Operational Update

29 August 2019

Key points:

- Silex announced in February 2019 the signing of a Term Sheet between Silex, GE-Hitachi Nuclear Energy (GEH) and Canadian uranium miner Cameco Corporation for the restructure of SILEX technology Licensee GE-Hitachi Global Laser Enrichment LLC (GLE);

- The Term Sheet details key terms for the joint purchase by Silex and Cameco of GEH's 76% interest in GLE, which would result in Silex acquiring a 51% interest and Cameco increasing their interest from 24% to 49%;

- Good progress has been made by GEH, Cameco and Silex towards finalisation of binding transaction documentation for the GLE restructure, the closing of which will also be subject to obtaining approval from the US Government;

- The proposed transaction provides an ideal path to market for GLE and the SILEX technology, with the Paducah commercial plant opportunity and the underpinning agreement between GLE and the US Department of Energy pivotal on this path;

- IQE Plc finalised the purchase of Silex's wholly-owned subsidiary Translucent Inc's cREO™ technology in early 2018, resulting in a payment of US$5 million (in IQE stock) in September 2018;

- The Company's balance sheet as at 30 June 2019 remains in a strong position with net assets of ~$36 million, including ~$25 million in cash, IQE shares of ~$10 million and receivables of $2 million. Liabilities were ~$1 million.

Silex Systems Limited | ABN 69 003 372 067
Building 64, LHSTC, New Illawarra Road, Lucas Heights NSW 2234
Telephone: +61 2 9704 8888 | Facsimile: +61 2 9704 8851 | Website: www.silex.com.au

The SILEX Technology Update

During the year in review we continued to execute our strategy to preserve value and optionality for the future commercialisation of the SILEX laser-based uranium enrichment technology, primarily focusing on efforts to participate in the restructure of the exclusive Licensee of the SILEX technology, GLE. Details of this restructure are provided below.

The SILEX technology is the only third-generation uranium enrichment technology under development in the world today. If successfully commercialised, our technology could become a major contributor to nuclear fuel production for the world's nuclear reactor fleet, in the form of:

- ***natural grade uranium*** via the re-enrichment of tails inventories (i.e. the Paducah commercial plant project); and
- ***enriched uranium*** for use as fuel in today's conventional nuclear power reactors - in the form of low enriched uranium (LEU), as well as customised fuel for the next generation fleet of Small Modular Reactors (SMRs) - in the form of high assay LEU.

We remain committed to the commercialisation program for the SILEX uranium enrichment technology and to GLE, with the belief that the SILEX technology could become a key component of the nuclear fuel cycle in the future.

i) Our Strategy:

The Company's strategic focus is on the commercialisation our core asset, the SILEX technology. Fundamental to the execution of our strategy are the following:

- increasing Silex's involvement in the SILEX technology commercialisation program through the GLE restructure;
- continuing to build our relationship with GLE shareholder, Cameco - one of the world's largest uranium and nuclear fuel suppliers;
- strengthening our presence in the US, the primary target market for deployment of the SILEX technology;
- preserving the 2016 GLE-DOE Sales Agreement which underpins the proposed Paducah commercial plant project;
- retaining our talent and maintaining our Sydney facility as a centre of innovation; and
- focusing on effective cost management to ensure the most efficient use of cash reserves.

ii) GLE Restructure:

In February 2019 the Company announced the signing of a new Term Sheet between Silex, GEH and Canadian uranium miner Cameco Corporation which detailed the key terms for the joint purchase by Silex and Cameco of GEH's 76% interest in GLE. We continue to progress towards the execution of binding transaction documentation for the restructure of GLE and preparation of additional documentation seeking the requisite approval of the transaction from the US government (USG). Subject to gaining USG approvals and closing of the transaction, Silex will own 51% of GLE and Cameco will increase their ownership interest from 24% to 49%.

In addition, Silex and Cameco are negotiating an option for Cameco to purchase from Silex at fair market value, an additional 26% interest in GLE, potentially increasing their interest to 75% (subject to USG approvals). As one of the world's leading uranium and nuclear fuel suppliers, Cameco's desire to remain heavily involved in GLE and to ultimately support the commercialisation of the SILEX technology through the Paducah project is a significant endorsement of the potential of our core technology.

iii) The Paducah Project Opportunity:

The Paducah commercial plant opportunity continues to be viewed as an ideal path to market for the SILEX technology. The opportunity would allow for the initial commercial deployment of the technology on a smaller scale and at a lower cost, representing a lower risk path to market for the Company and all stakeholders.

