

### Successfully Executing on Growth Strategy Investor Presentation

Thursday 8 June 2023

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# Our largest project to date...





# ...validates our technology credentials and growth strategy

Redflow is one of only a handful of LDES (Long Duration Energy Storage) companies which has non-lithium energy storage technology approved for CEC funding



- California will need 45–55 GW of long duration energy storage will be required to support California's grid by 2045<sup>1</sup>.
- Strategic perspective on energy storage incl. focus on developing Lithium alternatives in California
- California Energy Commission providing USD \$140m for LDES technology
- Builds on California 2 MWh system now operational for >12 months
- Redflow has invested in the last 18 months to be ready for this opportunity

- High visibility LDES project for the multi-US\$bn US energy storage market
- Endorsement of Redflow's capability to supply energy storage for multi-MWh projects
- Demonstration of Australian green technology global leadership
- A major strategic project for the Californian Energy Commission
- Underpins scale up in manufacturing, volume cost down and product strategy



Paskenta Band of Nomlaki Indians, 2 June 2023

1. Long Duration Energy Storage for California's Clean, Reliable Grid, California Energy Storage Alliance, 2020 https://static1.squarespace.com/static/5b96538250a54f9cd7751faa/t/5fcf9815caa95a391e73d053/1607440419530/LDES\_CA\_12.08.2020.pdf

# Strategic investments driving commercial success

Focused investments over the past 4+ years have led us to this multi-MWh breakthrough project



#### **Global leader in LDES**

recognised by key industry stakeholders in target markets

### **Operationally proven**

across multiple projects and applications including at MWh scale

#### **Technology leadership**

**ZnBr** 

with clear path to scale up, unit cost down and margin

### Attractive long-term prospects

through core chemistry performance and scale economics





# The Project places Redflow in the right market

Redflow has achieved breakthrough in a market that has the highest opportunity with a limited number of participants at a similar level of commercial maturity

#### **Project reflects a successful shift of focus onto:**

- + Commercial and industrial market
- Progressive step changes in system size: 500 kWh (2019), 2
   MWh (2021), 20 MWh (2023)
- + Focus on markets with highest opportunity (US and Australia)
- + Proven ability to scale using modular approach

Redflow joins a small group of electrochemical energy storage companies who have announced or delivered 20MWh+ lithiumalternative battery systems in this Multi GWh market.

- + Presents highest market opportunity and growth
- High value on Redflow performance and capabilities
- + Leverage operational experience
- Largest opportunity to drive scale and margin





# Well positioned to execute on next stage of growth

Strategic focus over last 12 months has built a platform for sustainable growth

#### **Product**

- + ZBM3 launched delivered into field and learnings integrated.
- + ZBM3 core module for all new projects.
- + Pod200 core building block for large systems.
- + R&D continuing for ongoing product enhancements and margin growth.

#### Market presence

- + US & Australia sales and support teams active.
- + C&I and grid-scale customer engagement across key markets.
- + LDES Council and Zinc Alliance industry groups.
- + California SGIP approval
- Australian federal and state government engagement

#### Sales pipeline

- + Accelerated growth in pipeline.
- Ongoing progress on key deals at advanced engagement, as well as major new opportunities developed.
- + Partnerships in place to drive additional sales.
- + Core reference sites provide critical industry proof points.

### Ready to scale

- + Thailand facility re-tooled for ZBM3 production.
- + Scale-up scoped and planned to 80 MWh p.a.
- + Supplier arrangements in place for scale.
- + New EPC partnerships to enable delivery and execution.
- Active planning for production beyond Thailand.



# Strong pipeline developed

AUD\$	Prospect	Active proposal	Active customer engagement	Moving to close	
Total estimated size and value of opportunities <sup>1</sup>	<b>\$2.6Bn</b> 3.2 GWh	<b>\$1.2Bn</b> 2.4 GWh	<b>\$193M</b> 273 MWh	<b>\$32M</b> 39 MWh	US projects represen the majority of global pipeline.
	<ul> <li>Opportunity identified or received and filtered for relevance.</li> <li>Confirmed suitable application for Redflow battery solution.</li> <li>Initial customer / integrator discussion likely to have occurred.</li> </ul>	<ul> <li>Detailed commercial and technical discussion.</li> <li>Clear understanding and alignment of customer storage requirements.</li> <li>Project specifics and timeline defined.</li> <li>Technical design and commercial framework presented.</li> <li>Initial pricing provided.</li> <li>Customer budget confirmed.</li> </ul>	<ul> <li>+ Active customer engagement.</li> <li>+ Redflow technical and commercial resources prioritised.</li> <li>+ Detailed technical solution proposed.</li> <li>+ Contractual pricing submitted</li> </ul>	<ul> <li>Redflow confirmed as energy storage solution.</li> <li>Negotiation on detailed contract terms.</li> <li>Final pricing negotiations.</li> <li>Alignment ion Redflow manufacturing, battery delivery and installation timetable.</li> <li>Note – includes CEC 20 MWh project.</li> </ul>	ppendet Multi-MWH opportunities comprise >95% of advanced pipeline 95% increase in pipeline since 2022.
	Prospect-stage numbers exclude 15.4 GWh of opportunities larger than 1 GWh due to significant uncertainties around timing & outcome.		<ul> <li>Delivery and implementation timetable defined.</li> <li>May include high level commitment e.g. Letter of Intent, MOU.</li> </ul>		



1. Size and value of sales pipeline as of 7<sup>th</sup> June. Estimated value only based on individual projects and subject to change. There is no guarantee or assurance that Redflow will secure any of these opportunities contained in the pipeline, or that, even if secured, they will generate material revenue or earnings.

