

Silex Systems - Operational Update

22 August 2016

Highlights

- Despite the ongoing depressed state of the nuclear fuel markets and the impact this is having on our share price, Silex continues to push forward with activities to support both licensees in the commercialisation of our unique and potentially game-changing technologies – the SILEX laser-based uranium enrichment technology and the Translucent cREO™ semiconductor technology;
- The continued development and commercialisation of our core asset, the SILEX technology, and the restructure of Licensee, GE-Hitachi Global Laser Enrichment LLC (GLE) was the primary focus of the Company during FY2016;
- Silex successfully negotiated and executed a term sheet in April 2016 with GE-Hitachi providing the framework for a full restructure of SILEX technology Licensee, GLE;
- Silex has taken the lead on the search for new investors in GLE with discussions advancing with several interested parties;
- An agreement between GLE and the US Department of Energy (DOE) which could see the first commercial SILEX enrichment plant be built in Paducah, Kentucky is nearing finalisation;
- The SILEX technology engineering and economic validation program has continued to achieve pleasing results in key program activities at both the Wilmington and Sydney project sites;
- The Company's restructure announced 30 June 2014 has been completed, resulting in the licensing of the Translucent cREO™ technology and the sale of Solar Systems' assets. Both subsidiaries ceased operations during FY2016;
- In September 2015, Translucent's 'cREO™' technology was exclusively licensed to IQE Plc based in the UK. IQE is progressing the cREO™ technology towards commercial deployment in various advanced semiconductor markets;
- Current cash reserves of \$50.3 million, equivalent to \$0.30 per share.

1) SILEX Uranium Enrichment Project Update

i) **GLE Restructure:**

The Company's primary focus in FY2016 was on the continued development and commercialisation of our core asset – the SILEX technology, and the restructure of our Licensee GE-Hitachi Global Laser Enrichment LLC (GLE). GE-Hitachi Nuclear Energy (GEH) announced in April that they are looking to exit GLE, due to changes in business priorities and the continuing difficult conditions being experienced in the nuclear fuel markets. On 29 April 2016, Silex signed a term sheet with GEH securing an exclusive option to acquire GEH's 76% interest in GLE, and the right to assign in part or in whole the acquisition terms to third parties.

Under the term sheet signed with GEH, Silex further agreed to reimburse GEH its pro-rata share of funding for the Wilmington operation for CY2016. This is in addition to Silex funding the development of commercial-scale laser systems at its Lucas Heights facility in Sydney. GLE shareholder, Cameco, 24% owner of GLE, remains supportive of Silex's efforts to restructure GLE.

In recent months Silex has taken the lead on the search for new investors in GLE, with a preference for securing high calibre strategic investors who are capable of supporting GLE's transition to market with the SILEX technology. Discussions continue to advance with a number of interested parties.

Silex firmly believes that GLE is the best vehicle to take the SILEX technology to market, based on the preservation of several key assets which will underpin GLE's value going forward. These assets include:

- the highly skilled and specialised engineering team based in Wilmington (in addition to the highly talented laser development team in Sydney);
- the Test Loop demonstration facility that has operated since 2010 and continues to advance the technology towards full-scale demonstration; and
- the combined construction and operating license (COL) granted by the US Nuclear Regulatory Commission in 2012 for a potential commercial enrichment plant in Wilmington, NC.

In addition to the abovementioned key assets, the Paducah commercial plant opportunity (to produce natural grade uranium from tails stockpiles owned by the US Department of Energy (DOE)) is being negotiated exclusively between the DOE and GLE – refer to the update below.

ii) *Project Update:*

The focus of the Company is firmly set on the remainder of the commercialisation program for the SILEX laser uranium enrichment technology. Whilst the pace of this commercialisation program was slowed significantly by GLE in July 2014 in line with continued adverse conditions in the nuclear fuel markets, the technology engineering and economic validation program has continued to achieve pleasing results during FY2016. Key technology demonstration activities relating to improved process efficiency and scaled-up laser system performance were completed during the year in review at the Wilmington and Sydney project sites respectively.

