



Silex

SYSTEMS LIMITED A.C.N. 003 372 067

FULL YEAR RESULTS AND OPERATIONAL UPDATE

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Key Operational Highlights

The SILEX Technology

- The US Nuclear Regulatory Commission's ("NRC") Atomic Safety and Licensing Board ("ASLB") is completing its evaluation of an application from GE-Hitachi Global Laser Enrichment LLC ("GLE") for a license to construct and operate a commercial uranium enrichment plant based on the SILEX laser technology, in Wilmington, North Carolina.
- According to the NRC's current timeline, it is expected that the ASLB will make its decision regarding GLE's license application by 31 August 2012. If granted, it is anticipated that the NRC will then issue the license notification in the first two weeks of September.

Solar Systems

- In the Product Commercialisation Program co-funded by the Victorian Government, the Manufacturing Review and Product Release milestones were completed in March and June 2012 respectively. The Final Report, the last remaining milestone is expected to be completed in August 2012.
- In the Mildura Stage 1 Demonstration Facility Project, co-funded by the Victorian Government with contributions from the Commonwealth Government APP grant scheme, 3 milestones: Utility System Development Review; Planning Approval and Construction Start; and 1.5MW Utility Development Review were completed by June 2012. Construction of this 1.5MW facility continues on schedule and budget.
- Sites for demonstration plants (of up to 1MW each) have been secured in Beaumont California, USA, and at the Nofa Resort near Riyadh, Saudi Arabia. Manufacturing and construction has commenced for these plants - first off-shore demonstration facilities using the CS500 Dense Array Dish CPV System.

Translucent

- Potential customers in both the Power Electronics and LED industries continue to conduct trials on Translucent's proprietary 'vGaN™' substrates with steadily improving results. It is anticipated that this iterative process will lead to validation of commercial-grade substrates by mid CY 2013.



SilexSolar
Australian Clean Energy



CHRONOLOGIC
GLOBAL TIMING SYSTEMS



SYSTEMS LIMITED

- Engineering development of Translucent's proprietary low-cost 'VGe™' substrates for application to ultra-high efficiency CPV solar cells has advanced considerably during the year. Furthermore, preliminary analysis conducted in collaboration with Arizona State University indicates these types of cells may potentially achieve solar conversion efficiencies of 50% or more.

Chronologic

- Breakthroughs with the core USB-inSync™ technology have generated further interest in several new applications, potentially opening up additional market segments.
- In recent months, Chronologic has embarked on an exhaustive process to secure appropriate strategic partners for its technology and/or products. Several trips have been undertaken to the US and Asia, resulting in detailed discussions on possible business transactions, including joint venturing, merger or acquisition.

Silex Solar

- Significant restructuring of the business was undertaken throughout the period however, in light of continuing economic difficulties in the global flat-panel PV industry, Silex has made the difficult decision to terminate all activities in the Silex Solar business.
- The Sydney Olympic Park facility is in the process of being vacated with the corporate head office to relocate in the Sydney CBD.

Financial Results for the year ended 30 June 2012

- Net loss for the year was \$36.8 million.
- Net cash outflows from operating activities were \$16.2 million.
- Costs from finalising the cessation Silex Solar's business and exit from Sydney Olympic Park totalled \$13.4 million. This includes equipment decommissioning and dismantling, lease termination, redundancies and inventory and fixed asset write downs during the year.
- Losses from Solar Systems' and Translucent's operations for the year were \$10.8 million and \$5.4 million respectively as the divisions continued their product development and commercialisation activities.
- Further details of the Group's accounts can be found in the Company's Appendix 4E filing with the ASX.

Silex remains in a strong financial position with cash reserves of \$87.6 million at year end. Investment in the development and deployment of its core technologies into target markets has accelerated, resulting in significant progress towards the commercialisation of its potentially game-changing technologies, including laser enrichment for nuclear power and utility-scale solar energy technology.

