



Silex Systems Limited

Operational Update – FY2015

(ASX: SLX) (OTCQX: SILXY)

Dr Michael Goldsworthy, CEO / Managing Director

21st August 2015

Forward Looking Statements

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The Company

Silex Systems is an advanced technology company, primarily focused on the development and commercialisation of its innovative and potentially disruptive laser-based

SILEX uranium enrichment technology

Silex Restructure Nearing Completion

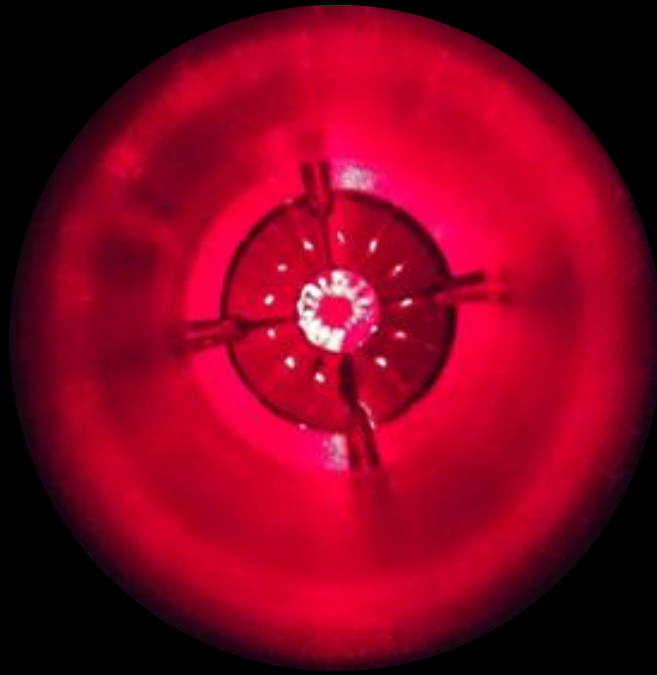
Key Points - Silex Systems Strategic Review and Restructure

- Strategic review of business undertaken by Silex Board in June 2014 resulting in company restructure
- Key decision – to return the primary focus of the company to the development and commercialisation of our foundation technology – the SILEX laser uranium enrichment technology
- Cessation of Solar Systems business announced on 30 July 2015, with IP and associated expertise retained in the short term to pursue residual opportunities
- Technical due diligence for the Translucent technology well advanced with several third parties involved – divestment process expected to be completed in the near term
- The restructure of Silex expected to deliver a significant reduction in cash burn to approximately \$3 million p.a., on a forward recurring basis (current cash reserves approximately \$53 million)
- Focussing on the SILEX technology will provide the best path forward to return value to shareholders in the medium term, particularly when nuclear fuel markets return to positive growth

GLE Restructure Completed

Key Points - GE-Hitachi Global Laser Enrichment (GLE) Restructure

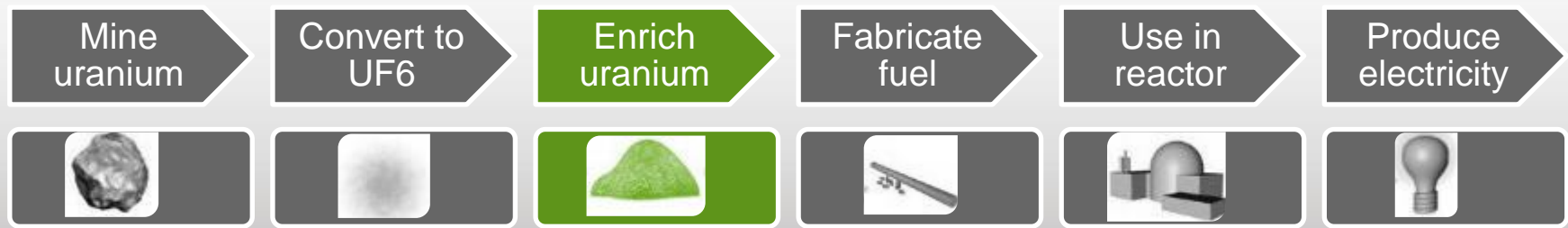
- SILEX technology Licensee GLE announced a major restructure in July 2014, slowing the commercialisation project in response to adverse conditions in nuclear fuel markets (Fukushima effect)
- Downsized team in Wilmington, North Carolina making significant progress with process and engineering improvements, potentially improving process efficiency and overall economics
- Our small team in Lucas Heights, Sydney is also making significant progress, having just completed a major development and demonstration milestone for a prototype plant scale laser system
- GLE continues to pursue the tails reprocessing plant opportunity in Paducah, KY – negotiations with the US Department of Energy are nearing completion
- Medium to long term outlook for the global nuclear industry suggests a return to growth and recovery in the nuclear fuel markets
- Nuclear power will remain a key component of the global electrical generation capacity with electricity demand expected to increase by around 80% by 2040 (compared to 2012 demand – International Energy Agency 2014)



