

Redflow set to execute on growth plan and deliver large projects

30 January 2024

Quarterly activities report for 3 months ended 31 December 2023

Key highlights:

- **Market recognition and commercial profile continues to grow**
Australian and US federal and state government engagement, as well as utilities.
- **Continued growth in sales pipeline with key deals progressing**
Multi-GWh of qualified pipeline with key opportunities in Australia and US advancing.
- **Announced projects of over 55 MWh continue to progress**
California Energy Commission, Energy Queensland, Acciona and US Department of Energy.
- **Ongoing production issues addressed, with resolution to be implemented in early February**
Key supplier quality issues impacted revenue in Q2 / H1 FY24. Resolution on track to be implemented in early February.
- **New CFO appointed to Redflow executive team**
Michael Hipwood brings a wealth of financial, strategic and operational experience.

Redflow Limited (ASX: RFX) (the '**Company**' or '**Redflow**') is pleased to provide its quarterly activities and cashflow reports for the three months ended 31 December 2023 (**Q2 FY24**).

Despite a disappointing financial result for Q2 FY24 (and as a result for H1 FY24), Redflow is confident of a strong revenue performance for this calendar year (**CY24**) compared to previous years given its announced projects.

Updates on announced projects

- **Paskenta Microgrid** – Phase One of this project has been adjusted to 15.4 MWh following final budget allocation across battery, solar and engineering works. California Energy Commission (CEC) executives have communicated they are targeting additional budget to bring the project up to the previously announced 20 MWh. After delays caused

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by changes to funding sources within the Californian government, additional environmental site-specific review and final negotiations with the end customer (Paskenta Band of Nomlaki Indians), Redflow expects to receive the formal notice to proceed in early February 2024. This will allow the Company to accept the initial material deposit to commence production of the batteries with delivery of batteries across FY25. Expected revenue¹ of circa \$12.5 million in FY25.

- **Energy Queensland** – Engineering and design of this 4 MWh project is continuing to progress with the signing of the Master Supply Agreement expected in February 2024. The expected installation remains on track for late FY24 and early FY25. Revenue opportunity of circa \$2.5 million in FY24 and FY25.
- **Acciona** – Redflow's Energy Pod and batteries for this 200 kWh reference project are expected to arrive at the customer's site in early February 2024. Expected revenue of circa \$150,000 in FY24 for the initial reference project with initial payment already received. Redflow sees the potential for large-scale projects if the trial site progresses well.
- **US Department of Defence (DoD) Microgrid** – Engineering and design of this project is on track to meet the US DOD milestones, with system delivery expected in approximately Q2 FY25. Expected revenue² of circa \$1.7 million in FY25 with the potential of further projects pending the performance of this microgrid.
- **US Department of Energy Valley Childrens Hospital** – Negotiations between the US DOE, CEC and Faraday, and the end customer for the 34 MWh LDES project are continuing and Redflow expects final contracting to be completed in H1 FY25. The LDES microgrid project engineering and design is progressing, with the delivery timetable expected over CY2026. Revenue opportunity of circa \$25 million. This includes budget for core research and development and further product development of circa A\$6 million that has been preliminarily approved as part of the US DOE budget project allocated, subject to further project definition and approval.

Market developments and commercial update

Redflow's pipeline continues to grow with a qualified pipeline of multi-GWh projects across key target markets. Several projects in Australia and the US have progressed significantly in recent months. Some highlights of key deals that the commercial team is focused on include:

- Redflow has been shortlisted for a long-duration storage project of up to circa 55 MWh for a large Australian utility. The project will now proceed through a formal RFP process, with a final decision expected in Q1 FY2025 and expected delivery to commence in FY2025. Lithium-based systems have been specifically excluded from the tender process. If successful and selected for the maximum size and scope, Redflow is targeting potential project revenue in the order of up to \$50 million.
- Redflow is continuing to work with various elements of the US Department of Defense around additional smaller reference MWh projects including a 400 kWh opportunity in final negotiations. Another project in advanced engagement is of similar size and scope as the US Department of Defense project that Redflow announced in late 2023.