# Sales pipeline highlights

H1 FY23 results presentation, Feb 2023 - still active

### Fortune 500 US financial

500MWh+ / 2023-26 Deployment

RFX named as preferred storage technology in RFI for bank branches. Development of initial deployment at several sites to test installations. Operations centres under evaluation.

### **Global mining company**

100MWh+ / Target 400 kWh 2023 pilot

Large global mining and renewable companies. Engagement since late 2021. Targeting initial pilot projects at test centre as next step.

#### New

### Hawai'i Large C&I

16MWh+ / 2024 Deployment RFX paired with a local developer is finalist for a 24/7 clean energy microgrid to power a large C&I customer in Hawai'i.

#### Utility remote grid

400 kWh / Target 2023 initial deployment

EnergyPod200 initial installation for fringe-ofgrid application, providing resilience and power system stability and reliability.

### Hospital microgrid

20-25 MWh / Target 2024 Deployment

Large hospital program in disadvantaged community area in Northern California. Solar + storage microgrid for resilience, energy cost reduction and avoidance of diesel backup.

#### **US Federal Government**

5MWh+ / deployments starting 2024

Several opportunities to provide storage for resilience applications for US Department of Defense and Department of State.

California IPP Up to 1 GWh / 2026-28 Deployment

Large IPP developing two LDES projects in California with commercial operation dates targeted for 2026 and 2028.

#### Anaergia Victor Valley

5.8 MWh / Target 2024 Deployment Repeat customer. LOI with Anaergia signed (March '22). EPC down-selected; Redflow named as preferred battery provider.

#### **Australia IPP**

GWh Scale / 2024-28 deployment

Large independent power producer sourcing multi-vendor battery solution to meet significant load needs. Multi-year project with initial deployments beginning 2024. Opportunities previously highlighted now won

 California microgrid for native American Tribe – 20 MWh

- + Southern Ocean Lodge – 560 kWh
- Bureau of
   Meteorology –
   3 radar sites



\* These are examples of sales opportunities. There is no guarantee or assurance that Redflow will secure any of these opportunities, or that, even if secured, they will generate material revenue or earnings.



### The market opportunity



# Energy transition accelerating



Shift to renewables accelerating – government and corporates.



Stationary energy storage moving to core of energy transition strategies.



Customers increasing focus on Long Duration Energy Storage (LDES) and lithium alternatives.



Energy ecosystem embracing LDES opportunity.



Game changing legislative and regulatory stimulus.

AEMO's ISP modelling suggests that to achieve outcomes of the 2022 ISP, the National Electricity Market (NEM) will require by 2050 a total of 46GW (640GWh) of dispatchable storage in all forms and 16GW capacity of utility scale battery and pumped hydro storage.



Forecasted NEM capacity to 2050 under AEMO's Step Change scenario. Source: AEMO.



# Market opportunity aligned for Redflow

Market shifting to medium and longer duration energy storage solutions<sup>1</sup>



### US\$3-4 trillion

cumulative global market for Electrochemical LDES by 2050<sup>3</sup> Critical role of flow batteries recognised alongside Lithium, pumped hydro and hydrogen<sup>2</sup>

### Redflow capabilities well aligned with requirements of LDES market

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1. Redflow analysis based on data from Long Duration Energy Storage Council & McKinsey & Company, Net-Zero Power Report, November 2021 & EIA, Battery Storage in US Report, Aug 2021

2. Australian Government Department of Industry Science Energy and Resources, Low Emissions Technology Statement 2021, November 2021

3. Boston Consulting Group: Potential for US Competitiveness in Emerging Clean Technologies. September 2022.

# LDES now at the core of energy transition planning



"Long-duration energy storage is not a luxury, but a necessity. This is not an economic paradigm, it's a reliability paradigm"<sup>1</sup>

PNNL: Energy Storage: The Time Is Now



"Long-duration, largescale batteries are a central part of the Queensland Energy and Jobs Plan."<sup>2</sup>

Hon Dr Steven Miles, Deputy Premier, Minister for State Development, Infrastructure, Local Government and Planning <image><section-header><section-header>

'Urgent need' for Australia to invest in long-duration energy storage, says AEMO<sup>3</sup>

Energy Storage News



1. PNNL.gov, Long-Duration Energy Storage: The Time Is Now, May 2023, Citing PNNL study in Journal of Energy Storage, Defining long duration energy storage, April 2023

2. The Queensland Cabinet and Ministerial Directory, Supercharging Queensland's future as the battery capital, 16th Jan 2023

3. Energy Storage News, 'Urgent need' for Australia to invest in long-duration energy storage, 21st February 2023. Based on Australian Energy Market Operator market update (AEMO), 21 February 2023

# Australian market recognition accelerating

#### Government engagement



"Way to go, Redflow - using local know-how to manufacture batteries with knock-your-socks-off performance. There's a huge opportunity for us here in Australia to simultaneously cut emissions and boost jobs. Firms like Redflow are more proof of that."

