US Government Approves US$700m Package for HALEU Availability Program in Support of US Nuclear Industry

17 August 2022

Silex Systems Limited (Silex) (ASX: SLX; OTCQX: SILXY) is pleased to acknowledge the passage into law of the Inflation Reduction Act of 2022 (IRA) in the US, which includes a US$700 million funding package to support the HALEU Availability Program to be conducted over the next four years by the US Department of Energy (DOE).

HALEU (High Assay Low Enriched Uranium) is the fuel required by many of the emerging advanced Small Modular Reactors (SMRs) - the next-generation of nuclear power technology. Global Laser Enrichment (GLE), the exclusive licensee of the SILEX laser technology for uranium enrichment, will explore opportunities to be a potential participant in the HALEU Availability Program. GLE submitted a response to a Request for Information (RFI) from the DOE on this matter in February 2022 and will be ready to respond to any related Request for Proposals (RFP).

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

"The signing into law of the Inflation Reduction Act this week is a pivotal turning point in the revitalisation of nuclear power in the US. The IRA is a cornerstone of America's response to climate change, and recognizes nuclear power as a critical component of a carbon free, resilient and stable electricity grid."

"As the US Government ramps up initiatives to domesticate its nuclear fuel supply chain and lessen its dependence on nuclear fuel imports, particularly from Russia, we expect GLE may have increasing opportunities to commercialise the SILEX technology," he added.

There is currently no commercial source of HALEU fuel in the US today, and many SMR developers had planned to source their early HALEU fuel requirements from Russia. Given the growing concern over energy security and supply chains in the wake of Russia's invasion of Ukraine, those plans may no longer be realistic, creating significant urgency in establishing the HALEU Availability Program.

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The IRA specifies that the US$700 million of HALEU Availability funding be spent in the following three categories:

- ***Licensing*** - US$100m is provided for the licensing and regulation of HALEU fuel fabrication and enrichment facilities and the certification of transportation packages.

- ***Enrichment*** - US$500m is provided for DOE to produce HALEU as fast as possible and to provide it to SMR developers. DOE is also directed to set up a "HALEU Consortium" which may include any entity involved in any stage of the nuclear fuel cycle to partner with DOE to support the availability of HALEU for domestic commercial use. DOE is also provided funding to hold a survey of stakeholders to estimate the quantity of HALEU necessary for domestic use.

- ***General Support*** - US$100m is provided for general activities to support the availability of HALEU for civilian domestic research, development, demonstration, and commercial use.

The IRA requires that the funding shall be provided by the DOE Office of Nuclear Energy's HALEU Availability Program through a competitive merit-based process, and that the DOE spend the money by September 2026. The IRA also includes several other measures to support the economic viability of existing nuclear power plants, including a nuclear power production tax credit, which along with ongoing support for the development of advanced SMRs, helps place nuclear power on a level playing field with subsidised renewable energy sources.

Silex and Cameco are currently reviewing the potential to accelerate GLE's commercialisation of the SILEX technology in order to respond to these emerging opportunities, subject to alignment with evolving market conditions.

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 '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 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 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 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 China's threats towards Taiwan; 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; 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.