



SOR Energy Ink™ Integrates with Commercial Power Management

Highlights

- **COMMERCIAL ELECTRONICS INTEGRATION:** A prototype Energy Ink™ moisture cell system has been successfully integrated for the first time with e-peas power-management electronics, demonstrating that its electrical output can be captured and managed using commercial electronics.
- **ESTABLISHED SEMICONDUCTOR SUPPLIER:** Belgium-based e-peas is a fabless semiconductor company supplying power-management circuits for applications across consumer electronics, industrial IoT, smart homes and buildings, wearables and logistics.
- **MOISTURE ENERGY DOCK DEMONSTRATOR:** The commercial power-management integration was achieved during work on the Moisture Energy Dock demonstrator, which aims to transfer energy into a removable lithium-ion battery. A simple proof point is whether energy transferred by the Dock can support a one-minute voice call on a Nokia feature phone.
- **DRIVING PRACTICAL SYSTEM INTEGRATION:** A core purpose of the Moisture Energy Dock demonstrator program is to progress Energy Ink™ through the practical integration steps required for real electronic systems. The e-peas integration represents a key step in that process.
- **NEXT INTEGRATION MILESTONE:** The next practical integration milestone is to reduce the Dock's internal moisture chamber to centimetre-scale thickness while maintaining successful system operation, supporting a pathway to thinner electronic devices.
- **SEPARATE BATTERY-FREE MATERIALS PROGRAM:** In parallel, a separate battery-free materials program is evaluating alternative cell architectures and electrode materials, including commercial and emerging materials and potential collaboration opportunities.

Strategic Elements Ltd (ASX:SOR) is pleased to report the **first successful integration** of a prototype Energy Ink™ cell system with commercial power-management electronics from e-peas, achieved during work on the Moisture Energy Dock demonstrator.

Energy Ink™ is an early-stage energy technology being developed to generate electrical energy from moisture by 100%-owned Australian Advanced Materials, in conjunction with a world-class materials science team at the University of New South Wales and other research and development collaborators.

The integration demonstrates that electrical output from a prototype Energy Ink™ cell system can be **captured and managed** using commercial electronics, progressing Energy Ink™ toward integration with components used in practical electronic systems.

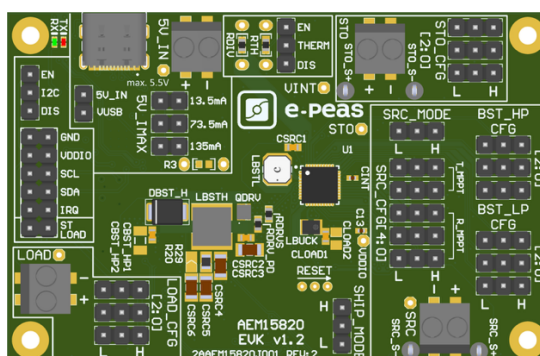
Managing Director Charles Murphy said: “Energy Ink™ is pioneering work in the emerging field of moisture energy. Deep-tech innovations, especially new power sources, take time to mature but can deliver significant upside. Our Pooled Development Fund structure is designed for this — providing patient capital to capture breakthrough opportunities. The Energy Ink™ team is highly focused on transferring energy from the Moisture Energy Dock into a lithium-ion battery and accelerating the separate battery-free pathway.”

Commercial Power-Management Integration

Until now, electrical output from Energy Ink™ cells has principally been measured and characterised using laboratory or in-house equipment.

The development team has now successfully integrated a prototype Energy Ink™ cell system with power-management electronics supplied by Belgium-based **e-peas**, a fabless semiconductor company supplying power-management circuits for applications across consumer electronics, industrial IoT, smart homes and buildings, wearables and logistics.

e-peas specialises in low-power power-management electronics designed to capture and manage small and variable electrical inputs from energy-harvesting technologies. The successful integration provides an important link between the Energy Ink™ cell system and the broader electronic architecture being assembled within the Moisture Energy Dock.