OPERATIONAL UPDATE

1. SILEX URANIUM ENRICHMENT TECHNOLOGY

US Nuclear Regulatory Commission (NRC) Licensing Schedule

- The NRC Atomic Safety and Licensing Board (“ASLB”) is completing its evaluation of an application from GLE for a license to construct and operate a commercial uranium enrichment plant based on the SILEX laser technology, in Wilmington, North Carolina.
- According to the NRC’s current timeline, it is expected that the ASLB will make its decision regarding GLE’s license application by 31 August 2012, with announcement of the decision to be provided within the following two weeks.

Test Loop & Engineering Design Activities

- Further positive tests were achieved in the Test Loop facility (Wilmington, NC) during the period. These tests and ongoing activities aim to accumulate performance, operating and life-time data on the technology to assist the engineering design program for the first proposed commercial production plant.
- Concurrent testing and engineering design activities are expected to continue into CY 2013, with the aim of providing additional information supporting the scaling up of equipment for the proposed commercial production plant.

The Path Forward

- Under current plans, there are three key criteria required to be met prior to GLE making a final decision to proceed with the construction of the first commercial production facility:
 - (i) Approval for a Construction and Operating License from the NRC;
 - (ii) Completion of the commercial plant engineering design program, including the evaluation of prototype systems for commercial production; and
 - (iii) Securing of conditional customer commitments.
- Subject to these and other factors and activities, GLE plans to make a decision on the construction of the first full-scale commercial production facility with a capacity of up to 6 million separative work units (‘SWU’s’).

Nuclear Industry Status and Growth Outlook

- Despite the Fukushima event in Japan in 2011, global demand for enriched uranium is expected to increase significantly over the next two decades, with the anticipated construction of a new generation of nuclear power plants. Many Governments around the world continue to recognise that nuclear power is an important element in helping to meet the world’s converging needs to achieve energy supply security and address climate change.
- Significant expansion in nuclear capacity is planned by several countries including most notably China and India. According to the latest available data (on the World Nuclear Association website - August 2012) there are currently 433 operable reactors around the world today. Additionally, there are currently 65 nuclear reactors under construction (including 26 in China and 7 in India), 158 new nuclear reactors planned with approvals, funding and/or major commitments in place (including 51 in China and 18 in India), and 329 more proposed (including 120 in China and 39 in India) and mostly expected to be in operation within 15 years.

2. SOLAR SYSTEMS

Product Development

- The product commercialisation program co-funded by the Victorian Government has recently been completed, with the final report due to be submitted at the end of August 2012.
- The Manufacturing Review milestone was completed in March 2012. This involved a review of the manufacturing capabilities and processes at Solar Systems' clean-room fabrication facility in Melbourne, in which the Company's proprietary 'Dense Array' CPV modules and receivers are manufactured.
- The Product Release milestone, involving a review of the CS500 'Dense Array' Dish Systems installed at Bridgewater, was successfully completed in June 2012.
- Significant progress with the development of the unique CPV 'Dense Array' technology, including performance optimisation, reliability testing and cost reductions continues to be made. The Company plans to release a lower cost and improved performance product to the market during CY 2013.
- Significant progress has also been achieved in the development of Intellectual Property associated with the 'Dense Array' technology, with the filing of 4 new patent applications and drafting of several more potential patent applications.

Bridgewater Demonstration Facility

- The Bridgewater test and reliability facility was officially opened on 28 June 2012. This facility will underpin reliability testing leading ultimately to international certification of the technology for global deployment.
- The Company's first commercial power purchase agreement (PPA) for power off-take onto the local Bridgewater grid was signed with Diamond Energy on 28 June 2012.