Hon. Ed Husic, MP Member for Chifley, and Australian Federal Minister for Industry and Science, May 2023

### Supporting core infrastructure



Recent highlights supporting critical infrastructure:

- + 3 sites in NSW delivered for BoM for renewable hybrid project.
- + 3<sup>rd</sup> system delivered for Knox City Council VIC.
- + >16 tonnes of CO2 abated at Optus Daintree site.
- Batteries for South Ocean Lodge delivered.



**Major partnerships** 

- MOU signed with Energy Queensland, February 2023.
- "We have taken time to understand Redflow's solution and capabilities, and believe it has the potential to be a great complement to lithiumbased systems for Queensland's conditions."

Peter Price, Executive General Manager, Engineering

#### Industry recognition



- Named in the Australian Government Low Emissions Technology Statement 2021
- + Referenced in the 2023 CSIRO Renewable Energy Storage Roadmap report
- + Submissions made to both the National Battery Strategy and Queensland Battery Industry Strategy.



# Well positioned in highly attractive US market

### Increasing focus on LDES



- In late 2022, the U.S. DoE opened applications for nearly \$350 million in funding to develop Long-Duration Energy Storage solutions.
- By 2030 North America will represent 20% of the global energy storage, which is projected to reach 88 GW/278 GWh.<sup>1</sup>
- California Energy Commission providing USD \$140m for LDES technology.

### Massive US government stimulus<sup>2</sup>





IRA set to transform US LDES market:

- 30% base credit for storage projects.
- + +10 40% additional credits available.
- + Stationary storage without solar supported.
- + US localisation provides significant tax credits.

### Established Redflow presence



Invested over the last 18 months to be ready for the opportunity

- Built US team in California commercial and technical.
- Industry partnerships Black and Veatch, Ameresco, Faraday, Empower Energies
- + Developed key market relationships.
- + SGIP status in California.

### High visibility reference system



Core 2 MWh system in California, supported by CEC

- + Passed 12 months operation.
- One of a few non-Lithium battery projects in California.
- Multiple hosted visits by end customers, gov't & partners.
- Key learnings integrated into further Pod and large system design.
- Met all CEC requirements.



1. https://pv-magazine-usa.com/2023/03/23/north-america-represents-21-of-global-energy-storage-market-by-2030/ 2. Image from White House Twitter, https://twitter.com/WhiteHouse/status/1558809479814209538

# Uniquely positioned to benefit from new clean energy focus under US-Australian Alliance

Australia-United States Climate, Critical Minerals, and Clean Energy Transformation Compact affirms the position of climate and clean energy as the third pillar of the Alliance



"Under the Compact, Australia and the United States intend to:

Drive the development of emerging battery technologies to help ensure our nations can lead energy storage as we diversify our energy sources. Australia and the United States recognise the importance of further technical engagement and coordination on battery interoperability, international standards, regulations and battery tracing and recyclability, including to drive offtake agreements for the battery sector."

JOINT STATEMENT, 20 May 2023 Prime Minister of Australia, President of the United States of America<sup>1</sup>

1. https://www.pm.gov.au/media/australia-united-states-climate-criticalminerals-and-clean-energy-transformation-compact





### Our strategy



# Strategy on a page



ENERGY FOCUSED APPLICATIONS



COMMERCIAL AND INDUSTRIAL (C&I) CUSTOMERS

- + Solar shifting and energy arbitrage
- Medium to long duration focus 4+ hours
- + Industries and applications where safety paramount (e.g. mining)
- + Leverage hibernation attributes

- + Small C&I deployments <1 MWh
- Medium to larger C&I deployments – Behind the Meter focus 2 – 20 MWh
- + Leverage energy density
- + Position for Grid scale opportunities 20 MWh+



AUSTRALIA AND US AS CORE MARKETS

- US California and other markets with large LDES energy storage needs & drive for diversification
- + Focus on core Australian market
- + Pursue deals in other markets where opportunity is compelling



### Redflow is a leader in Long Duration Energy Storage

#### Core competitive advantages versus non-lithium peers









#### Highest energy density across all commercial flow battery chemistries

 Zinc-Bromine is up to 3x higher energy and power density than Iron-Flow, Vanadium and other Zinc-based chemistries<sup>1</sup>

### Active operational experience

 More than 250 active deployments and over 15 million cumulative hours of field operations since 2018<sup>2</sup>

### Low raw materials cost profile

- Zinc is the world's 4th most abundant metal – cost and availability advantages.
- Zinc-Bromide cited as one of the lowest estimated cost of raw materials across different battery chemistries on \$/kWh basis<sup>3.</sup>

#### Flexibility and agility in deployment and performance

Modular approach and hibernation mode maximises design capacity flexibility and aligns energy delivery to need.



