SOR to Automate Energy From Moisture Development

Perth, Australia—10th October 2024—ASX-listed Strategic Elements Ltd (ASX: SOR) is pleased to announce the launch of the Energy Ink™ "Cell to Sheet Program", aimed at creating larger-scale prototypes and demonstrators with significantly increased energy generated from moisture. The program plans to use automated printed electronics machinery in commercial facilities to produce A4-sized sheets of cells, progressing toward stacking large numbers of these sheets vertically to enhance energy output.

A collaborative team from the University of New South Wales, Stealth Technologies, and SOR, in partnership with a commercial printed electronics facility, has investigated multiple automated machinery and printing technologies capable of producing Energy Ink™ cells with high precision. Several hybrid methods combining commercial deposition machinery and screen printing have been selected for trial.

This required a complete overhaul of the Energy Ink™ formulation, an increased batch size of upgraded ink to multi-litre range, significantly increased cell size, a transition to commercial suppliers for circuitry ink and materials, and a new structure for cell layout. This preparatory work has been completed, and testing is about to commence at UNSW and in a commercial facility.

Successfully moving development from individual small cells in a laboratory to a commercial facility capable of fabricating A4-sized sheets of cells will be transformative for the Energy Ink™ technology. This transition will boost scalability, reduce time, improve consistency, increase testing throughput, and enhance optimisation of materials and processes. Ultimately, it will enable the creation of larger-scale prototypes and demonstrators with significantly increased energy generated from moisture.

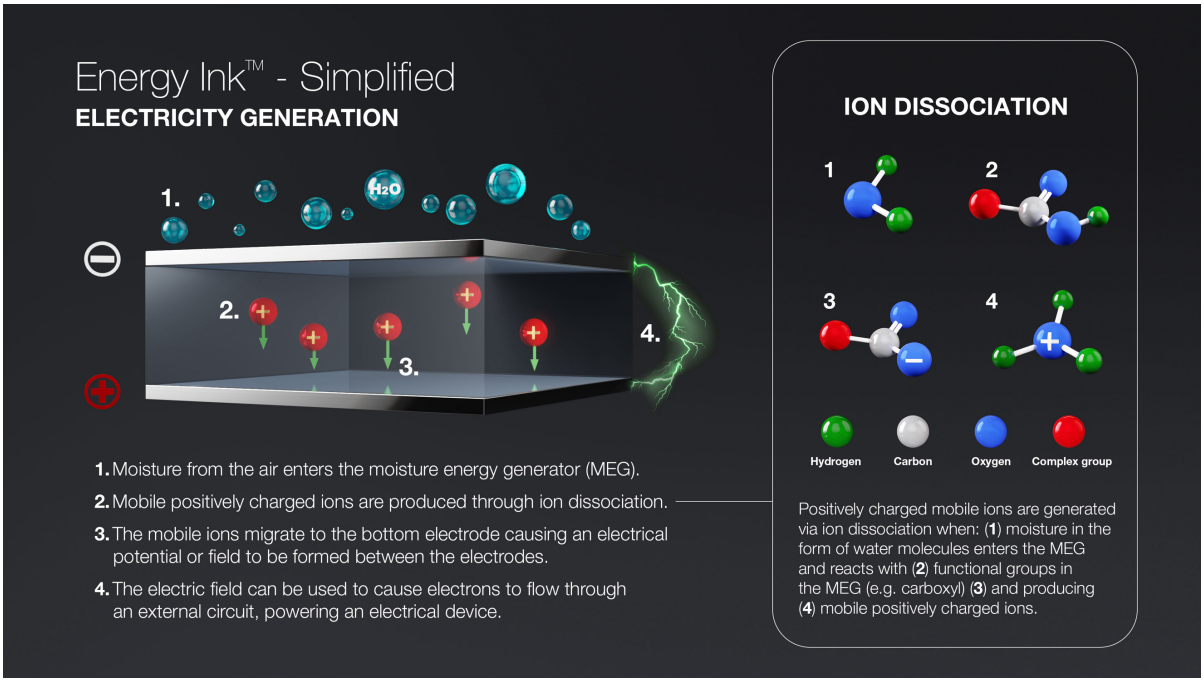
The Energy Ink™ technology is still at an early stage and has signifcant hurdles to achieve technical feasbility. These advancements will be leveraged to attract global collaborators to tackle further unaddressed hurdles such as duration, shelf life, corrosion and transitioning from prototypes to a more extensive, integrated system.

Managing Director Charles Murphy said, “As the Energy Ink™ is a pioneering technology, much work was required to design the Cell to Sheet Program and prepare modified ink and materials for trial in automated machinery. While much of this foundational work has not been externally visible, achieving this progress in such a brief time is a credit to the entire team. The next phase could revolutionise our ability to generate energy from moisture and enable us to attract global collaborators.”

Next Steps

The next step, trialling methods of automated fabrication of Energy Ink™ sheets, has begun, with results expected in Q4 2024. If successful, the Company will produce multiple A4-sized sheets of cells in Q1 2025. Following this, a decision on re-commencement of the EV charge program and progression to vertical stacking can be made.

Australian Advanced Materials Pty Ltd (AAM), a wholly owned venture of SOR, is leading the development of the Energy Ink™ technology alongside a world-class material science team from the University of New South Wales and other collaborators. The technology focuses on harvesting energy from moisture in the air. The Australian Research Council has contributed approximately $1,020,000 in funding (non-dilutive to SOR shareholders), with AAM providing an additional $800,000 over four years.



About Strategic Elements

ASX-listed Strategic Elements Ltd (SOR) operates as a 'Venture Builder' by sourcing and combining teams of leading scientists or innovators. The Company majority funds the initial development of each Venture whilst seeking a major strategic investor/partner to assist research commercialisation. The Australian Federal Government has registered Strategic Elements as a Pooled Development Fund (PDF) with a mandate to back early-stage Australian innovation. The PDF program provides the Company with a highly beneficial tax structure for the Company and its shareholders. More information on the program can be found on the Company's website.

More Information
Charles Murphy, Managing Director
admin@strategicelements.com.au
www.strategicelements.com.au
Phone: +61 8 9278 2788

This announcement was authorised for release by the Strategic Elements' Board of Directors.

Risks and Forward-Looking Statement

The Company's future success depends on its venture companies' successful development. The Company has had initial success with developing the Energy InkTM technology. However, given the nature of early-stage technology, it is susceptible to risks associated with early-stage R&D, such as the uncertainty of material science development, advanced technologies, intellectual property risks, materials engineering challenges, competition, fabrication challenges, access to required laboratory equipment and problems scaling up lab-based methods. There can be no guarantee that the assumptions and contingencies on which any forward-looking statements, opinions and development timeline estimates contained in materials published by the Company are based will ultimately prove to be valid or accurate. The forward-looking statements, opinions and estimates depend on various factors, including known and unknown risks, many of which are outside the control of the Company. Actual performance of The Company may materially differ from forecast performance.