



Silex
Systems Limited

Continued acceleration of GLE's Commercialisation Program for the SILEX Technology through CY2024

19 February 2024

- **GLE joint venture owners Silex (51%) and Cameco (49%) have approved GLE's operating plan and budget for CY2024 that enables the continuation of accelerated activities in the commercialisation program for the SILEX uranium enrichment technology**
- **The CY2024 plan and budget involves an approximate doubling of GLE's project expenditures compared to CY2023 (to up to US\$54.5 million), and in addition to acceleration of the technology demonstration project, will allow GLE to progress other key commercialisation activities, including Paducah, KY site acquisition activities, NRC commercial plant licensing activities, and completion and commissioning of the new GLE corporate and manufacturing facility in Wilmington, NC**
- **The CY2024 plan and budget, including accelerated demonstration of the SILEX technology at GLE's Test Loop pilot facility in Wilmington, preserves the option of commencing commercial operations at the planned Paducah Laser Enrichment Facility (PLEF) as early as 2028**
- **Continued acceleration of GLE's commercialisation program beyond CY2024 remains conditional on the availability of industry and government support, geopolitical and market factors, and a feasibility assessment for the PLEF**

Silex Systems Limited (Silex) (ASX: SLX; OTCQX: SILXY) is pleased to advise that GLE's CY2024 plan and budget has been approved by the GLE joint venture Governing Board which will enable continued acceleration of the commercialisation program for the SILEX uranium enrichment technology. With GLE's and Silex's combined efforts in CY2023 and CY2024 to bring forward activities and expenditures, GLE anticipates completing the technology demonstration project during CY2024, which will include the completion of an independent assessment of the TRL-6¹ pilot demonstration and submission of a report to Silex and Cameco.

¹ Technology Readiness Level 6 (TRL-6) as defined by DOE Technology Readiness Assessment Guide (G 413.3-4A)

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

“In view of climate change and geopolitical issues, market pressure for new Western enrichment capacity continues to intensify, including proposed legislation to ban the import of Russian uranium products into the United States and a voluntary industry shift away from Russian-sourced nuclear fuel. Given the potential for supply disruptions in the global nuclear fuel market, Silex and Cameco have agreed to a CY2024 plan and budget for GLE, which assuming successful completion of the pilot demonstration project and other activities, preserves the option of commencing commercial operations at the planned PLEF multi-purpose production plant as early as 2028, subject to the availability of industry and government support, as well as geopolitical, market and other factors.”

“Specifically, GLE’s CY2024 plan and budget supports the completion of the technology demonstration project, continued pursuit of government and industry support and funding opportunities, site acquisition activities related to the planned PLEF, preparation of the PLEF NRC license application, completion and commissioning of GLE’s new facility in Wilmington, NC, and activities to support manufacturing readiness and supply chain development. These activities provide the potential for GLE to deploy the SILEX uranium enrichment technology in a timely manner to help address the forecast supply gap in nuclear fuel markets in the coming years,” he added.

The Triple Opportunity for GLE and the PLEF multi-purpose production plant:

The Triple Opportunity includes the following three PLEF commercialisation options at a multi-purpose production plant, which are not necessarily sequential by nature. The order of priority for deployment will depend on government and industry support and market factors:

- 1) PLEF UF₆ Production:** Production of natural grade UF₆ (with U-235 assay of 0.7%) via processing of depleted tails (U-235 assays of 0.25% to 0.5%) with the SILEX technology (the original PLEF Project) which would come in the form of already converted uranium, thereby potentially helping to alleviate UF₆ conversion supply pressure;
- 2) PLEF LEU Production:** Production of low enriched uranium (LEU) (U-235 assays up to 5%) and LEU+ (assays from 5% to 10%) from natural UF₆ with separate SILEX enrichment capacity – to supply enriched uranium fuel for existing reactors;
- 3) PLEF HALEU Production:** Production of high assay LEU (HALEU) (U-235 assays up to ~20%) via enrichment with SILEX technology to supply fuel for next generation advanced SMRs.

The PLEF opportunities are underpinned by the landmark 2016 agreement between GLE and the US Department of Energy (DOE) which provides the feedstock for the production of equivalent natural grade uranium in the form of UF₆ over three decades, with the output sold into the global uranium market at an expected production rate equivalent to a uranium mine producing an annual output of up to 5 million pounds of U₃O₈, which would rank in the top ten of today’s uranium mines by production volume.



Preliminary analysis by Silex of the PLEF UF₆ Production Project indicates it could rank equal to a 'Tier 1' uranium project based on current estimates of the long-life and low cost of production.

Subject to the successful completion of the pilot demonstration project, industry and government support, a feasibility assessment for the PLEF and market factors, the SILEX technology could enable GLE to become a major contributor to nuclear fuel production for the world's current and future nuclear reactor fleets.

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.