- 1. Redflow internal analysis based on core chemistry characteristics and publicly available company information
- 2. Redflow internal operational data as of 7th June 2023
- 3. See Rocky Mountain Institute, Breakthrough Batteries, 2019, Exhibit 20. Important Note the information in the report is indicative of the estimated relative chemical cost of storage for zinc bromide chemistries. It is not a statement of Redflow's chemical cost of storage, which may differ from their information

# Industry partnerships a key element of our strategy



Channel to market & accelerated sales cycle

Step change in industry positioning

Embed Redflow into overall renewable project design

Execution and support capabilities

Valuable input into product development and evolution

#### **Example partnership initiatives**

- Fortune 500 US financials services company – retail branches and operational sites.
- Execution of 20 MWh project for Paskenta Band of Nomlaki Indians.
- Micro-grid in a box concept incl. solar and EV charging capabilities.
- + US Government micro-grid project (specifying non-lithium solution requirements).
- Regional grid modernisation pilot project in Australia.



New partnerships announced in last 18 months

# Scale-up based on proven model

Capable of rapid scale up with low execution risk to meet growing demand



#### Establish Market Position

- + Fully converted to ZBM3.
- + Experienced management with 50+ employees with high retention.
- + ISO 9001 recertified (May 23).
- Recent intermittent supply chain and process quality issues.<sup>1</sup> Expect to be back in full production August 2023

#### Broaden Market Share

- Scale up to ~42 MWh p.a. end Q4 CY23 to fulfil 20 MWh project commitments
- Pathway to scale up to ~80 MWh p.a. Q4 CY24 – trajectory determined by customer demand
- Achieved through automation, multi-shifts, added productivity & key engineering projects

#### **Deliver at Scale**

- Multiple options for scale up incl. facility duplication, US localisation, contract manufacturing and joint venture/licensing
- + Scale up timing and optimal model will be determined by significant sales commitments and demand profile
- + Pursue local incentives in target markets



1. See Redflow Quarterly Update, 28 April 2023

# Clear focus over next 12 months

Market strategy	Objective	Impact	
C+I and utility	Convert key deals and execute on additional projects in our target markets	Demonstrate our ability to deliver project outcomes as a market leading Lithium alternative in long-duration energy storage. Continue to grow our market share.	
markets	Capitalise on our momentum to convert the existing pipeline and add new opportunities.	Grow our pipeline, advance project feasibility, drive sales and revenue. Utilise industry partnerships to help accelerate sales momentum.	
Prioritise US and	Leverage our achievements, delivery experience and customer interest into multi-MWh systems	Progressively grow project size, push scale efficiencies through our business. Demonstrate larger system capabilities with reference systems and data.	
Australian markets	Increasingly enhance the core market attractiveness of the Redflow LDES solution	Further improve project economics using bankability, access to local incentives, and compelling Levelised Cost of Storage data to advance projects.	
Energy focused	Focus on key markets to take advantage of local stimulus measures that drive demand	Concentrate on high-momentum markets undertaking grid modernisation. Meet market demands for local sourcing/manufacturing. Australia and US focus (IRA)	
applications	Preparedness for GWh scale	Maximise Redflow Thailand for capital efficient scale in the near-term. Develop capability and readiness for GWh demand.	



# Pathway to commercial success

Focus on strategy execution, disciplined capital management and returns from scale





# An exciting outlook based on strong progress



Our latest project is a validation of our strategic focus. We intend to maintain this focus.

Building the company with success in our target markets as our goal has delivered our greatest success yet.

US & Australia focus. Large scale C&I and Grid focus. LDES focus.



Our platform will allow us to deliver on our near-term opportunities. Building options for greater scale.

Our existing manufacturing facility in Thailand is ready to be scaled to deliver on current sales.

We are preparing options for the company to achieve greater scale when our order book grows further.



Conversion of our pipeline is our commercial focus. We'll grow the opportunity set with increasing industry profile.

Increased market presence and profile with projects, people and partners will be a strong lever to grow our pipeline.

We expect that pipeline projects will increasingly convert with our demonstration of project delivery and the overall LDES market growth.



Our pathway to commercial success and returns is driven by scale, strategy delivery and continued discipline.

Management will continue to allocate capital carefully and retain balance sheet cleanliness.

This will create a platform for scale to drive improved returns as we achieve our strategic objectives and commercial success.