Mildura CPV Power Station Project

Stage 1 – Pilot Plant Facility (1.5MW)

- Construction activities are currently continuing on schedule and budget, with scheduled completion in the first half of CY 2013.
- A grid connection agreement has been signed with Powercor Australia and discussions regarding a power purchase agreement are well advanced.
- Three milestones under the Commonwealth Government APP grant project for Mildura Stage 1, being the Utility System Development Review, Planning Approval and Construction Start and Utility Development Review were completed by June 2012.
- The Victorian and Commonwealth Governments have agreed to change the Mildura Stage 1 Project from 2MW to 1.5MW capacity. This change was necessitated by a restriction on the maximum power dispatch rating of an adjacent 22kV transmission line that the facility will be connected to. The Stage 2 100MW project is not affected by these restrictions as it will be connected to a nearby high capacity 220kV transmission line.

Stage 2 – Solar Power Station Project (100MW)

- The Stage 2 100MW Power Station Project has received funding commitments of \$75 million from the Commonwealth Government and approximately \$35 million from the Victorian Government (net of around \$15 million to be drawn down prior to Stage 2).
- The planning phase continues, with construction commencement expected in CY 2014, subject to successful completion of Stage 1.

Power Station Projects and Pilot Plants

- Solar Systems is actively pursuing several off-shore opportunities to demonstrate its Dense Array CPV Dish technology through the deployment of demonstration plants.
- Subject to successful completion of these smaller plants, the objective is to undertake major utility power station development projects in these offshore markets, potentially in collaboration with strategic partners.
- Two off-shore pilot demonstration plants of up to 1MW capacity each are underway:
 - Nofa Equestrian Resort near Riyadh, Saudi Arabia: Construction is expected to be completed in the first half of CY 2013.
 - Beaumont, California USA: Construction is expected to be completed in the second half of CY 2013.

3. TRANSLUCENT

Translucent continued to advance product development and industry validation activities in three target markets – Power Electronics, LED lighting and CPV solar cells.

Product Development Activities

(i) Substrates for Power Electronics and LED Lighting applications:

- Improvements continue with the quality of Translucent's proprietary vGaN™ substrates (Gallium Nitride (GaN) epitaxial layers deposited on Rare Earth Oxide (REO) layers on silicon wafers). This iterative improvement process which includes testing by several potential customers is taking longer than anticipated, however the results are very encouraging with product quality substrates anticipated in the near term.
- Translucent is currently constructing an in-house designed, fully functional multi-wafer prototype production system, which will significantly increase the volume of vGaN™ substrates that can be produced, and will enable the production of large 200mm substrates for the first time.

(ii) Substrates for Ultra-High Efficiency Solar Cells:

- Translucent is developing a novel process to reduce the cost and increase the efficiency of advanced multi-junction (MJ) solar cells used in concentrating solar (CPV) applications (such as the technology being developed by Solar Systems). The process involves deposition of germanium-tin (GeSn) layers on to silicon wafers in a proprietary designed epi-reactor.
- Analysis undertaken in collaboration with Arizona State University has indicated that (GeSn) based MJ cells have the potential to achieve 50% or more solar conversion efficiency, compared to around 43% for today's best MJ cells, and around 20% for conventional silicon solar cells.

Commercial Activities

- Commercial activities continue to increase with potential customers in both the Power Electronics and LED industries building functional devices and conducting trials on Translucent's silicon wafer-based vGaN™ substrates with continuously improving results. This product line offers significant cost advantages compared to sapphire and other expensive substrates currently used in these industries.
- Apart from realising lower substrate costs, the additional advantage for customers is that the vGaN™ substrates can be readily utilised in standard 200mm silicon wafer process plants – again with significant cost benefits.
- Translucent has initiated collaborative efforts with three key CPV solar cell manufacturers (Spectrolab, Emcore, IQE) in the GeSn substrate project outlined above, and expects to be able to supply them with product-quality substrates during the next year. This project has received a funding grant from the Australian Solar Institute (ASI) worth \$2 million over 3 years.

