GLE Acquires Paducah, KY Property for the Paducah Laser Enrichment Facility

27 November 2024

Silex Systems Limited (Silex, the Company) (ASX: SLX; OTCQX: SILXY) is pleased to advise that Global Laser Enrichment LLC (GLE), the exclusive licensee of the third-generation laser-based SILEX uranium enrichment technology, has acquired a 665-acre parcel of land for the planned Paducah Laser Enrichment Facility (PLEF), in Kentucky. This parcel, previously owned by the Commonwealth of Kentucky and managed by the Kentucky Department of Fish and Wildlife Resources (KDFWR), was acquired by GLE through an agreement among the Commonwealth, KDFWR, and the Paducah-McCracken County Industrial Development Authority.

GLE previously entered into a set of agreements that provided the option to purchase the land parcel in June 2024 (refer to Silex announcement dated 4 June 2024 for further details).

The site is strategically located adjacent the U.S. Department of Energy's (DOE) former first-generation Paducah Gaseous Diffusion Plant (PGDP), which was shut down in 2013 after decades of operations, leaving hundreds of thousands of tonnes of depleted UF_6 tails inventories at the PGDP facility. The site that GLE has acquired provides access to the cylinder yards where the tails inventories are stored, minimising transportation between the PGDP and the proposed site of GLE's PLEF. GLE has been assessing the site for several months and performing geotechnical analysis in support of its pending licence application and environmental report submissions to the Nuclear Regulatory Commission (NRC). GLE is currently on track to submit the environmental report in December 2024 and licence application in mid-2025.

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

"The acquisition of the PLEF site is the result of several years of dedicated efforts from the GLE team along with considerable support from the community of Paducah and the Commonwealth of Kentucky. The location of GLE's site adjacent to the PGDP is an important outcome in relation to the 2016 agreement between GLE and the DOE, under which GLE will acquire over 200,000 metric tonnes of the depleted tails inventories, underpinning GLE's PLEF project opportunities. GLE plans to use this material as feedstock for the production of natural grade uranium hexafluoride (UF_6) using the SILEX laser enrichment technology for up to 30 years. The anticipated production rate will be equivalent to a uranium mine with an annual output of up to 5 million pounds of uranium, which would rank in the top 10 of today's uranium mines by production volume."

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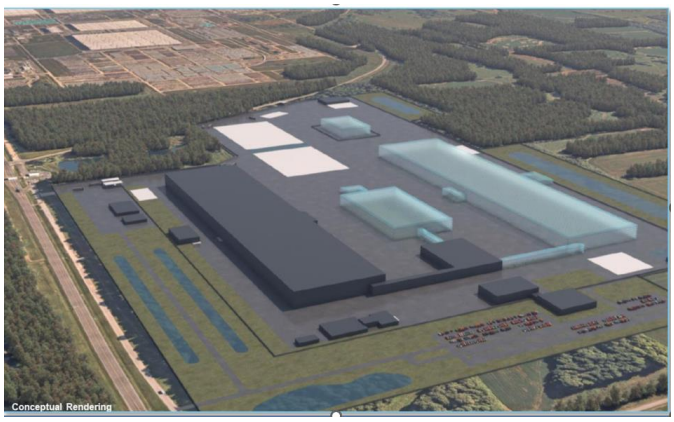
Stephen Long, GLE's CEO said:

"We greatly appreciate the collaborative efforts of our community and state partners in Kentucky that have been instrumental in finalising this land acquisition. We are excited to continue our partnership with the Commonwealth of Kentucky as we work towards a commercialisation decision and maintaining our deployment target of no later than 2030."

The terms of the site acquisition are confidential. However, the purchase price is in line with comparable sites in Western Kentucky. Silex's 51% contribution to the purchase price is not material to the Company.

Subject to the successful completion of the TRL-6 pilot demonstration project, industry and government support, licensing, a feasibility assessment for the PLEF, suitable market conditions, and other factors, the SILEX technology could enable GLE to develop the planned PLEF project and become a key supplier of natural UF_6, low-enriched uranium (LEU), and high-assay LEU (HALEU).



Source: GLE | Planned PLEF site adjacent to PGDP (conceptual), PLEF site activity and feedstock located at the PGDP

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 TRL-6 pilot demonstration program, nuclear fuel market conditions, industry and government support, project feasibility and commercial plant licensing, 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 'Quantum Silicon' for the emerging technology of silicon-based quantum computing. The 'Quantum Silicon' project remains dependent on the outcomes of the project as well as the successful development of silicon quantum computing technology by third parties, 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.

Forward Looking Statements

The commercial potential of the abovementioned technologies and activities 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, Quantum Silicon production, medical and other isotope separation projects, and any associated commercial prospects are forward-looking and are subject to a number of variables, including but not limited to, known and 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 (including project outcomes), 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 global economic stresses such as interest rates and inflation; geopolitical risks, in particular relating to Russia's invasion of Ukraine and tensions between China and Taiwan which may impact global supply chains; uncertainties related to the effects of climate change and mitigation efforts; the results of the GLE/SILEX uranium enrichment pilot demonstration (TRL-6) program; the market demand for natural uranium and enriched uranium; the outcome of the project for the production of Quantum 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; 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.