### Capital raising summary



### Entitlement offer – overview

Offer Overview	<ul> <li>Pro-rata, non-renounceable Entitlement Offer to raise up to approximately \$18.9 million (before offer costs) if fully subscribed.</li> </ul>
Offer Structure	<ul> <li>The Entitlement Offer will be conducted on the basis of 1 new share for every 2 shares held at 7pm (Sydney time) Wednesday, 14 June 2020 (Record Date), at an issue price of \$0.21 per new share.</li> </ul>
	+ The issue price of \$0.21 per share represents a discount of approximately:
Offer Pricing	<ul> <li>14% to the 10 day VWAP up to and including Monday, 5 June 2023;</li> </ul>
	<ul> <li>16% to the 5 day VWAP up to and including Monday, 5 June 2023; and</li> </ul>
	+ 9% to the last price traded on Monday, 5 June 2023.
Eligible Shareholders	<ul> <li>Participation in the Entitlement Offer will be open to shareholders in Redflow on the Record Date with a registered address in Australia, New Zealand, Hong Kong, Singapore and the United Kingdom.</li> </ul>
Additional New Shares Available	<ul> <li>Eligible Shareholders may apply for new shares in excess of their entitlement. If demand for Additional New Shares exceeds the number of Additional New Shares available, Directors will scale back applications on a pro rata basis.</li> </ul>
Ranking	+ New shares issued under the Entitlement Offer will rank equally with existing shares.



# Entitlement offer – indicative use of funds

	Entitlement Offer 50% subscribed (Amount \$m)	Entitlement Offer 75% subscribed (Amount \$m)	Entitlement Offer 100% subscribed (Amount \$m)
Support sales and business development, support infrastructure and general working capital activities	1.2	2.7	4.8
Support cost down and product development and research activities	2.1	2.9	4.7
Capital for Production Ramp up	4.7	6.3	6.4
Funding supply chain raw materials and finished good inventory	1.2	2.1	2.8
Capital Raising Expenses	0.1	0.1	0.1
TOTAL*	9.4	14.2	18.9

\* Due to rounding, individual numbers may not equal total

- + If the Offer is not fully subscribed and shortfall not fully placed, the Company will need to raise additional funds for its activities for the 2024 financial year.
- The potential sources of funding include additional equity funding, debt funding (including through working capital or receivables facilities), improved supplier or customer terms or a combination of these sources. None of these alternatives have been determined at present and any need to implement a funding alternative would be considered if required having regard to the circumstances at the time including the amount raised under the Offer.
- + Specific funding risks are discussed further at page 30
- + This use of funds is illustrative only of Redflow's present intention. The precise activities that will be undertaken and the allocation of total funds raised may change without notice depending on market conditions and circumstances generally from time to time. There is no guarantee that funds raised will be applied precisely in the manner set out above or in the amounts described, or that they will be adequate to meet the ongoing funding requirements of Redflow under its current business plan.



## Entitlement offer - timetable

EVENT	INDICATIVE DATES*
Announcement of Entitlement Offer	Thursday, 8 June 2023
Existing shares quoted on an 'ex-entitlement' basis	Tuesday, 13 June 2023
Record Date	7pm (Sydney time) Wednesday, 14 June 2023
Entitlement Offer opens Entitlement Offer Booklet and acceptance forms despatched to Eligible Shareholders	Friday, 16 June 2023
Entitlement Offer Closes	5pm (Sydney time) Friday, 7 July 2023
Announcement of shortfall (if any) under the Entitlement Offer	Wednesday, 12 July 2023
Allotment date of new shares issued under the Entitlement Offer	Thursday, 13 July 2023
Normal trading of New Shares issued under the Entitlement Offer	Friday, 14 July 2023
Despatch of holding statements for New Shares issued under the Entitlement Offer	Monday, 17 July 2023

\*The timetable is subject to change and Redflow reserves the right to withdraw or vary the timetable for the offer without notice. In particular, Redflow reserves the right to extend the closing date for the Entitlement Offer, to accept late applications whether generally or in particular cases or to withdraw the Entitlement Offer without prior notice.

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### Investment Risks



### **Investment Risk**

#### GENERAL

There are a number of factors, both specific to the Company and of a general nature, which may affect the future operating and financial performance of the Company, its products, the industry in which it operates and the outcome of an investment in the Company. There can be no guarantee that the Company will achieve its stated objectives or that forward-looking statements will be realised.

This section describes certain, but not all, risks associated with an investment in the Company. Each of the risks set out below could, if it eventuates, have a materially adverse impact on the Company's operating performance, financial performance, financial position, liquidity, and the value of its Shares.

#### SPECIFIC RISK FACTORS

In addition to the general risks set out above, the Directors believe that there are a number of specific factors that should be considered. Each of these factors could have a materially adverse impact on the Company, its expansion plans, operating and product strategies and its financial performance and position. These include:

#### **Funding Risk**

If the Offer is fully subscribed (including if any shortfall is fully placed), the Company will have sufficient funds for its activities for the 2024 financial year (including funds for its expenditure requirements under the Faraday Supply Agreement). There is a risk that the Offer (including any placement of the shortfall) will not raise all of the funds required for the 2024 financial year and the Company will need to raise additional funds – see page 27 of this presentation.

