



RedFlow Technologies Ltd

Quarterly Report
Period ending 30 June 2009



Corporate Directory

Board of Directors

Mr Chris Winter (CEO)
Mr Alex Winter (CTO)

Mr Phillip Hutchings (Chairman)
Mr Richard Aird (Executive Director)

Company Secretary

Mr Iain Smith

Auditors

Price Waterhouse Coopers

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Bankers

Commonwealth Bank of Australia

Solicitors

Hemming & Hart

Group Companies

RedFlow Technologies Ltd ACN 130 227 271

RedFlow Pty Ltd ACN 116 992 253
RedFlow International Pty Ltd 128 888 997

Fast Facts - Company Overview

General Information

- RedFlow is one of the world's leading developers and manufacturers of zinc-bromine (ZnBr) batteries.
- RedFlow's ZnBr battery modules have 5 kVA power, and store 10 kWh of energy in a 200 kg sealed unit.
- RedFlow packages its ZnBr batteries into Power+BOS® energy storage systems, certified for grid connection, with 10 kWh to 30 kWh capacity for daily cycling.
- RedFlow Power+BOS® systems are installed with solar PV for managing peak load on rural electricity grids.
- RedFlow is an unlisted public company, owned by management and external investors, located in Brisbane, Australia.

- With sophisticated control and communications systems, RedFlow's products are Smart-Grid ready.

Production

- RedFlow's factory produces at an annualised rate of approximately 1 MWh of capacity per year.
- From early 2010, that will increase to 4 MWh per year.

Employees

- 25 FTE, plus external suppliers.

Application Model

MW-scale storage deployed as kW-scale systems

HIGHLIGHTS OF THE QUARTER

- RedFlow installed six more energy storage systems during the quarter for Ergon Energy under the AEST project.
- The zinc-bromine units are performing well in the field applications.
- The RedFlow pilot scale factory is now operating at full capacity and is fully committed for the next five months.
- RedFlow's current manufacturing capacity is 1 MWh of storage per year. This will increase to 4 MWh/yr in 2010.
- Mr Phillip Hutchings joined RedFlow as Chairman on 2 July 2009. This appointment strengthens the commercial team at RedFlow.
- CEO Chris Winter attended the Electricity Storage Association conference in USA in preparation for RedFlow's entry into the US market in 2010. Discussions with our peer companies and utilities indicate that the RedFlow product is well placed.
- Product optimisation is ongoing, with a focus on reduced manufacturing cost.
- The new RedFlow website was launched.

OVERVIEW

RedFlow's pioneering high performance zinc bromine batteries now lead the world in terms of actual utility installations.

RedFlow is now shipping at the rate of four systems per month.

The performance results from these first installations has met or exceeded our expectations.

Our pilot-scale factory is now fully committed for the next five months.

Meanwhile, it is clear that the global initiatives to reduce carbon emissions are going to stimulate demand for electricity storage within the grid. Both the Australian and US Governments have announced incentive programs centred around Smart Grid roll-outs. Energy storage is a key component for an effective smart grid.

As such, it is clear that RedFlow is well positioned in this dynamic market.

RedFlow is now developing its plan for entering the much larger US market in 2010



A RedFlow Power+BOS® zinc-bromine based battery system undergoing installation in May 2009.

INSTALLATION OF REDFLOW ENERGY STORAGE SYSTEMS

RedFlow is well advanced in its installations of Power+BOS® energy storage systems to Ergon Energy. This series comprises 30 Power+BOS® systems under the Advanced Energy Storage Technology (AEST) grant,

In early May 2009, RedFlow achieved a company milestone with the first deliveries of its zinc-bromine systems. These are installed in rural south-east Queensland within a SWER electricity distribution network. They are integrated with solar PV systems, installed at the same time.

During the quarter, RedFlow installed six systems for Ergon Energy. This brought the total installations as at the end of June 2009 to:

- Eight lead-acid based systems; and
- Four zinc-bromine systems using RedFlow's proprietary battery technology.

The initial eight systems were based on conventional lead-acid batteries and were designed to prove the integrity and integration of the RedFlow Remote Terminal Unit (RTU).

From early May 2009, RedFlow switched to supplying zinc-bromine system. These are believed to be the first units of their type installed anywhere in the world within an electricity distribution grid.

Apart from some minor commissioning issues (with non-RedFlow components), the zinc bromine batteries have performed faultlessly. They are managing peak loads by supplying electricity at peak evening times, and then being recharged overnight.

Each Power+BOS® zinc-bromine energy storage system comprises:

- Two of RedFlow's zinc-bromine battery modules;
- A 5 kVA SMA inverter to provide 240 volts domestic supply;
- Communications and control using RedFlow's RTU;
- Packaged in a steel powder-coated enclosure and all AS 4777 Grid Feed certified.

These systems have 20 kWh capacity in daily cycling.



RedFlow ZnBr energy storage system installed in south-east Queensland

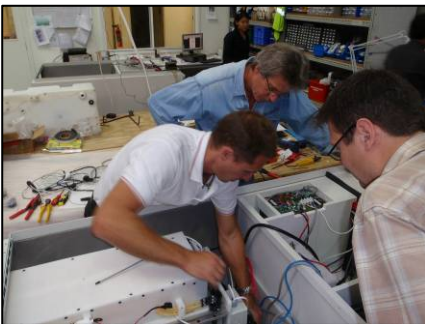
MANUFACTURING OPERATIONS

RedFlow's current pilot-scale manufacturing facility is operating well. Our team of engineers and technicians, together with our suppliers are producing both zinc-bromine battery modules and full Power+BOS® systems.

The current rate of manufacture is eight battery modules and four Power+BOS® systems per month, which equates to 1 MWh of storage capacity per year.