¹ Expected revenue is based on signed contracts. Revenue opportunities are based on well advanced negotiations but pre contract signing.

² See note 1

- Redflow has been selected as the preferred technology for an initial ~8 MWh project for a large US company for one of their campuses, with approval for detailed design being received. Redflow is working closely with the nominated integrator on detailed technical and commercial components. The final investment decision is expected in Q1 FY2025. Subject to the final system size and scope, Redflow is targeting potential project revenue in the order of approximately A\$7-7.5 million.
- Redflow is continuing to work closely with a number of Australian utilities around their network and community battery programs. If successful, the projects are expected to be announced in the coming months, with delivery commencing in 2025.

In parallel, market recognition of the core role of long-duration energy storage (LDES) has continued to accelerate. In December 2023, the Australian Energy Market Operator (AEMO) released its [Draft 2024 Integrated System Plan \(ISP\)](#), a roadmap for the energy transition. The report cited the need for 3.6 GW of medium-duration storage (4 - 12 hour discharge) by 2030.

Globally, a recent report from the Long Duration Energy Storage Council estimates LDES will be a US\$3.6 trillion industry with an installed capacity potential of 4-6TW by 2030 to achieve 24/7 reliable renewable energy.³

As one of the most commercially advanced LDES technologies globally, and with a number of reference multi-MWh projects in the US and Australia to be delivered throughout 2024, Redflow is well placed to capture these opportunities.

Redflow also continues to engage with various State and Federal entities in Australia around its growth plans and the potential to secure non-dilutive investment support over the next 12 months that will allow the Company to continue to invest and expand its presence in Australia. Redflow will provide the market with further updates as these discussions progress.

Growing market recognition and commercial profile

Redflow attended a number of significant engagements in Q2 FY24, further reinforcing the Company's growing position in the energy storage market.

In October 2023, Redflow's CEO Tim Harris and President, North America and CCO Mark Higgins had the honour of participating in the official State visit by the Australian Prime Minister, Anthony Albanese to the White House. The State visit represented a renewed commitment between the two nations to collaborate on climate change solutions and technology and Redflow's invitation reflected the impact of its US projects and growing profile in the US. The visit included attendance at various State functions and a private meeting between the Prime Minister, Redflow executives and US partners.

Redflow was highlighted in a Queensland Government Trade and Industry Queensland (TIQ) investment prospects, which highlighted Redflow in a case study as a Queensland developed battery and playing a key role in growing Queensland's battery strategy.⁴

In November 2023, Redflow was featured as a key case study in the Australian Federal Government's Australian Green Economy Prospectus as an innovative Australian green technology company having the potential to play a significant role in the global energy

³ Long Duration Energy Storage Council, *Solar and LDES: Critical Partners to Ensure 24/7 Reliable Renewable Energy*. See https://ldescouncil.com/assets/pdf/ISA_LDESCouncilPaper.pdf

⁴ See https://www.tiq.qld.gov.au/getmedia/5b1adbba-f914-4cb1-9261-df146956a0d1/Queensland-Investment-Prospectus_2024_v1_DIGITAL.pdf

transition.⁵

In November 2023, Redflow also participated in a number of local and international events recognising energy storage as key to the global transition to net zero. This included Redflow's Mark Higgins meeting with Deputy Prime Minister & Minister for Defence, the Hon Richard Marles in California and also attending a reception hosted by the Queensland Government for APEC Asia-Pacific Economic Cooperation CEO Summit in San Francisco.

In December 2023, Tim Harris joined Queensland Minister for Energy and Clean Economy Jobs, Mick De Brenni for an event at the Queensland University of Technology Advanced Battery Facility in Brisbane. Minister De Brenni cited Redflow as a leader in long-duration energy storage and the ambition for Queensland to become a global centre for nonlithium energy storage technology.⁶

In December 2023, Tim Harris attended the COP28 UN Climate Change Conference in Dubai as a guest of the Australian government where he had significant engagement with global customers, policy makers and industry leaders to enhance the Company's commercial and strategic progress globally.