Moisture Energy Dock Demonstrator

The Moisture Energy Dock brings together an Energy Ink™ cell system, moisture management, commercial power-management electronics and energy transfer within a compact demonstrator.

The objective is to transfer energy into a standard removable lithium-ion feature-phone battery. Human breath is being used as the test moisture input, with a deliberately simple proof point to assess whether sufficient energy can be transferred by the Dock to support a **one-minute voice call using a Nokia feature phone**.

The phone-call demonstration is intended to provide a simple and easily understood endpoint. Importantly, development of the Dock also provides a platform for addressing the practical engineering constraints involved in progressing Energy Ink™ toward future electronic systems.

Engineered Moisture and Compact Device Integration

Human breath is being used as a convenient test moisture input for the Moisture Energy Dock. The broader engineered-moisture approach is focused on environments where humidity is controlled, predictable or can be readily maintained within a suitable operating range, such as climate-controlled buildings, data centres and certain industrial environments.

Other potential application environments include skin-contact and wearable formats, where local moisture may provide opportunities for very low-power battery-free electronics.



A key next milestone is to reduce the thickness of the Dock's internal moisture chamber to **centimetre-scale** while maintaining successful system operation. Reducing the size of this moisture environment is an important practical step toward future integration of Energy Ink™ into thinner electronic devices.

Separate Battery-Free Materials Program

In parallel with the Moisture Energy Dock demonstrator program, the Company is progressing a separate battery-free materials program focused on alternative Energy Ink™ cell architectures and electrode materials. The program is evaluating commercial and emerging materials, together with potential collaboration opportunities, with a particular focus on stable, non-consumable electrode systems suitable for future battery-free Energy Ink™ applications.

This work is separate from the Moisture Energy Dock demonstrator pathway and is intended to establish the technical foundations for future battery-free electronic formats.

About Energy Ink™

Energy Ink™ is an early-stage energy technology being developed by Australian Advanced Materials Pty Ltd, a wholly owned venture of Strategic Elements, in conjunction with a world-class materials science team at the University of New South Wales and other research and development collaborators.

The technology is being developed to generate electrical energy from moisture and is being advanced across materials design, prototype development, industrial screen-printing, engineered moisture, power management and prospective application pathways. Energy Ink™ is also being developed toward thin, flexible and battery-free electronic formats, with potential applications in low-power devices where conventional batteries can create significant design, maintenance and end-of-life constraints.

More than \$5 million in competitive Federal research and innovation funding has been secured across the Energy Ink™ program, supporting its development alongside Strategic Elements' patient capital.

About Strategic Elements

Strategic Elements Ltd (ASX:SOR) is a registered Pooled Development Fund that provides patient capital to Australian innovation through wholly owned operating ventures, with the objective of building value before seeking an appropriate strategic partner, investor or commercial pathway.

The Pooled Development Fund structure is particularly suited to technologies with longer development timelines, including emerging energy and power technologies such as Energy Ink™, and provides eligible shareholders with tax concessions including **tax-free capital gains and dividends***.

The Company's current operating ventures include Australian Advanced Materials, developer of Energy Ink™, and Stealth Technologies, developer of the EdgeIQ industrial intelligence platform. The Company also maintains an active program to identify, acquire and develop new project opportunities across a broad range of industries and stages of development, consistent with the flexibility of its Pooled Development Fund structure.

More Information

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

Forward-Looking Statements

**This announcement contains forward-looking statements regarding the development, application and potential commercialisation of Energy Ink™ technology. These statements are subject to risks and uncertainties, including technical performance, reproducibility, material development, printing and device fabrication, packaging, integration, durability, access to collaborators, manufacturing scale-up and market adoption. No assurance can be given that Energy Ink™ will achieve commercial deployment or that any future collaboration will result in a commercial outcome. Further information regarding the Pooled Development Fund program is available at the business.gov.au website. Investors should consider obtaining independent taxation advice.*