4. CHRONOLOGIC

- ChronoLogic continues to work on the development of its new DVI product range, which continues to generate significant interest in the multi-billion dollar Test and Measurement industry.
- Recent breakthroughs with the core USB-inSync™ technology have generated further interest in several new applications, potentially opening up additional market segments.
- Chronologic has embarked on an exhaustive process to secure appropriate strategic partners for its technology and/or products. Several trips have been undertaken to the US and Asia, resulting in more detailed discussions evolving on possible business transactions, including joint venturing, merger or acquisition.

5. FINANCIAL SUMMARY

Revenue from continuing operations was \$9.4 million for the year ended 30 June 2012. This was in line with expectations.

The net loss for the period was \$36.8 million. This included a loss from Silex Solar's discontinued operation of \$19 million, impacted by further reductions in selling prices and costs associated with the impending closure including the negotiated lease settlement, dismantling and decommissioning, further write downs of fixed assets and inventory and redundancy payments (totalling \$13.4 million).

Meanwhile, the engineering development and commercialisation activities continue unabated at Solar Systems, Translucent and ChronoLogic with key internal milestones being met during the last year as outlined above.

The result for Solar Systems was a loss of \$10.8 million compared to a loss of \$5.7 million for the prior year, as the business ramped up its product development and commercialisation programs.

Translucent's result was a loss of \$5.4 million compared to a loss of \$4.4 million for the prior year. Significant technical progress has been achieved by Translucent to improve product quality and performance of its vGaN™ substrate product line.

Net cash outflows from operating activities of \$16.2 million reduced by 43.8% year on year. The improvement to operating cash outflows is largely a consequence of the discontinuation of Silex Solar's operations.

Strong cost management and minimisation of cash burn remains a key focus as the company strives towards the commercialisation of its various technologies. We expect further savings in our operating cost profile and improvement to net cash outflows from operating activities to continue through FY 2013.

Further Information

Further information on the Company's activities can be found on the Silex website: www.silex.com.au or by contacting the persons listed below.

Contacts: Michael Goldsworthy or Julie Ducie on +61 2 9532 1331

Media: Alan Jury or David Akers on +61 2 8298 6100

About the SILEX Technology:

In 2006, Silex signed an agreement with GE to develop and commercialise the SILEX Process, the world's only third-generation laser based technology, to enrich uranium for fuel used in nuclear power plants. Silex invented the technology in the mid 1990's and had been developing the technology for over a decade at its research facility in Sydney before the GE agreement was completed. Under the agreement, Silex receives several milestone payments and if successfully deployed, a royalty on revenues derived from the technology of between 7% and 12% (depending on the costs of deployment per unit of production capacity).

The SILEX Laser Uranium Enrichment Project was relocated to GE Hitachi Nuclear Energy's headquarters in Wilmington, North Carolina during 2007, and in 2008 the agreement was assigned to GE-Hitachi Global Laser Enrichment LLC (GLE), a business venture which is now owned by GE (51%), Hitachi Ltd. (25%) and Cameco (24%). Under the agreement GLE funds all ongoing project and deployment costs.

GLE is currently undertaking a 'Test Loop' Program in Wilmington, in parallel with an Engineering and Manufacturing program at its Oak Ridge, Tennessee Engineering Facility. These programs involve important pre-commercialisation demonstrations of the technology at production scale. GLE will use the Test Loop and Engineering program results to determine whether to proceed with the construction of the first full-scale commercial laser enrichment production facility in the world. GLE's decision is also dependent on receiving a License for the commercial production facility, planned for the Wilmington site, from the US Nuclear Regulatory Commission. This is expected in Q3 CY12.

For more information visit: www.silex.com.au

About Solar Systems:

In March 2010, Silex announced that it had completed the acquisition of the assets of Melbourne based Solar Systems Group from the company's Administrators, including the technology intellectual property and patents, a new manufacturing facility in Abbotsford, Melbourne, and a large-scale pilot demonstration facility in Bridgewater, central Victoria. A new wholly owned subsidiary was formed for the acquisition using the original name of Solar Systems Pty Ltd ("Solar Systems").

