

# Redflow Ltd

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## Redflow inks orders for zinc bromide batteries from Europe, Australia

Redflow Limited (ASX:RFX) has received orders for its ZBM products from Europe and Australia, with further progressive orders expected.

The company is also outsourcing full manufacturing of its zinc-bromide batteries (ZBM) to Flextronics (NASDAQ:FLEX) to enable scaling of its business.

In addition, new products are being developed to address the residential and small to medium enterprise energy storage sectors.

Adding interest, Redflow has appointed its largest shareholder, Internode founder and non-executive director Simon Hackett as the new chairman with effect from today.

However, the company advised that its expected progression into significant recurrent battery sales volume had not yet occurred.

As a result, it is no longer in position to support its previous target of achieving operating cash-flow breakeven status by December 2015.

Ongoing field trials of ZBM products are also being conducted in in Africa, South America, Europe, Asia and Australia.

Redflow has also improved on its ZBM2 and ZBM3 electrode lifetime expectations, manufacturing warranty and base pricing as well as appointing Andrew Kempster as its global sales director.

Simon Hackett, chairman, commented:

"The package of new initiatives announced today will combine to allow Redflow to address a much broader market. These initiatives are also great news and offer great benefit to existing and prospective Telco and LSB customers."

"I look forward to working with the board, with CEO Stuart Smith, and with our entire team to help us to deliver products that are capable and deserving of significant success around the world."

### New manufacturing initiatives

While the majority of manufacturing of its ZBM products have already being outsourced to Flextronics, electrodes are still being manufactured in Brisbane.

The company is now moving to fully outsource manufacturing to Flextronics in order to maximise the scalability of its production process.

**Price:** A\$0.037

**Market Cap:** A\$32895800M

### 1 Year Share Price Graph



### Share Information

**Code:** RFX

**Listing:** ASX

**52 week High Low**  
A\$0.10 A\$0.03

**Sector:** Tech

**Website:** [www.redflow.com.au](http://www.redflow.com.au)

### Company Synopsis:

Redflow Ltd (ASX:RFX) is listed on the Australian Securities Exchange.

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This includes the transition to the use of its latest electrode surface coating, ACN13, which in-house testing has demonstrated substantial improvement in physical operating characteristics and projected lifetime.

Production of fully outsourced ACN13 batteries will commence at Flextronics in December 2015.

To allow for the full outsourcing to be completed efficiently, and to maximise the benefits of the transition to ACN13, the production rate of ZBM products by Flextronics will be substantially reduced until the full electrode outsourcing process is concluded.

The reduction in production volume during this transition process will deliver substantial operating cost reductions to Redflow. Ongoing operating cost reductions in Brisbane will also be realised once the full outsourcing transition is completed.

Redflow will retain the capability to build ZBM's in quantities appropriate for research and development purposes.

This ongoing work will drive future cost reductions and energy density increases.

Redflow anticipates having sufficient operating cash reserves for the next 12 months, even with minimal sales over that period.

## **ZBM Improvements**

The company has increased ZBM2 and ZBM3 electrode lifetime expectations, manufacturing warranty as well as reducing base pricing.

This new electrode energy throughput warranty applies for a maximum period of ten years from date of purchase, or until the stated total energy throughput is reached.

Remaining components maintain a one year warranty against manufacturing defects.

Redflow has also reduced pricing of the ZBM2 by 16% to US\$7,000 and ZBM3 by 10% to US\$8,000.

The nominal Levelised Cost Of Energy for the delivery of energy from ZBM2 and ZBM3 batteries has reduced by over 50% to US\$0.20/kWh.

## **New Product Developments**

Direct interest from potential customers has led the company to develop new products to address the demand for energy storage systems in the residential and small to medium enterprise sectors.

The first supported deployment of ZBM products into this important market sector will be with inverter/charger products from European inverter

manufacturer, Victron Energy, which are electrically approved and widely deployed by system integrators around the world.

Redflow is currently developing a new Battery Management System (BMS) product to enable 'plug and play' inverter integration and management of the ZBM into multiple energy storage systems.

The BMS is a compact unit that will plug in to a string of 1 to 8 Redflow ZBMs. It will feature web based, automated battery string management and performance monitoring.

Development work will be undertaken in Adelaide under the guidance of new chairman Hackett.

The first version of this product is expected to be released in the first calendar quarter of 2016. It will be available to new and existing ZBM customers, and will work with all production versions of the ZBM.

## **Board Changes and Appointments**

The appointment of Hackett as chairman reflects the recognition that the transition to supporting a broader customer base for Redflow products is contingent on the successful execution of a technically advanced and customer-centric delivery strategy.

Hackett has demonstrated his capacity to build business value by taking Internode Pty Ltd from inception in 1991 through to its successful sale to iiNet Limited (ASX:IIN) in 2012 for \$105 million.

Howard Stack will remain on the board and will take up the position of deputy chairman.

The new chairman will also review the composition of the company's board and may bring in additional expertise or adjust it.

Redflow has also appointed Andrew Kempster as its global sales director to lead structuring of new sales channels with system integrators.

This will ensure the company can pursue new opportunities in the residential and SME space from early in 2016, while continuing to work with its global sales team to pursue active leads and trials around the world in the Telco and LSB markets.

## **Analysis**

Sales of zinc bromide batteries in Europe and Australia reflects the technical and environmental advantages they have over lithium-ion and lead-acid batteries.

Full outsourcing of manufacturing to Flextronics will also maximise scalability as it develops new products to meet demand from the residential and SME energy storage market.

New chairman Simon Hackett will also bring his experience in developing and commercialising disruptive technologies into support the transition to supporting a broader customer base for the company's products.

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