Even if funds are raised to meet the immediate needs of the Company, there is no assurance that adequate or sufficient funds can be raised in the future to meet its funding requirements after the 2024 financial year, to achieve its stated business objectives or strategy, to meet expenditure requirements under future commercial scale supply contracts or to achieve a breakeven point, either at all or on terms and conditions which are commercially acceptable to the Company or at a price which is not lower than the Offer Price.

If the Company is unable to obtain such additional capital, it may be required to reduce the scope of its anticipated activities which could adversely affect its business, prospects, financial condition and operating results. There is also a risk of default of its contractual commitments if they cannot be renegotiated.

#### **Faraday Supply Agreement**

Commencement of work under the Faraday Supply Agreement is subject to Faraday Microgrids formalising definitive legal project agreements for funding with the California Energy Commission and the use of Federal Investment Tax Credits and power offtake with the Paskenta Band of Nomlaki Indians and then giving Redflow a notice to proceed.

There is no guarantee that the required definitive legal project agreements will be finalised and the notice to proceed given, within the expected timeframe. If the agreements are not agreed or the notice to proceed not given, then the Paskenta Project may be materially delayed or may not proceed which could materially affect Redflow business and operating results.

The Faraday Supply Agreement contains terms and conditions which are commonly found in capital equipment supply agreements of comparable size, nature and type including provisions for liquidated damages for delivery and completion delay, obligations to remedy defects in materials and workmanship. Redflow bears the risk of increased costs and, to manage this risk, has included a right to modify the project scope in the event of cost increases due to force majeure events. Faraday may terminate the agreement without cause subject to payment of an amount of compensation.

#### Sales and Revenue Risk

The Company currently operates on a negative cash operating basis in that its operating expenses exceed its revenue. The Company's revenue depends on the extent and timing of future product sales and implementation of individual projects which may be affected by factors outside the Company's control such as tasks for which the customer is responsible. There is a risk that sales and revenue may take longer than expected to materialise or not be realised at all. For example, there are no guarantees that battery trials, system demonstrations, initial deployments or commercial scale projects, will be successful or, even if successful, will convert into firm orders or sales revenue on a timely basis.

#### **Manufacturing Cost Reductions**

The Company's business prospects are dependent on its ability to ramp up manufacturing capability and reduce the production costs of its batteries. The Company manufactures its current Gen3 battery from its facilities in Thailand and believes that manufacturing cost reductions are achievable via efficiencies and general productivity improvements, key engineering projects, reductions in supplier and manufacturing costs from greater customer orders and economies of scale, plus productivity and process improvements. There is no guarantee however that cost reductions will be successfully implemented or will be achieved. If the Company is unable to reduce its cost of production sufficiently, the Company may not achieve profitability.

#### **Commercialisation Risk**

If the Company's battery technology is not adopted by its customers, or if its battery technology does not meet industry requirements for power and energy storage capacity in an efficient and safe design, the Company's battery will not gain market acceptance.



Many other factors outside of the Company's control may also affect the demand for its battery and the viability of adoption of advanced battery applications, including:

- performance and reliability of battery power products compared to conventional and other non-battery energy sources and products;
- success of alternative battery chemistries; and
- cost-effectiveness of the Company's products compared to products powered by conventional energy sources and alternative battery chemistries.

#### **Product and Performance Risk**

The Company's products are complex and now includes a battery which is capable of being deployed for various applications (including telecommunications, residential, small-scale and large-scale commercial use and application by utilities), a battery management system and a physical enclosure for its residential and commercial storage system. The Company launched its Gen3 battery in July 2022.

There is an inherent risk that the products and enhancements (including the Gen3 product) will contain defects or otherwise do not perform as expected (for example in terms of battery life and reliability). The Company undertakes product testing under laboratory and simulated field conditions, which aims to identify such problems before their release for field trials or use. Even after pre-release testing, there remains the risk of manufacturing or design defects, errors or performance problems that may only emerge over time and use in the field under operating conditions.

The Company provides a product warranty which is subject to a range of technical and operating conditions. However, the Company has not tested its battery over its operating life either in the field or in simulated conditions. If the Company's products fail to perform as expected or if production of the Company's products is subject to delays (including delays in the rollout of the Gen3 product), the Company could lose existing and future business and its ability to develop, market and sell its battery and energy storage systems could be harmed.

Product defects or non-performance may also give rise to claims against the Company, diminish the brand or divert resources from other purposes, all of which could have a materially adverse impact on the Company financially and reputationally.

The Company's products will frequently be deployed in remote locations where reliability is important, and any defects or non-performance problems could result in expensive and time-consuming design modifications or warranty charges, delays in the introduction of new products or enhancements (including the new Gen3 product), significant increases in service and maintenance costs, exposure to liability for damages, damaged customer relationships and harm to the Company's reputation, any of which may adversely affect its business and the Company's operating results.

The Company is dependent on the supply of raw materials for a number of different parts and components. While the Company follows a quality control process there are possible situations where the quality of raw materials supplied will adversely affect the performance of the product.

#### **Technology Obsolesence Risk**

Rapid and ongoing changes in technology and product standards could quickly render the Company's products less competitive, or even obsolete if it fails to continue to improve the performance of its battery, its chemistry and battery management systems.