SILEX Laser Uranium Enrichment Technology

Advantages of the SILEX Technology

- Enrichment is the most difficult and costly step in making nuclear fuel for power reactors (~35% to 40% of total cost based on current market prices)
- All enrichment today performed by gas centrifuge technology developed initially in the 1940's
- Current enrichment market ~50 million Separative Work Units p.a. (SWU's = the unit of enrichment) @ ~US\$80/SWU for term contracts – global market currently worth up to US\$4 billion p.a.
- Market pre-Fukushima ~ 60MSWU p.a. @ ~US\$160/SWU – market was worth around ~US\$9 billion p.a.
- SILEX is a breakthrough in efficiency – most cost effective enrichment method
- Anticipated to have the lowest capital costs of all enrichment technologies
- The only 3rd generation laser-based enrichment technology in the world
- Classified technology - protected by the strictest security measures



Nuclear Fuel Production

Commercialisation and License Agreement

Perpetual Royalty Agreement with Global Laser Enrichment (GLE)

- Exclusive worldwide commercialisation and license agreement for the SILEX Technology – signed in 2006
- Phase I milestone completed in May 2013 – triggered US\$15 million payment to Silex
- Next milestone payment triggered by start of construction of initial commercial plant: US\$5 million
- Final milestone payment – US Nuclear Regulatory Commission (NRC) verification of construction compliance of initial commercial plant: US\$15 million
- **Perpetual royalty range of 7 - 12% of future GLE revenues from commercial operations (based on calculation of cost per unit production installed)**



SILEX Technology Royalty Business Model

Our business model for uranium enrichment:

Zero capital cost to Silex

- Plant capex to be funded by GLE

High value perpetual royalty

- Contracted range of royalty rates set into perpetuity

Gen III technology advantage

- Only laser-based enrichment technology in the world

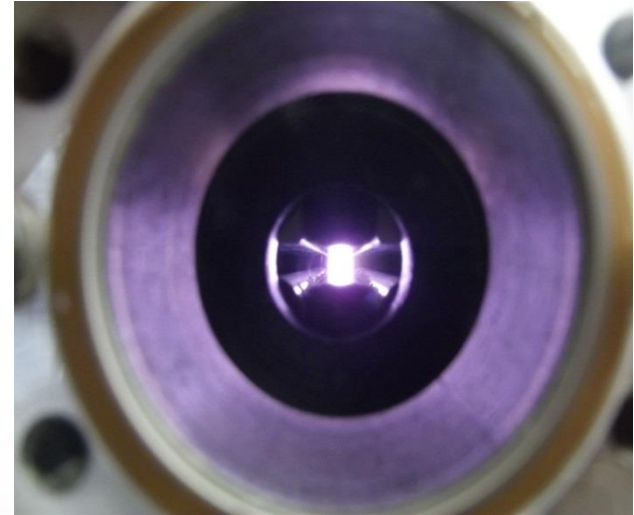
Long term growth story

- Global nuclear power capacity set to significantly increase

GLE's Phased Approach to Commercialisation

Commercial Plant Options

- Plans include possible enrichment plant of up to 6MSWU in Wilmington, NC (US NRC construction & operating License received in 2012)
- Additional opportunity for a commercial plant in Paducah, Kentucky – subject to negotiations with US Department of Energy (refer slide 12)
- Commercial plant decisions by GLE are dependent on market conditions
- Focus for the next few years on advancing the Phase II project to demonstrate full scale commercial production equipment



Phase	Objectives	Status
Phase I:	Test Loop technology demonstration and NRC commercial plant license approval	Completed
Phase II:	Economic and engineering validation for the initial commercial production module	Commenced in 2012
Phase III:	Construction of the first full-scale commercial production facility	To be confirmed