Solar Systems' solar technology is applicable to large utility-scale electrical power generation using its proprietary "Dense Array" concentrating photovoltaic (CPV) solar conversion technology. This technology utilises ultra-high efficiency photovoltaic (PV) cells (initially developed for space applications) and is ideally suited to the burgeoning global utility-scale solar power station market. The key and unique advantages of this technology include the use of advanced 'multiple junction' solar cells, currently capable of approximately 40% conversion efficiency - approximately double the efficiency of today's best silicon based cells, and the use of active cooling to maximise power output and lifetime performance from the solar cells.

For more information visit: www.solarsystems.com.au.

About Translucent:

Translucent, 98% owned by Silex, has been developing advanced materials, principally insulating rare earth oxides (REO's) in its state-of-the-art development facility in Palo Alto, California. The initial R&D activities focused on applications in the photonics and semiconductor industries. By incorporating REO's onto well-established semiconductor materials such as silicon, and making them compatible with industrial processes, the original photonics applications pursued by Translucent have been expanded to include photovoltaics (multi-junction cell technology), substrates for LED production, and power electronic devices (power FET's). All these potential applications had the common theme of using the REO's to develop low cost "on-silicon" solutions.

Translucent has now incorporated its REO technology into its crystalline semiconductor-on-insulator (cSOI™) platform, for which it has numerous patents and pending patents. cSOI is an "on-silicon" platform, meaning that it leverages the low-cost fabrication techniques long established in the silicon semiconductor industry while still harvesting the breakthrough advantages of the REO materials. After years of rigorous R&D effort, Translucent is now close to realising the first commercial products based on the REO wafer platform technology.

For more information visit: www.translucentinc.com

About Chronologic:

ChronoLogic is an Adelaide-based subsidiary (90% owned by Silex) developing novel electronics equipment incorporating its proprietary USB-inSync™ technology. In essence, ChronoLogic's USB-inSync™ technology transforms the ubiquitous USB connection from a simple consumer connectivity bus to an instrumentation grade interface with class-leading synchronisation capabilities. Potential applications include the Test and Measurement market, Data Acquisition (DAQ) market, Precision Timing market and Cross-Platform Synchronisation of laboratory and industrial instruments. Products include a new Distributed Virtual Instrumentation (DVI) range, currently being released to market. These products will offer unprecedented flexibility and control for engineers and scientists.

Virtually every consumer product we use today has been manufactured and tested in plants and laboratories using this type of equipment or instrumentation. Applications fall within the Test, Control and Automation areas, including the semiconductor, automotive and mining industries through to medical diagnostics and food processing. A large number of these applications require synchronous measurements and acquisition of data, and the ability to control processes and/or events with precise relative timing. These requirements are addressed for the first time on a USB-based instrumentation platform by Chronologic.

For more information visit: www.chronologic.com.au

Forward Looking Statements and Business Risks:

Silex Systems is a research and development Company whose assets are its proprietary rights in various technologies, including, but not limited to, the SILEX technology, Solar Systems technology and business, Translucent technology and ChronoLogic technology. Several of the Company's technologies are in the development stage and have not been commercially deployed, and therefore are high-risk. Accordingly, the statements in this announcement regarding the future of the Company's technologies and 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 development program and the stable isotopes program; the demand for enriched materials including uranium, silicon, oxygen, carbon and others; the risks associated with the development of Solar Systems technology and related marketing activities; the outcomes of the Company's interests in the development of various semiconductor, photonics, instrumentation and alternative energy technologies; the time taken to develop various technologies; the development of competing technologies; the potential for third party claims against the Company's ownership of Intellectual Property associated with its numerous technologies; the potential impact of government regulations or policies; and the outcomes of various commercialisation strategies undertaken by the Company.