The Company continues to research, develop and manufacture zinc bromine flow batteries. The market for advanced rechargeable batteries is at a relatively early stage of development, and the extent to which the Company's zinc bromine batteries will be able to meet its customers' requirements and achieve significant market acceptance is uncertain.

One or more new, higher energy rechargeable battery technologies could be introduced which could be directly competitive with, or superior to, the Company's technology. Competing technologies that outperform the Company's battery could be developed and successfully introduced, and as a result, there is a risk that the Company's products may not be able to compete effectively in its target markets.

#### Reliance on system integrators as strategic partners

The Company relies on key system integrators as strategic partners providing channels to market. A key part of its business plan is predicated on a steady expansion of the customer bases through development of its strategic system integrator relationships.

There may be a materially adverse effect on the Company if the market reputation of a system integrator suffers, if one or more of these strategic system integrator relationships is lost and not replaced or if a dispute arises between the Company and a systems integrator. There are also risks associated with being one step removed from the ultimate customer and end user, such as issues arising from installation of Redflow energy storage systems by an integrator.

The Company's system integrators may operate in multiple jurisdictions which are subject to differing regulatory requirements. There is a risk that these regulatory frameworks may expose the Company to obligations, claims and additional compliance costs in relation to its products, including storage, handling and disposal of chemicals.



#### Manufacturing risk - general

There are risks which are inherent in manufacturing operations including machinery breakdowns, damage from flood and fire, below standard workmanship or materials, employee issues (including accidents), workplace health and safety and so on. Any adverse impact on production could have a materially adverse impact on the Company's ability to meet customer needs and the risk of customer claims and the Company's ability to achieve its expansion plans or its financial performance.

#### Manufacturing capacity risk

As the Company will build its manufacturing capability based on its projection of future supply agreements, its business revenue and profits will depend upon its ability to enter into and complete these agreements, achieving competitive manufacturing yields and drive volume sales consistent with its demand expectations.

In order to fulfil the anticipated product delivery requirements of its potential customers, the Company will invest in capital expenditures in advance of actual customer orders, based on estimates of future demand. If market demand for the Company's products does not increase as quickly as it has anticipated and align with the Company's manufacturing capacity, or if the Company fails to enter into and complete projected development and supply agreements, the Company may be unable to offset these costs and to achieve economies of scale, which could materially affect its business and operating results.

Alternatively, if the Company experiences sales in excess of its estimates, it may be unable to support higher production volumes, which could harm customer relationships and overall reputation. The Company's ability to meet such excess customer demand could also depend on its ability to raise additional capital and effectively scale its manufacturing operations.

If the Company is unable to achieve and maintain satisfactory production yields and quality, its relationships with certain customers and overall reputation may be harmed, and its sales could decrease.

#### Manufacturing production and outsourcing risk

The manufacturing and assembly of safe, long lasting batteries is a highly complex process that requires extreme precision and quality control throughout a number of production stages. Improving manufacturing processes will be an ongoing requirement both to reduce cost and improve battery performance and reliability by minimising manufacturing errors.

The Company has adopted a combination of outsourced and insourced component manufacturing of its battery parts to achieve the benefits of scalability, quality control, and cost efficiencies and to reduce its overall manufacturing risks (including the risk of damage to finished products when they are delivered from the factory to the customer). The outsourced component of the Company's manufacturing strategy has associated risks. It means the Company is unable to directly control delivery schedules, quality assurance, manufacturing yields and production costs.

Any defects in battery packaging, impurities in the electrolyte or electrode materials used, contamination of the manufacturing environment, incorrect welding, excess moisture, equipment failure or other difficulties in the manufacturing process (including as a result of COVID-19) could cause batteries to be rejected or to fail in the field, thereby reducing yields and affecting the Company's ability to meet customer expectations.

Problems in the Company's manufacturing and assembly processes could limit its ability to produce sufficient batteries to meet the demands of potential customers.

#### Thailand manufacturing personnel

The Company's manufacturing facility depends on the recruitment and retention of skilled employees to produce quality batteries and meet customer demand. There can be no assurance that the Company will be successful in attracting and retaining the skilled personnel necessary to meet current or any future demand for product. The inability to attract and retain qualified personnel could have a materially adverse impact on the Company.

#### Regulatory and compliance risk

The Company uses hazardous substances including zinc bromine, zinc chloride and hydrochloric acid in the manufacture of its batteries. Various regulatory requirements apply to the storage, handling and disposal of such chemicals. The Company must also comply with prescribed product standards in the various jurisdictions in which it operates, that are relevant to the manufacture, installation and operation of its battery. This includes UL certification in the United States, which is considered to be essential for large scale deployments and battery programs.

There is a risk that the Company will be unable to comply with the regulatory requirements imposed on its batteries or that the cost of compliance will exceed expectations and have an adverse impact on the financial position of the Company. This may prevent the Company from accessing markets in certain jurisdictions.

