

# Ecoul – Energy Storage Solutions

## Media Release

### Australian Government Investment Supports Big Thinking on Small-scale Energy Storage

**Cost-effective electricity storage for residential and commercial renewable energy installations has moved a step closer following the Australian Government’s backing of a pilot project featuring the Ecoult Deka Ultrabattery technology.**

Sydney, Australia – 20 March, 2013. Australian energy storage company Ecoult has been awarded Australian Government funding through the Australian Renewable Energy Agency (ARENA) to conduct small/mid-sized storage project development using Deka UltraBattery technology to deliver cost effective storage solutions for homes and businesses in Australia and around the world.

This pilot will develop a [battery storage system](#) prototype for three types of deficit charge/distributed energy applications:

- Off-grid renewable power solutions (Remote Area Power Supply);
- Distributed grid connected storage to support voltage and power fluctuations that arise where there is dense concentration of small roof-top solar installations in residential areas; and
- Hybrid generation (such as diesel plus renewables) to improve fuel efficiencies.

Ecoul CEO John Wood said the ARENA grant was a strong vote of confidence in the Australian-invented technology.

“Ecoul has already demonstrated the success of the Deka UltraBattery technology in MW scale applications in a range of field conditions,” Mr Wood said.

“We are now in the process of extending our products and solutions from MW-scale to commercial and residential applications. Our objective is to reduce the cost of energy storage and boost the competitiveness of small-scale [renewable energy](#) sources such as roof-top solar panels.

“This backing from the Australian Government will help us continue our work in enabling affordable and effective integration of renewable energy into the Australian grid as well as in remote, off-grid applications.

The pilot project will extend the successful collaboration between Ecoult, its US-based parent company East Penn Manufacturing and the Commonwealth Scientific and Industrial Research Organisation (CSIRO).

Research partner CSIRO, which originally invented the Deka UltraBattery technology, will also play an important role in this pilot project, developing intelligent algorithms that improve the integration of Deka Ultrabattery units with the Solar PV panels and increase the value derived from each kWh of energy storage.

#### A Track Record of International Success

Ecoul has already successfully implemented the Deka Ultrabattery technology in MW-scale, grid-tied solutions around the world, delivering [regulation services](#) as well as solar and wind energy smoothing and shifting. Ecoult is currently implementing Deka Ultrabattery as part of a full stand-alone Power System for the King Island Renewable Energy Integration Project (KIREIP), being developed by Hydro Tasmania (Australia), with the objective to significantly reduce King Island’s reliance on diesel fuel to supply the island’s energy needs.

Mr Wood said the support from the Australian Government, coupled with demonstrated international demand for the technology, showed the Deka Ultrabattery was progressing systematically and very successfully in the energy storage marketplace.

“Over the last three years, Ecoult has completed extensive accelerated testing against profiles representative of the various applications to be demonstrated in the ARENA pilot.

“These field test results and the throughput achieved have confirmed the outstanding performance of Deka Ultrabattery in either variability management (smoothing) and in deficit charge regimes such as those typically encountered in distributed solar applications.”

Currently, sealed [lead acid batteries](#) (VRLAs) are the dominant chemistry used in distributed energy storage, using motive/'deep discharge' batteries that have been adapted for renewable support. However, these batteries steadily lose capacity with each discharge and must then be 'refreshed' periodically through an overcharge to restore capacity. Overcharging can be disruptive, and ultimately, sacrifices some of the useful life of the battery.

Testing conducted by Sandia National Laboratories in the United States showed Deka UltraBattery can perform better (by retaining consistent capacity), and for much longer, in deficit charge operations than VRLAs. Indications are Deka UltraBattery can outperform VRLAs in the order of five times.

### **Future Directions**

Mr Wood said Ecoult would continue to search for new applications for the Deka Ultrabattery technology, particularly at the small and medium end of the market.

“We see broad scale adoption of Deka Ultrabattery for the support of grid and renewable applications across the full kWh to MWh scale,” he said.

The company would also continue to pursue open modular architectures to support other Australian technology developers.

“The Deka Ultrabattery grew out of the ingenuity of the Australian research community. By encouraging knowledge sharing, we want to contribute to ongoing collaboration between the research community, government, the battery storage industry and the broader renewable energy industry.

“The end goal is to provide cost-effective storage to smooth and supplement clean but intermittent renewable energy generation around the world, and improve the quality of the power produced.”

### **Ecoult CEO John Wood is available for interviews.**

### **About Ecoult**

Ecoult delivers complete energy storage solutions and modules powered by the breakthrough Deka UltraBattery® technology – a hybrid lead-acid energy storage device containing both an Ultracapacitor and a battery in a common electrolyte. Ecoult's storage solutions manage intermittencies, smooth power and shift energy in a safe, reliable and environmentally sound way – the energy storage of choice for [grid ancillary services](#), wind and solar farms, remote microgrids, dual purpose and diesel microgrid efficiency applications. Ecoult is a subsidiary of US-based battery manufacturer East Penn Manufacturing, Inc.

For more information visit [www.ecoult.com](http://www.ecoult.com).

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