The opportunity would involve construction of GLE's proposed 'Paducah Laser Enrichment Facility' (PLEF) utilising the SILEX technology to re-enrich large stockpiles of depleted tails inventories owned by the DOE. An agreement between GLE and the DOE providing for the sale of the tails inventories to GLE was signed in November 2016. Efforts during the year have focused on ensuring that the agreement between the DOE and GLE remains in full force and effect through to the anticipated recovery in the nuclear fuel markets.

The tails re-enrichment project at the PLEF would continue over several decades, resulting in the production of natural grade uranium which could then be sold into the expanding global uranium market at a nominal production rate of around 2,000 metric tons of natural uranium hexafluoride (UF_6) per year (subject to applicable regulations). Preliminary economic analysis of the project indicates that it would rank as a large 'Tier 1' uranium mine by today's standards with respect to size and cost of production.

Subject to a recovery in uranium market pricing and receipt of required regulatory approvals and securing project financing, the Paducah commercial plant opportunity represents an ideal path to commercialisation for our unique laser enrichment technology.

iv) Project Update:

In parallel with the GLE restructure activities, a focused effort continued on the technology commercialisation program at both the Silex, Sydney and GLE, Wilmington, North Carolina project sites. Laser system development activities in Sydney included design optimisation for the prototype commercial-scale plant laser system. Activities in Wilmington included the preparation of the Test Loop facility for future deployment of prototype plant-scale equipment required for pre-commercial testing.

The Company continues to take a cautious approach to the SILEX technology commercialisation program in line with current market conditions and while the GLE restructure is underway. The preservation and deployment of key resources continues to be carefully managed to ensure that the program can be ramped up again at an appropriate time in the future.

v) Nuclear Power Outlook:

Market conditions in the nuclear fuel industry are expected to remain challenging for some time. The ongoing delays to the restart of the Japanese nuclear fleet, the premature retirement of plants in the US, Japan and Europe and ongoing energy policy debates in numerous countries continue to have an impact on the nuclear fuel markets. As a result, the short to medium-term demand for uranium and enrichment remains low and prices continue to remain depressed. However, the long-term value proposition for nuclear energy and its fuel markets remains positive. There are many countries which have prioritised government policy initiatives relating to climate change and energy security, stating that nuclear power should form a meaningful part of their energy mix in the future.

According to the World Nuclear Association (world-nuclear.org) there are currently 444 operable nuclear reactors today, and 54 nuclear reactors under construction. The US is the world's largest producer of nuclear power, with 97 operable reactors accounting for more than 30% of worldwide nuclear generation of electricity. China is the fastest growing nuclear energy market, with 47 reactors in operation, 11 reactors under construction and a pipeline of over 200 proposed reactors for construction. In addition, there is the potential for commercialisation of next-generation SMRs – which may offer significant advantages over large conventional nuclear power reactors. SMRs have the potential to be cheaper and simpler to construct, and as a producer of base load generation, to compete favourably with intermittent distributed generation such as solar and wind. There are currently numerous SMR development programs advancing around the world.

While challenges remain in the short to medium-term for the nuclear power industry and its fuel markets, a more positive outlook remains for the long-term. Accordingly, we believe the supply and demand fundamentals in nuclear fuel markets will recover in the coming years.

The cREO™ Semiconductor Technology

The cREO™ technology was purchased by UK-based IQE (AIM: IQE) in early 2018 in accordance with the 2015 License and Assignment Agreement between Silex subsidiary Translucent and IQE. As a result, payment of US$5 million was received in September 2018 (in IQE stock). In addition, a perpetual royalty between 3% and 6% will be payable to Translucent on the sale of any IQE products that utilise the cREO™ technology.

IQE is the global leader in the design and manufacture of advanced semiconductor wafer products used in many of today's advanced semiconductor devices, such as smart phones and wireless technologies. The cREO™ technology was successfully transferred in late 2015 to IQE's Greensboro, North Carolina manufacturing facility for the completion of product development and commercialisation activities.

IQE have reported good progress with the development and demonstration of the cREO™ technology for the potential integration of advanced high-performance compound semiconductor materials on silicon wafers across several areas of IQE's portfolio. In particular, IQE reported continued strong progress in the development of their unique 5G RF Filter Materials Portfolio based on the cREO™ technology and are actively engaged with several semiconductor customers to bring this product to market.

The Stable Isotopes Project

The assessment of a new stable isotope development program to utilise our significant laser isotope separation expertise for application to nearer term commercial opportunities continues. A number of potentially attractive alternative uses of the SILEX technology for stable isotope production have been identified in medical diagnostic, industrial and semiconductor applications. The evaluation of a number of opportunities is being conducted, after which the Company will consider the merits of supporting a focused program to enhance the value of the Company's IP portfolio.

Further information on the Company's activities can be found on the Silex website: www.silex.com.au or by calling +61 2 9704 8888.

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.

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 two 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 potential development of competing 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 undertaken by the Company.