This is at the full capacity of our current facility and all production until late 2009 is committed. Our plans are to increase to a 4 MWh/yr rate in early 2010 in the first of a two-staged expansion of manufacturing.

Our current processes have only a low level of automation, and the volume of specialised components from our suppliers is still relatively small. RedFlow expects unit production costs will fall significantly as we progressively scale up manufacturing volumes.



Assembly of a Power+BOS® energy storage systems at our factory in Brisbane, Australia

PRODUCT DEVELOPMENT

The field trials to date are showing that the RedFlow zinc-bromine battery module is delivering the expected high electrical performance. As well, the packaging of our batteries into Power+BOS® products is now being established as a reliable “plug and play” product.

RedFlow is continuing to invest in its product developments. The battery performance and its cost both have potential for further improvement. Ongoing development and optimisation will ensure that the RedFlow

technology remains ahead of competing products.

RedFlow’s development is focussed on three areas:

1. Power+BOS® - Grid connected systems for rural use (5 kW/20 kWh):

- Enhanced and simplified design to further reduce manufacturing costs;
- Miniaturisation of controls and communications equipment into a proprietary micro-processor; and
- Refinement of our proprietary RTU (Remote Terminal Unit) especially for integration into commercial Smart Grid systems.

2. Grid+BOS® - Grid connected systems for urban use(5 kW/10 kWh):

- Reducing size of existing systems;
- Began in-house trials of new power electronics; and
- Prototype systems under development.

3. RAPS - Off grid, remote area power systems for stand-alone renewable energy(5 kW/30 kWh):

- Concluded a development agreement with Ergon Energy;
- Lead-acid based systems released for sale; and
- ZnBr based systems undergoing in-house development.

SALES & BUSINESS DEVELOPMENT

There is increasing interest from other utilities in Australia for energy storage in a generic sense. During the quarter, RedFlow received specific requests from two large Australian utilities for more product information.

RedFlow has also been in discussions with distributors of renewable energy components with a view to establishing an agency relationship. This would enable RedFlow to reach end users installing individual solar based renewable energy systems.

Overlying this market interest in our products, RedFlow plans to extend our business development and sales activities.

As pressure to reduce carbon emissions increase, there is increasing global interest in smart grids. "Smart grid" is the term used to describe the next evolution in electricity distribution. A smart grid will use sensors to automate and control the two-way flow of energy across operations - from power plant to the power outlet in a house. Smart grids also better incorporate renewable energies such as solar generation, and will require energy storage for optimal outcomes.

In Australia, the Federal Government announced in its May 2009 Budget that it intends to invest up to \$100 million in partnership with the energy sector to develop a National Energy Efficiency Initiative: Smart Grid, Smart City.

The US Government has announced similar, but much larger initiatives.

In both cases, Governments are accelerating the move to the smart grid.

These moves will be positive for the introduction of electricity storage as a mainstream component of electricity networks in coming years.

RedFlow has begun developing contacts in the US for market entry in 2010.

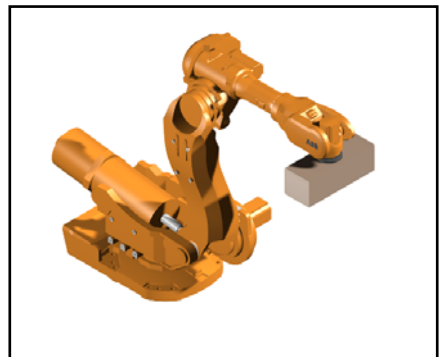
EXPANDED MANUFACTURING CAPACITY

RedFlow is now finalising its plans to expand its manufacturing capacity by a factor of four in early 2010.

After that, a second expansion will be linked to sales volumes of Power+BOS® systems later in 2010 and 2011.

Each expansion will introduce further automation and increased volumes for suppliers. Unit production costs will fall.

RedFlow's overall goal is that our zinc-bromine battery modules will achieve a unit cost of one third of conventional lead acid batteries while delivering better performance.



RedFlow's expanded factory will use robotics to reduce manufacturing costs.



CORPORATE NEWS

CEO Chris Winter and Peter Goggin (business development consultant) attended the 19th Annual Meeting of the Electricity Storage Association in Washington, DC on May 20 to 22. The global interest in energy storage was highlighted by the record attendance of 300.

Peter and Chris also met with utilities and electricity industry associations in California.

These meetings indicated that RedFlow is leading its competitors in kW-scale flow systems. Moreover, it appears that RedFlow is more advanced in its business model and progress with utility scale trials and planned applications than any other global competitor.

During the quarter, RedFlow upgraded its website. This will help RedFlow reach more industry participants, as well as providing useful information for our prospective customers, suppliers and of course our shareholders.

Early in July, Mr Phillip Hutchings joined the board as Chairman. He is a mechanical engineer with a strong background in corporate finance. He has a record of successfully guiding young companies into commercialisation.

Mr Richard Aird, our former chairman, will remain on the board and continues to make a strong contribution to RedFlow.

Since the last shareholders update, Dr David Evans and Mr Justin Schaffer ceased as directors. RedFlow thanks both for their valuable contribution to the critical early growth phase of the group.

FINANCE & ADMINISTRATION

RedFlow made two small share issues during the quarter to provide funds for ongoing product development and for working capital needed for the current levels of production.

As the AEST project proceeded smoothly, RedFlow received significant payments from the Australian Government and from Ergon Energy.

The 08/09 financial year finished with RedFlow in a good position. The audited accounts will be distributed to shareholders promptly.

**Chris Winter
CEO**

If you have any questions, I would be pleased to assist.

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INTERESTING WEBSITES

Electricity Storage Association
www.electricitystorage.org

Ergon Energy
www.ergon.com.au/about-us

GridPoint
www.gridpoint.com



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