Production and operations update

As disclosed in previous market releases, the Company's manufacturing process has been materially impacted by quality issues in a key externally supplied essential component of the battery stack, specifically glass-filled HDPE sheets. The componentry did not meet specifications, and the technical solution has been complex to solve, with multiple batches failing quality checks. A number of alternative suppliers engaged over the last four months also failed to meet specifications and quality assessments.

As a result, production of customer-grade batteries was intermittent and significantly interrupted for most of H1 FY24, which has had a direct impact on delaying projects and the associated revenues.

Redflow has worked on a resolution with the supplier, qualification of alternative suppliers and accelerated a more fundamental battery design iteration using an injection moulding approach that eliminates the need for this specific material.

This issue now appears to be resolved following a rigorous design of a new part (including use of third-party engineers) and extensive analysis and testing. Redflow is also testing substitute glass filled HDPE sheets from other alternative suppliers as a further back up.

Following the resolution of these issues, customer production is planned to recommence and ramp up from 1 February 2024.

Despite the setback that has delayed anticipated revenue over the last two quarters, Redflow's focus on ensuring battery quality and the decision to prioritise a robust, long-term solution before the production ramp-up for the large projects announced is required and beneficial to the Company's future success.

⁵ See Australian Trade and Investment Commission, Australian Green Economy Prospectus, November 2023. See https://www.globalaustralia.gov.au/sites/default/files/2023-12/ATIC_Australian_Green_Economy_Prospectus_0.pdf

⁶ See full report on the event on Nine News: https://www.linkedin.com/posts/redflow-limited_zincbromine-energy-innovation-activity-7117319450642546688-Aw6g?utm_source=share&utm_medium=member_desktop

Cash results

H1 FY24 net cash used in Operating activities and Investing activities was \$6.699 million.

In Q1 FY24, net cash used in Operating activities and Investing Activities was \$3.901 million.
In Q2 FY24, net cash used in Operating and Investing Activities was \$2.798 million.

The improvement of \$1.103 million in Q2 was due to the receipt of the R&D tax credit payment of \$2.457 million offset by the increased operating costs of \$1.354 million versus Q1 as per the table below.

Payments to related parties over Q1 FY24 was \$211,243, relating to fees paid to directors over the quarter and related parties.

Redflow Cash Movement	AUD\$ 000
FY24 Q1 Cash Movement	-3,901
FY24 Q2 Cash Movement	-2,798
Improvement of	1,103
<i>Due to</i>	
R&D Tax Credit Payment	2,457
Decreased Advertising & Marketing	293
Increased Interest Received	38
Increased product manufacturing and operating costs	-958
Increased Staff Costs	-437
Increased Research and Development	-110
Increased Administration and Corporate costs	-100
Decreased Receipts from Customers	-52
Increased Intellectual Property	-29
Other Costs	1
Total	1,103

H1 FY24 results and path to profitability

Management expects H1 FY24 to result in a loss of approximately \$14 million, resulting from lower-than-expected customer revenue arising from the supply issues noted above to cover fixed costs, and adjustments to balance sheet items, specifically increasing warranty provisions. These are non-cash adjustments. Net assets as at 31 December 2023 are expected to be \$6.5 million (versus \$9.1 million as at 30 June 2023).

The final audited H1 FY24 results will be released in late February.

Redflow is refining its strategic 4-year Path to Profitability Plan and intends to release it in mid-March 2024. The 4-year Path to Profitability Plan will outline:

- The planned timeframe for the introduction and capability of the Company's next generation battery – (currently named the X10) which aims to be competitive at utility scale with other battery technologies whilst achieving target margin.
- The production plan over the coming years, including the significant planned scale up and scope to onshore manufacturing to produce the X10 to meet local demand and local

content requirements.

