

## **Sandia and RedFlow Limited Announce Testing Collaboration**

Starting in October 2011, Sandia National Laboratories (SNL) will be testing RedFlow's latest flow battery. This battery system will soon be available in the USA and is designed for both grid-connected and off-grid applications. The tests on the 5kW/10kWh zinc-bromine flow battery module (ZBM) will be performed as part of a multi-phase project to develop advanced performance metrics for flow battery systems.

RedFlow's ZBM is designed to either stand alone or be integrated into larger electricity storage systems. It is configured as a building block allowing scaled storage solutions from smaller kilowatt to larger megawatt-scale applications. RedFlow is already supplying energy storage systems to meet the requirements of the distribution utilities in Australia and New Zealand, and will shortly enter the telecommunications power sector.

RedFlow is providing SNL with two System Development Kit (SDK) systems containing the ZBMs. The SDK includes an enclosure and additional protection circuitry. Phase I of this test program is to obtain third party validation of the nameplate performance. In Phase II, SNL is taking this testing one step further by applying a variety of simulated real world applications to the systems. Phase II testing will assist in the preparation of specific application-based business cases.

This collaboration will advance the goals of SNL, the Department of Energy and RedFlow by improving energy storage testing and evaluation practices and in turn helping to bring RedFlow's unique energy storage technology to North America.



*A RedFlow 5 kW 10 kWh zinc-bromine flow battery module.*

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### **About RedFlow**

RedFlow manufactures and sells electricity storage systems (ESS) based on its IP-protected zinc-bromine flowing electrolyte battery module (ZBM). RedFlow's 5 kW/10 kWh ZBM is light-weight, compact and with volume manufacturing, low cost compared to alternative batteries. RedFlow manufactures both ZBMs and ESSs at its Brisbane factory in Australia. RedFlow ESSs have standard capacities of 10 to 20 kWh, and the range is being extended to the megawatt class with the M-category prototype under development. They are designed for peak load management and smart grid support in electricity networks, inclusion in hybrid solar and diesel generating stations and to add value to intermittent generation from renewable energy sources. More information can be found at [www.redflow.com](http://www.redflow.com)

### **About Sandia**

Sandia National Laboratories is a multi-program laboratory managed and operated by Sandia Corporation, a wholly owned subsidiary of Lockheed Martin Corporation, for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-AC04-94AL85000.

Since 1949, Sandia National Laboratories has developed science-based technologies that support U.S. national interests and security. Sandia is a government-owned/contractor operated (GOCO) facility. Sandia Corporation, a Lockheed Martin company, manages Sandia for the U.S. Department of Energy's National Nuclear Security Administration. The U.S. DOE Energy Storage Systems Research Program (ESS), managed by Sandia National Laboratories in Albuquerque NM (Sandia), has evolved over three decades of successful battery and power sources research, engineering, and testing, especially as storage technologies relate to electric utilities, renewables, and grid security. The DOE Energy Storage Systems Program (DOE OE/ESSP) is part of the Office of Electricity Delivery and Energy Reliability at DOE. More information can be found at <http://www.sandia.gov/index.html> and <http://www.sandia.gov/ess>.