

## ASX Announcement

26 February 2021

### Investments in R&D and telco partnerships position Redflow for strong growth

**Redflow Limited (ASX: RFX)** (the 'Company' or 'Redflow') is pleased to announce its results for the six months ended 31 December 2020 (H1 FY21), a period where Redflow significantly progressed engagements with key telco and commercial & industrial customers, executed on research & development initiatives and launched new innovations, all of which position the Company for accelerated growth.

Over the course of H1 FY21 the Company achieved significant progress against several key milestones, including:

- Progressed the critical Gen3 battery program, including the first customer trial
- Received an order for a 60 battery Large Scale Battery (LSB) from a Western Australian stockfeed supply company with a strong order book, for delivery in the coming months
- Progressed strategic growth opportunities in key markets
- New innovations progressed including launch of new 'Industrial Battery Housing' (IBH) enclosure and ability to work with existing lead acid systems
- Validated Redflow's environmental credentials
- Reduced costs through disciplined expense management, resulting in a 78% improvement to operating cash outflow
- \$6.9 million raised from an Entitlement Offer and two subsequent shortfall placements, exceeding the Company's original target of raising at least \$6.25 million
- Entered a partnership with Optus post half-year end to deploy Redflow batteries as part of the Australian Government's Mobile Network Hardening Program

#### Commenting on the H1 FY21 results, Redflow CEO and Managing Director Tim Harris said:

"In line with our strategy, we focused on the development and accelerated testing of our Generation 3 (Gen3) battery and were pleased to have made significant progress over the first half, which culminated in the initiation of our first customer trial in December. We also prioritised the development of new features to ensure our battery is optimised prior to large scale deployments, focused on pH level optimisation to improve battery performance, and launched a new industrial housing enclosure for use in industrial outdoor situations and to facilitate ease of installation and commissioning.

"Whilst travel restrictions have impacted international business development activities, we continue to progress discussions with key customers and potential customers, delivering a healthy number of sales over the half, including the sale of a 60-battery system to Semini Custom Feeds, a Western Australia-based stock feed company. When installed, this will be the largest Australian system Redflow has deployed. This sale shows how our new Large Scale Battery (LSB) can scale successfully to meet our customers' larger industrial requirements and broader megawatt hour (MWh) utility-scale deployments."

#### Sales and distribution update

Redflow continued to pursue business development opportunities despite the impacts on international travel associated with the COVID-19 pandemic, receiving and delivering orders during the period.



Semini Custom Feeds, ordered a 60 battery LSB to cut its fuel and energy costs. Working with Redflow's WA partner, TIEC Electrical, Semini expects the 600 kilowatt-hours (kWh) system to cut its costs by about \$120,000 per year based on current expenditure on diesel, maintenance and mains power, and will eliminate the need to purchase electricity from the grid.

Over H2 FY21, Redflow batteries were deployed by Redflow Partner Seven20 Electrical in a number of mid-sized solar and battery installations in Wagga and Kiama, under the NSW State Government's Department of Primary Industries like-for-like grant scheme. These agricultural installations supported organic wineries and the Pines, a boutique dairy that anticipates a 5-year payback on its renewable system investment.

Following the end of the period, Redflow announced a partnership with Optus to deploy Redflow batteries as part of the Australian Government's Mobile Network Hardening Program. The first battery system was installed in February at a black spot site in Lexton (Victoria), and Optus is planning to deploy Redflow batteries in at least 56 black spot sites as part of this program. Redflow is currently working with Optus to determine how many Redflow batteries are required per site and the rollout schedule.

As at 31 December 2020, Redflow had orders for 97 batteries for projects in Australia and South Africa. The majority of these orders are expected to be delivered and payments received in the coming months. This does not include further orders received in 2021 and battery requirements for the Optus program.

### **Generation 3 battery development and first trial**

During the half, Redflow focused on accelerating Gen3 battery development. This included major advancements to stack technology, tank architecture, improved cooling and a new electronics control system that will enable Redflow to achieve a target 30% reduction in costs.

In December, Redflow commenced its first Gen3 battery customer trial to support an off-grid system in Mount Tamborine in Queensland. The trial site is meeting expectations whilst providing valuable data into performance of the new Gen3 stack design and new Mk12 electronics.

The initial Gen3 trial is a critical milestone that will provide valuable insights into battery performance in a live environment. Additional trials are planned over the coming months to ensure the battery is thoroughly field proven, prior to larger-scale deployments. Based on demand, Redflow currently anticipates Gen3 to move into production in the second half of the calendar year.

The Redflow product and engineering teams have also progressed work on key design considerations for large and utility MWh scale systems that will leverage the expandable and volume scale benefits of the Redflow battery modular design.