- A funding plan and the targeted mix of funding being Shareholder Contributions, Government Grants and R&D Tax Credits.

Redflow thanks its investors for their continued support as the Company navigates this key inflection point in its journey. The Board and management are committed and determined to see the Company reach its true potential and deliver value for its shareholders.

Commenting on the H1 FY24 performance, Redflow CEO and Managing Director Tim Harris said:

“Notwithstanding our production issues, the business continues to grow, and the progress we have made to create a multi-MWh backlog of projects has allowed us put volume into our business for the first time in its history. These projects have provided strong catalysts for additional projects and key customer engagements, which we expect to start seeing yield new wins in the coming months. We are working on further iterations on our path to profitability which we plan to share with the market shortly.”

Investor webinar to be held at 11:30am AEDT today

Tim Harris (CEO & Managing Director) and Michael Hipwood (CFO) will be holding a briefing via webinar for investors and analysts. Following their presentation on the Company's Q2 FY24 operational progress and growth opportunities, there will be an opportunity for Q&A.

Participants can register for the webinar via:

https://us02web.zoom.us/webinar/register/WN_EPxfXo7TQkSm1u0Q2XrSqw

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

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About Redflow

Redflow, a publicly listed Australian company (ASX: RFX) with offices in Australia and the US, designs and manufactures long-duration zinc-bromine flow batteries for stationary commercial, industrial, and utility applications. Redflow batteries are modular, scalable, fire-safe, and capable of 100% depth of discharge. They can also operate in a wide range of environments without supplemental heating or cooling and offer an extended life with minimal degradation over time. The company's smart, self-protecting storage technology offers unique advantages, including a hibernation feature, secure remote management, a simple recycling path, and sustained energy delivery throughout its operating life. Redflow's energy storage solutions have been in use for more than a decade at more than 270 sites in over 9 countries.

For further information, please visit: www.redflow.com

Appendix 4C

Quarterly cash flow report for entities subject to Listing Rule 4.7B

Name of entity

Redflow Limited

ABN

Quarter ended ("current quarter")

49 130 227 271

Dec-23

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
1	Cash flows from operating activities		
1.1	Receipts from customers	96	244
1.2	Payments for		
	(a) research and development	-1,287	-2,464
	(b) product manufacturing and operating costs	-2,215	-3,472
	(c) advertising and marketing	24	-245
	(d) leased assets	-43	-85
	(e) staff costs	-1,188	-1,939
	(f) administration and corporate costs	-556	-1,012
1.3	Dividends received (see note 3)		
1.4	Interest received	94	150
1.5	Interest and other costs of finance paid	-1	-2
1.6	Income taxes paid	0	0
1.7	Government grants and tax incentives	2,457	2,457
1.8	Other (provide details if material)	0	0
1.9	Net cash from/(used in) operating activities	-2,619	-6,368

	Current quarter \$A'000	Year to date (6 months) \$A'000
2	Cash flows related to investing activities or for:	
2.1	Payment to acquire	
	(a) entities	
	(b) businesses	
	(c) property plant and equipment	-136
	(d) investments	
	(e) intellectual property	-43
	(f) other non-current assets	-57