Paducah Enrichment Plant Opportunity Update

Negotiations between GLE and the DOE continue

- Closure of last 1st generation gaseous diffusion plant in May 2013 – led to Department of Energy (DOE) bid process for future operations
- GLE submitted a proposal to the DOE in August 2013 involving construction of a SILEX-based laser enrichment plant at the Paducah site
- DOE selected the GLE proposal exclusively in November 2013 for possible future commercial operations at Paducah
- Enrichment of DOE tails stockpiles potentially equivalent to one of the largest uranium mines in the world operating for around 40 years
- Plans will ultimately depend on a recovery in uranium market pricing from currently depressed levels
- Negotiations between the GLE and DOE are nearing completion with an outcome likely in the next few months



Paducah Enrichment Plant Site

Nuclear Energy Market Outlook

- Potential for significant increase in nuclear capacity over the next two decades
- Energy security and climate change are two key drivers for nuclear power deployment

Nuclear plant forecasts to 2030*

Country	2015	2030
TOTAL – all Countries	437	635
US	99	109
China	26	94
India	21	49
Japan**	43	50

* Approximate only - excludes 'proposed' plants, and includes ~ 60 older units shutdown

** Currently 42 operable reactors offline, 2030 assumes 10 units shutdown

Key Statistics

- ✓ 11 percent of global electricity
- ✓ 437 operable reactors currently
- ✓ 66 new plants under construction
- ✓ 168 plants planned
- ✓ 322 plants proposed

Source: World Nuclear Association (WNA) – July 2015

Uranium Enrichment Market Outlook

Short Term Market Outlook – ‘Negative’

- Short term market likely to remain depressed due to impact of Japanese industry shutdown
- Japanese reactor restarts slower than anticipated, with first unit at Sendai just back online
- Uranium market price down, but turning – Uranium is up ~30% since June 2014
- Enrichment market prices (term and spot) still very weak, but anticipated to recover



Medium Term Market Outlook – ‘Recovery’

- Medium term highly dependent on several macro factors
 - Pace of Japanese reactors restarts – up to 35 units to come back online in the next few years
 - Russian trade sanctions and possible effect on Tenex - world’s largest enrichment player
 - Pace of global nuclear build and influence of environmental drivers (climate change)
- Potential supply pressures in medium term timeframe – possible opportunity for introduction of SILEX capacity

Long Term Market Outlook – ‘Bullish’

- Plans for nuclear capacity to increase significantly from 380 GWe currently, to ~630 GWe by 2035 (UxC data, 2015)
- Accordingly, potential for significant increase in demand for natural and enriched uranium within ‘accessible’ market

Recent Industry Developments

Japanese Reactor Restarts

- First reactor at 'Sendai' restarted August 2015 and producing power with second unit to restart in coming months
- Two units at 'Takahama' to restart later in 2015 and early 2016, with the Ikata 3 unit also expected to restart in 2016
- Applications have now been submitted to the Japanese regulator NRA for the restart of 25 of 43 operable reactors

Russian Sanctions

- Threat of sanctions being imposed against Russian nuclear fuel with both Europe and the US stating their willingness to impose new sanctions should the Ukrainian situation remain unresolved
- Western utilities looking at Russian supply with greater uncertainty

South Australian Royal Commission

- South Australia is home to approximately 30% of the world's known Uranium deposits – currently exported as oxide ('Yellowcake') with no additional value added
- Commission is undertaking a comprehensive investigation into South Australia's participation in the areas of activity that form part of the nuclear fuel cycle including enrichment
- The Royal Commission has advanced through the submission phase, with public sessions to commence shortly
- Silex lodged its submission to the Royal Commission on 3rd August – available on Silex website

Summary

- ✓ The Company is nearing completion of a major restructure, resulting in a significant reduction in cash burn going forward (current cash reserves ~\$53m)
- ✓ Restructure resulted in a cessation of the Solar Systems business on 30 July, with the Translucent divestment process also nearing completion
- ✓ Primary focus going forward - the 'SILEX' uranium enrichment technology - the only third generation laser-based enrichment technology in the world
- ✓ SILEX technology is under exclusive licence to Global Laser Enrichment (GLE) - a business venture of GE (51%), Hitachi (25%) and Cameco (24%)
- ✓ GLE and Silex continue to support the uranium enrichment commercialisation program, albeit at a reduced pace in line with adverse short term market conditions
- ✓ Expect program to ramp up as the global nuclear fuel markets recover and grow again
- ✓ Silex will be entitled to a perpetual royalty of 7 to 12% (depending on plant capex) - on any of GLE's future uranium enrichment revenues



Thank you