Silex remains firmly committed to providing ongoing support to the GLE commercialisation program activities at both sites whilst the search for new investors proceeds. Subject to successfully completing the GLE restructure with new investors on board, we will aim for the commercialisation program to be ramped up again in the near future, in anticipation of the commencement of a recovery in market conditions.

iii) *The Paducah 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.

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. An agreement between GLE and the DOE facilitating the tails reprocessing is nearing finalisation.

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 nominal production rate of around 2000 metric tons of natural uranium hexafluoride (UF₆) per year (subject to applicable regulations), this would rank as a large 'Tier 1' uranium mine by today's standards.

iv) *Nuclear Power Outlook:*

Challenging market conditions continued to impact the nuclear fuel markets throughout FY2016. This was not unexpected given the continued slow pace of the restart of the Japanese nuclear reactor fleet following the Fukushima disaster in 2011 and the announcement of the premature retirement of a number of reactors in the US and Europe. As a result, demand for enrichment and uranium remains low and prices currently depressed.

Longer term, a more positive outlook remains for the nuclear industry, driven by the merits of nuclear power as a clean emissions-free source of base load electricity becoming better understood around the world. Ten new reactor units commenced operations in the past year giving a total of 445 operable reactors globally. With an additional 61 reactors under construction and 170 planned – the demand and supply fundamentals of the nuclear fuel markets are set to recover in the coming years.

Billions of dollars of investment continues to be made every year in the nuclear industry with new nuclear plant builds continuing in the US and the UK, as well as extensive programs in China, Russia, India and South Korea. This is 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.

We therefore remain encouraged by these positive developments in the global nuclear industry. We continue to 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.

2) Translucent – cREO™ Technology

Over the past decade, Silex subsidiary Translucent Inc developed a novel set of semiconductor materials known as ‘Rare Earth Oxides’ (REO™) for application to the manufacturing of next generation devices in the semiconductor, digital communications and power electronics industries. Following the extensive pursuit of business development options for Translucent, an exclusive License and Assignment Agreement was signed with UK-based IQE Plc (LON:IQE) on 15 September 2015. IQE is the global leader in the design and manufacture of advanced semiconductor wafer products.

A license fee payment of US\$1.4 million was paid by IQE in March 2016 following the transfer of the cREO™ technology to IQE’s Greensboro, North Carolina manufacturing facility for the completion of product development and commercialisation activities during a 30-month option period. Should IQE elect to exercise the right to purchase the technology within this period, the payment of a further US\$5 million will be made.

We remain pleased with the effort and focus that IQE have applied to the advancement of Translucent’s unique cREO™ technology to date. The potential commercial applications that IQE have identified for the technology may result in an attractive perpetual royalty stream based on revenues generated by IQE from use of the cREO™ technology.

IQE have been producing cREO™ templates on silicon wafers using one of Translucent’s production reactors for a number of months. The semiconductor characteristics of the templates produced are an excellent match to previously achieved results by Translucent. A second production reactor devoted to development and commercialisation of additional cREO™ materials recently entered service at the Greensboro facility. These production reactors will continue to produce product templates for the IQE Group and select commercial partners, with initial focus on RF (wireless) communications and power electronics device materials.

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 uranium enrichment technology, originally developed at 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. Silex also has an interest in a unique semiconductor technology known as 'cREO™' through its ownership of subsidiary Translucent Inc. The cREO™ technology is exclusively licensed to 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 remains high risk.

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.

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; results from IQE's commercialisation program and the demand for cREO™ products, 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 Licensees GLE and IQE.

The views and opinions expressed herein are solely those of Silex and do not reflect the view of GE-Hitachi Global Laser Enrichment LLC, or its owners or subsidiaries.