash and in-kind components) approximately \$8 million over three years, of which Silex’s contribution (cash and in-kind) after the CRC-P grant will be approximately \$4 million over the duration of the project.

The project aims to demonstrate the ability to cost-effectively produce enriched silicon with sufficiently high purity, and to establish the manufacturing methodology and capability to scale-up production as silicon-based quantum computing gains traction globally over the next decade. Current supply of enriched silicon via conventional centrifuge production is highly constrained, costly and volatile. Furthermore, the efficiency of the SILEX laser isotope separation technology is expected to enable higher purity ‘Zero-Spin Silicon’ to be produced, which will be important to the ultimate power and scalability of silicon quantum computing devices. Success in the project would enable Australia to establish itself as the world-leader in Zero-Spin Silicon production, potentially creating new jobs in advanced manufacturing and creating a new value-added export market.

As detailed in our December ASX announcement, SQC has committed to purchase ZS-Si product from Silex, should the project be successful. In accordance with the Offtake Agreement executed in December, SQC have paid the first of three annual payments of \$300,000 as an offset against future purchases of ZS-Si produced by Silex. Silex and SQC also signed a Subscription Agreement that resulted in SQC acquiring, through a private placement, \$900,000 of fully paid ordinary shares in the capital of Silex. The placement was completed with the issue of 2.3 million Silex shares on 7 January 2020.

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 Business Risks:

Silex Systems Limited (Silex) is a research and development company whose primary asset is the SILEX laser uranium enrichment technology, originally developed at the Company's technology facility in Sydney, Australia. The SILEX technology was licensed exclusively in 2006 to GE-Hitachi Global Laser Enrichment LLC (GLE) in the USA. GLE has been undergoing a restructure for a number of years after GE-Hitachi disclosed it was seeking to exit the venture. In view of the continuing uncertainty surrounding the GLE restructure and the continuing depressed nuclear fuel market conditions, plans for commercial deployment of the SILEX technology have been significantly delayed, and remain at risk.

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 subject of this announcement). The 'Zero-Spin Silicon' project remains dependent on obtaining third party funding contributions and on the outcomes of the Project and is therefore at risk.

The future of the SILEX technology is therefore highly uncertain and any plans for commercial deployment are speculative.

Silex also 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 in various advanced semiconductor products. The outcome of IQE's commercialisation program is also highly uncertain and remains subject to various technology and market risks.

The commercial potential of these technologies is currently unknown. Accordingly, the statements in this announcement regarding the future of the SILEX technology, the cREO™ technology and any associated commercial prospects are forward looking and actual results could be materially different from those expressed or implied by such forward looking statements as a result of various risk factors.

Risk factors that could affect future results and commercial prospects include, but are not limited to: the outcome of the GLE restructure; 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; and the outcomes of various strategies and projects undertaken by the Company.