

ASX Announcement

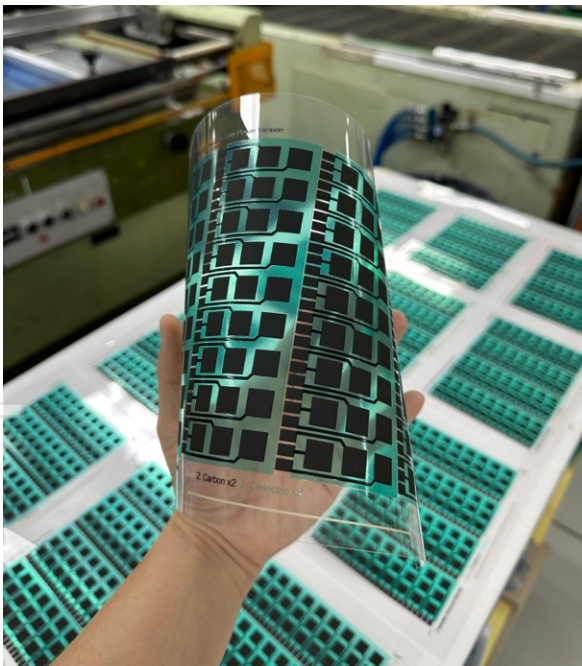
Energy Ink™ Achieves Key Step Toward Global Collaboration

Perth, Australia—25 September 2025 — ASX-listed Strategic Elements Ltd (ASX: SOR) is pleased to announce that Energy Ink™ — a printable ink that generates electricity from moisture in the air — has, for the first time, been used to manufacture thousands of prototype cells in a commercial facility using printing equipment commonly deployed across consumer, defence and healthcare sectors.

This achievement establishes the foundations for collaboration with international printed electronics centres and potential end-users. Through these partnerships, Energy Ink™ may be evaluated and co-developed into prototype cells and product demonstrators within industrial-style facilities. Building this capability broadens the opportunity base and creates a clear pathway from research conducted in Australia to active engagement with global industry.

Transfer Program Outcomes

Over 2000 prototype Energy Ink™ cells were successfully fabricated in a single production run and validated, confirming reproducibility in a commercial facility. In addition, 30 multi-cell arrays were connected and operated continuously for seven days at the target baseline power.



Fabrication in a commercial facility

Energy Ink™ cells demonstrating reproducibility under industrial processes.

High Yield Achieved

2,051 of 2,052 cells (99.95%) passed compliance testing for open-circuit voltage and short-circuit current.

Connected arrays manufactured

Successfully validated that interconnected cells can operate as functional arrays.

Multiple A5 sheets produced

Marking progress toward sheet-level fabrication, essential for scaling into demonstrators and eventual commercial deployment.

Energy Ink™ is being developed in collaboration with a world-class materials science team at the University of New South Wales (UNSW). UNSW is globally recognised for its expertise in functional materials and electronic printing with state-of-the-art nanofabrication, printing and characterisation facilities. The technology has been supported with more than \$5 million in competitive Australian Research Council (ARC) grants, including prestigious ARC Industry Fellowships.

Further Testing

Earlier development showed the low-power, disposable Energy Ink™ prototype powering a skin patch with two 4 cm × 4 cm cells (32 cm² total area) at 2.5 μW/cm². The transfer fabrication program scaled this performance across thousands of cells.

In the transfer program, 2,051 cells out of 2,052 achieved 100% yield for both open-circuit voltage (>1.2 V) and short-circuit current compliance. A 7-day constant current test of 30 arrays (27 cells in each array) was then conducted at a capped 10 μA per cell to match the skin patch baseline.

All 30 arrays maintained continuous output, each sustaining 270 μA (0.27 mA) for the 7-day period, with minimum power density of 2.5 μW/cm². Testing was performed under semi-controlled indoor humidity of 55%–70% RH, consistent with printed electronics facility environments.

Development Pathway & Challenges

With reproducible fabrication of prototype Energy Ink™ cells outside the laboratory now achieved, detailed characterisation will be undertaken to establish a robust dataset. The next objectives are to:

1. **Engage international printed electronics centres** — to test and develop Energy Ink™ alongside new materials, packaging, and electrodes. Focus on those with existing commercial relationships.
2. **Initiate discussions with end-user innovation hubs** — global companies often run programs for innovative technologies such as battery-free power sources.
3. **Progress toward pilot programs** — integrating Energy Ink™ into demonstrator products to generate data for potential commercial adoption.

Energy Ink™ remains at an early stage, with challenges ahead:

- Performance and durability — maintaining stable output over longer periods.
- Scalability — moving from prototype cells and sheets to larger or stacked formats.
- Integration — combining effectively with circuits, sensors, and packaging.
- Timelines — pilot programs may face delays and may not guarantee commercial adoption.

Company Comment

"Congratulations to our team. We look forward to strengthening our relationship with UNSW and collaborating internationally. Deep-tech innovations, especially new power sources, take time to mature but can deliver significant upside. Our Pooled Development Fund structure is designed for this — providing patient capital to capture breakthrough opportunities." — Charles Murphy, Managing Director, Strategic Elements

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

Strategic Elements Ltd (ASX: SOR) is a registered Pooled Development Fund (PDF) - an Australian Federal Government program stimulating investment into Australian innovation. The PDF structure provides eligible shareholders with significant tax advantages, including tax-free capital gains and dividends, while enabling Strategic Elements to pursue breakthrough innovation with longer development horizons. More information on the program can be found on the Company's website.

Risks and Forward-Looking Statement

The Company's future success depends on the successful development of its ventures, including Energy Ink™, which remains at an early stage. As with all early-stage R&D, there are significant risks, including uncertainties in materials science, intellectual property, engineering, fabrication, competition, equipment access, and scale-up from laboratory methods. No assurance can be given that assumptions, forward-looking statements, or development timelines will prove accurate. Outcomes depend on various known and unknown factors, many beyond the Company's control, and actual performance may differ materially from forecasts.