Silex Systems Limited
A.C.N. 003 372 067

Level 8, Suite 8.01
56 Clarence Street
Sydney NSW 2000 Australia

Ph: +61 2 9704 8888
Fax: +61 2 9279 1059

www.silex.com.au

Silex Systems - Operational Update

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The Board and Management are pleased to provide this half-year operational update as we finalise the corporate restructure of your company. The restructure announced in June 2014 is now largely complete, resulting in the company returning to a singular focus on the SILEX laser uranium enrichment technology. Today we remain in a sound financial position, with current cash reserves of $55 million, equivalent to $0.32 per share. With work continuing at a measured pace with GE-Hitachi Global Laser Enrichment in the SILEX Technology commercialisation project, and with the recently announced licence and royalty agreement with IQE Plc for Translucent's innovative semiconductor technology, the Board remains confident that the significant commercial potential of these two technologies will in time be reflected in the company's value.

1) Silex Systems Restructure

Cessation of operations in subsidiary entities Translucent Inc and Solar Systems Pty Ltd has been completed, with a summary of the key activities provided below.

i) Translucent Inc.: Over the past decade, California-based subsidiary Translucent Inc developed a novel set of semiconductor materials known as 'Rare Earth Oxides' (REO^{TM}) for application to the manufacturing of next generation devices in the semiconductor and power electronics industries. A recent assessment of business development options for Translucent resulted in the signing of an exclusive License and Assignment Agreement with UK-based IQE Plc (LON:IQE) on 15 September 2015. A license fee payment of approximately US$1.4 million is due to be paid by IQE by 15 March. As a result of this Agreement, the Translucent REO^{TM} technology has been transferred to IQE's Greensboro, North Carolina manufacturing facility for the completion of product development and commercialisation activities during a 30-month option period. More importantly, should IQE elect to exercise the right to purchase the technology within this period by payment of a further US$5 million, Translucent may earn an attractive perpetual royalty stream from IQE upon generation of revenues resulting from use of the technology.

ii) Solar Systems: The pursuit of opportunities to realise value from the sale of assets and intellectual property surrounding the unique 'Dense Array' concentrated photovoltaic (CPV) system for utility-scale solar power generation continues, and has to date yielded approximately $2.3 million. This includes the land, buildings and generating assets at Bridgewater and Mildura in Victoria, which were sold in December 2015 (net proceeds $1.7 million). Meanwhile negotiations with third parties continue in relation to the sale of intellectual property and other assets.

The corporate restructure of the company's subsidiary entities initiated in June 2014 is now largely complete, with operating cash burn in Translucent and Solar Systems eliminated.

2) SILEX Uranium Enrichment Project Update

i) Project Update: The focus of the Company is firmly set on the commercialisation program for the SILEX laser uranium enrichment technology, exclusively licensed to GE-Hitachi Global Laser Enrichment LLC ('GLE'), based in Wilmington, North Carolina. Despite the market driven cutbacks announced by GLE in July 2014, the program continued to make positive progress through 2015 with program milestones achieved in both the Sydney and Wilmington project sites. Ongoing laser system development activities funded by Silex at Lucas Heights (Sydney) resulted in a significant demonstration of prototype plant-scale laser systems during the period in review. In parallel, GLE funded activities in the Test Loop facility in Wilmington resulted in further testing of key process efficiency improvements which have the potential to lower both operating and capital costs of the technology.

Silex remains firmly committed to providing ongoing support to GLE at both sites. Additionally, in recent months we have increased our involvement in commercialisation and business development activities in conjunction with GLE and its shareholders, GE-Hitachi and Cameco. To this end, meetings with various stakeholders have been held over the last few months to discuss business development strategies. These discussions continue, with an assessment of options for increasing project funding currently underway.

ii) The Paducah Opportunity: Negotiations between GLE and the US Department of Energy (DOE) regarding the Paducah commercial plant opportunity discussed in recent announcements continue constructively, and we are advised that an outcome may be expected in the next few months. The opportunity would involve construction of GLE's proposed 'Paducah Laser Enrichment Facility' (PLEF) utilising the SILEX Technology to reprocess hundreds of thousands of tons of high assay tails inventories owned by the DOE, which resulted from decades of enrichment activities conducted in the US using first generation gaseous diffusion plants. The tails reprocessing would occur over a period of 40 years or more, resulting in the production of natural grade uranium which could then be sold into the expanding global uranium market. At a US government-regulated production rate of around 2000 metric tons of uranium (in the form of UF_6) per year, this would rank amongst the world's largest uranium mines today.

iii) Nuclear Power Outlook: The medium to long term outlook for uranium and enrichment services is forecast to return to growth, with the merits of nuclear power as a clean emissions-free energy source becoming better understood around the world. We are encouraged by the recent restart of the third Japanese nuclear reactor to come back online along with confirmation of Japan's commitment to generating a fifth of its power requirements from nuclear energy by 2030.

New nuclear plant builds continue in the US and the UK, in addition to extensions being granted to the operating lives of existing nuclear plants which could see many of these plants generating clean, reliable and affordable baseload electricity for up to 80 years. An aggressive new reactor build program continues in China with 24 reactors under construction, with India, South Korea, UAE and Russia also progressing with new reactor construction. This equates to billions of dollars of investment into the nuclear industry.

At the UN Climate Conference (COP-21) held in Paris in December 2015, 195 nations agreed to combat climate change and pursue action and investment towards a low carbon future. This could precipitate an increasing role for nuclear power around the world as a key carbon-free solution for baseload electricity requirements.

Whilst the markets for uranium and enrichment services currently remain depressed, we remain encouraged by the various positive developments for the global nuclear industry. We firmly believe the SILEX Technology, being our core asset and the only third generation laser enrichment technology being commercialised in the world, is the best path forward to deliver value to our shareholders.

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 is a research and development Company whose primary asset is the SILEX laser enrichment technology, originally developed in the Company's technology facility in Sydney, Australia. The SILEX technology, licensed exclusively to GE-Hitachi Global Laser Enrichment LLC (GLE) in the USA, is currently in the engineering development stage and plans for commercial deployment remain distant and high risk. The commercial potential of this technology is therefore unknown. Accordingly, the statements in this announcement regarding the future of the SILEX technology and any 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.

Some risk factors that could affect future results and commercial prospects include, but are not limited to: results from the SILEX uranium enrichment engineering development program being conducted jointly by the Company and GLE; the demand for natural uranium and enriched uranium; the time taken to develop the SILEX technology; the potential development of competing technologies; the potential for third party claims against the Company's ownership of Intellectual Property; the potential impact of government regulations or policies in the USA, Australia or elsewhere; and the outcomes of various commercialisation strategies undertaken by the Company and/or its Licensee GLE.