### **New features and key research**

In addition to developing and testing the Gen3 battery, Redflow also prioritised the development of other key features to enhance the Company's product offerings and optimise performance.

Redflow launched a new 'Industrial Battery Housing' (IBH) enclosure for use in industrial outdoor situations, to reduce the effort associated with installation and commissioning. Features include an IP45 rating, stackable design and the ability to be handled with standard battery lift equipment.

Redflow also developed a new capability to allow Redflow batteries to work seamlessly alongside lead acid batteries in a single system. This is of particular value to the telecommunications sector to help extend the duration of energy storage available without the need to replace existing lead acid systems.

For personal use only



Both these new features were key considerations that underpinned the decision for Optus to utilise Redflow batteries for the Australian Federal Government Strengthening Telecommunications Against Natural Disasters (STAND) program.

Redflow significantly increased its understanding of battery operations through enhanced analysis of the vast amount of data accumulated from deployments as well as further core chemistry research and testing. A key outcome from field experience and accelerated analysis centered around ensuring pH levels are optimised for managing core battery functionality, long life and cycle performance.

Earlier this month, Redflow validated its unique environmental credentials. Working with Ecocycle, a leading Australian recycler, the recycling characteristics and pathway of the Redflow battery were confirmed through the disposal of a number of end-of-life batteries. The project confirmed the straightforward and commercial recycling pathway of materials used in the Redflow battery when contrasted to the significant current technical and commercial challenges of recycling lithium ion batteries.

### **Financial Update**

Redflow delivered \$431k (H1 FY20: \$1.4 million) revenue over the period, with revenue performance reflecting delays in the conversion of various sales opportunities due to COVID-19.

Overall, Redflow saw a decrease in the loss after income tax from \$3.9 million in H1 FY20 to \$2.9 million in H1 FY21, predominantly as a result of a reduction in raw materials and consumables used as production was moderated and ongoing cost management measures.

Redflow raised \$6.9 million from an Entitlement Offer and two subsequent shortfall placements, exceeding the Company's original target of raising at least \$6.25 million. The capital injection, in conjunction with cost saving measures implemented across Redflow's business, has enabled Redflow to execute further on its growth strategy.

Redflow is committed to prudently investing and prioritising its current resources where it will provide the strongest shareholder return.

### **Redflow's growth outlook underpinned by Gen3 battery launch and Optus partnership**

Commenting on the Company's outlook, Mr Harris said: "Having made the necessary investments into the development and testing of our Gen3 battery as well as other key new features, we are well positioned to scale our business once travel restrictions normalise, with the strategic market opportunity remaining unchanged.

"We were delighted to have partnered with Optus this month to deploy Redflow batteries as part of the Australian Government's Mobile Network Hardening Program, which is funded in part by the Government's bushfire relief package and launched by The Minister for Communications, Urban Infrastructure, Cities and the Arts, the Hon Paul Fletcher. Optus will utilise our batteries in their mobile base station battery upgrades, funded under the Morrison Government's STAND program.

"We are currently working with Optus to determine how many Redflow batteries are required per site and the rollout schedule. The partnership is a significant milestone for Redflow and will provide an ideal case study of Redflow's ability to deploy batteries at scale to extend the battery backup at mobile phone towers. We are confident that we can leverage this experience to further progress discussions with other customers in our key markets."

For personal use only



**Redflow will hold a group investor conference call at 11:00am AEDT today.**

To pre-register for this conference, please follow the link below.

- <https://s1.c-conf.com/diamondpass/10012491-sh73ba.html>

*This announcement was authorised for release by the Board of Redflow Limited*

-- ENDS --

---

**For further information contact:**

**Corporate**

Tim Harris  
07 3376 0008  
[tim.harris@redflow.com](mailto:tim.harris@redflow.com)

**Investors**

Ronn Bechler  
03 9591 8901  
[ronn.bechler@marketeye.com.au](mailto:ronn.bechler@marketeye.com.au)

**Media**

John Harris  
08 8431 4000  
[john@impress.com.au](mailto:john@impress.com.au)

---

**About Redflow**

Redflow Limited, a publicly-listed Australian company (ASX: RFX), produces small 10kWh zinc-bromine flow batteries that tolerate daily hard work in harsh conditions. Redflow batteries are designed for high cycle-rate, long time-base stationary energy storage applications in the telecommunications, commercial & industrial and high end residential sectors, and are scalable from a single battery installation through to grid-scale deployments. Redflow batteries are sold, installed and maintained by an international network of energy system integrators. Redflow's smart, self-protecting batteries offer unique advantages including secure remote management, 100 per cent daily depth of discharge, tolerance of high ambient temperatures, a simple recycling path, no propensity for thermal runaway and sustained energy delivery throughout their operating life.

For further information, please visit: [www.redflow.com.au](http://www.redflow.com.au)