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
2.2	Proceeds from disposal of:		
	(a) entities		
	(b) businesses		
	(c) property plant and equipment	0	0
	(d) investments		
	(e) intellectual property		
	(f) other non-current assets		
2.3	Cashflows from loans to other entities		
2.4	Dividends received (see Note 3)		
2.5	Other (provide details if material)		
2.6	Net cash from/(used in) investing activities	-179	-331
3	Cash flows related to financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	0	11,643
3.2	Proceeds from issues of convertible debt securities		
3.3	Proceeds from exercise of options		
3.4	Transaction costs related to issues of equity securities or convertible debt securities	-211	-753
3.5	Proceeds from borrowings		
3.6	Repayment of borrowings		
3.7	Transaction costs related to loans and borrowings		
3.8	Dividends paid		
3.9	Other (provide details if material)	0	0
3.10	Net cash from/(used in) financing activities	-211	10,890
4	Net increase (decrease) in cash and cash equivalents for the period	-3,009	4,191
4.1	Cash and cash equivalents at beginning of period	12,705	5,513
4.2	Net cash from/(used in) operating activities (Item 1.9 above)	-2,619	-6,368
4.3	Net cash from/(used in) investing activities (Item 2.6 above)	-179	-331
Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
4.4	Net cash from/(used in) financing activities (Item 3.10 above)	-211	10,890
4.5	Effect of movement in exchange rate on cash held	2	-6
4.6	Cash and cash equivalents at end of the quarter	9,698	9,698

5	Reconciliation of cash and cash equivalents	Current quarter	Previous quarter
	at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	\$A'000	\$A'000
5.1	Bank balances	9,698	12,705
5.2	Call deposits	0	0
5.3	Bank overdrafts		
5.4	Other (provide details)		
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	9,698	12,705

6	Payments to related parties of the entity and their associates	Current quarter
		\$A'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1	211
6.2	Aggregate amount of payments to related parties and their associates included in item 2	
<i>Note: if any amounts are shown in 6.1 or 6.2 your quarterly report must a description and an explanation for, such payments</i>		
	Payments of salary and fees to Executive and Non-executive Directors.	

7	Financing facilities	Total facility amount at quarter end	Amount drawn at quarter end
	<i>NOTE: The term "facility" included all forms of financing arrangements available to the entity</i>		
	<i>Add notes as necessary for an understanding of the sources of finance available to the entity.</i>	\$A'000	\$A'000
7.1	Loan facilities		
7.2	Credit standby arrangements		
7.3	Other (please specify)		
7.4	Total financing facilities		
7.5	Unused financing facilities available at the quarter end		
7.6	Include below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional facilities have been entered into or are proposed to be entered into after quarter end, include details of those facilities as well.		

8	Estimated cash available for future operating activities	\$A'000
8.1	Net cash from / (used in) operating activities (Item 1.9)	-2,619
8.2	Cash and cash equivalents at quarter end (Item 4.6)	9,698
8.3	Unused finance facilities available at quarter end (Item 7.5)	0
8.4	Total available funds (Item 8.2 + Item 8.3)	9,698
8.5	Estimated quarters of funding available (Item 8.4 divided by Item 8.1)	3.7
<p><i>Note: if the entity has reported positive net operating cashflows in item 1.9 answer item 8.5 as "N/A. Otherwise, a figure for the estimated quarters of funding available must be included in item 8.5</i></p>		
8.6	<p>If Item 8.5 is less than 2 quarters, please provide answers to the following questions:</p> <p>8.6.1 Does the entity expect that it will continue to have the current level of net operating cash flow for the time being and if not why not ?</p> <p><i>Answer:</i></p> <div style="border: 1px solid black; height: 60px; width: 100%;"></div> <p>8.6.2 Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operation and , if so, what are those steps and how likely does it believe that they will be successful?</p> <p><i>Answer:</i></p> <div style="border: 1px solid black; height: 60px; width: 100%;"></div> <p>8.6.3 Does the entity expect to be able to continue its operations and to meet its business objectives and , if so , on what basis?</p> <p><i>Answer:</i></p> <div style="border: 1px solid black; height: 60px; width: 100%;"></div> <p><i>Note: where item 8.5 is less than 2 quarters, all questions 8.6.1, 8.6.2 and 8.6.3 above must be answered</i></p>	

Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement does give a true and fair view of the matters disclosed.

Date: 30-Jan-24

Authorised by: The Audit and Risk Committee

Notes

- 1 This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
- 2 If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standard applies to this report
- 3 Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
- 4 If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [*name of board committee – eg Audit and Risk Committee*]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
- 5 If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.