#### Sovereign Risk

The Company's manufacturing operations in Thailand and a number of overseas battery deployment projects are subject to the risks associated in operating in foreign emerging countries. These risks may include economic, social or political instability or change, hyperinflation, or changes of law affecting foreign ownership, government participation, taxation, working conditions, rates of exchange, exchange control, export duties, capital controls, repatriation of income or return of capital, environmental protection, labour relations and government regulations that require the employment of local staff or contractors or require other benefits to be provided to local residents. No assurances can be given that the co-operation of such authorities, if sought by the Company, will be obtained, and if obtained, maintained.



It cannot be ruled out that the government of Thailand (or any other foreign jurisdiction in which the Company operates) may adopt substantially different laws, policies or conditions relating to foreign investment and taxation. The Company may also be hindered or prevented from enforcing its rights with respect to a governmental instrumentality because of the doctrine of sovereign immunity. Any future materially adverse changes in government policies or legislation in Thailand (or any other foreign jurisdiction in which the Company operates) in relation to foreign investment and ownership may affect the viability and profitability of the Company.

#### Supply risk

The Company's manufacturing operations depend on obtaining raw materials, parts and components, manufacturing equipment and other supplies, including services from reliable suppliers (including transport services) in adequate quality and quantity, in a timely manner. It may be difficult for the Company to substitute one supplier for another, increase the number of suppliers or change one component for another in a timely manner or at all due to the interruption of supply or increased industry demand (including as a result of COVID-19). This may adversely affect the Company's operations.

The prices of raw materials, parts and components and manufacturing equipment may increase due to changes in supply and demand and global or other macroeconomic events such as the Ukraine Conflict and supply chain constraints. In addition, currency fluctuations and the weakening of the Australian dollar against foreign currencies may adversely affect the Company's purchasing power for raw materials, parts and components and manufacturing equipment from foreign suppliers.

If the Company is unable to secure key supply inputs in a timely and economically acceptable manner, it could have a materially adverse effect on its ability to meet customer demand and sell batteries profitably.

#### Warranty risk, product liability and extended life cycle testing risk

There is an inherent risk of defective workmanship or materials in the manufacture of the Company's products and for exposure to product liability for damages suffered by third parties attributable to the use of the product.

Defective products may have a materially adverse impact on the Company's reputation, its ability to achieve sales and commercialise its products and on its financial performance due to warranty obligations. It may also give rise to product liability claims. The Company will mitigate this risk via the usual contractual provisions which exclude liability for consequential loss and so on, but it is not possible to protect the Company against reputational loss.

The Company provides a product warranty which is subject to a range of technical and operating conditions. The battery has not however been tested over its full operating life either in the field or in simulated conditions.

#### Contract delivery and performance risk

The Company is expected to enter into contracts with partners and end customers which impose various contractual obligations on the Company. This may include, but not be limited to, delivery schedules, price, commissioning and integration, and performance parameters. If it does not meet those obligations, the Company may be exposed to claims for damages for breach of contract or other remedial action and incur remedial costs.

#### Intellectual property and patent risk

The ability of the Company to maintain protection of its proprietary intellectual property and operate without infringing the proprietary intellectual property rights of third parties is an integral part of the Company's business.

To protect its proprietary intellectual property, the Company has patents through its wholly owned subsidiary, Redflow R&D Pty Ltd. In addition, the Company has patent applications are at various stages of the examination process in various jurisdictions. There is a risk that some or all of the patent applications will not be accepted, either in Australia or overseas and that other persons may be able to commercially exploit the proprietary intellectual property.

The granting of protection such as a registered patent does not guarantee that the rights of third parties are not infringed or that competitors will not develop technology to avoid the patent. Patents are territorial in nature and patents must be obtained in each and every country where protection is desired. There can be no assurance that any patents which the Company may own or control will afford the Company significant protection of its technology or its products have commercial application.

Competition in obtaining and sustaining protection of intellectual property and the complex nature of intellectual property can lead to disputes. The Company has, and may in the future, enter into commercial agreements under which intellectual property relevant to the Company and its ZBM2s, and which is created by the counterparty or jointly created by the Company and the counterparty, will not be owned exclusively by the Company. In these circumstances the Company will seek to negotiate an appropriate licence to use any such intellectual property.

There is a risk that such newly created intellectual property not exclusively owned by the Company, will be material to the Company and there is no guarantee that the Company will be able to enter into appropriate agreements to use it either at all or on commercially acceptable terms and conditions, or on a timely basis. The inability to secure rights to use such intellectual property could have a material impact on the Company's ability to sell or otherwise commercialise its products, and its financial performance.



#### Reverse engineering risk and trade secret risk

There is a risk of the Company's products and battery management system being reverse engineered or copied. Redflow relies on trade secrets to protect its proprietary technologies, especially where it does not believe patent protection is appropriate or obtainable. However, trade secrets are difficult to protect. The Company relies in part on confidentiality agreements with its employees, contractors, consultants, outside scientific collaborators and other advisors to protect its trade secrets and other proprietary information.

These agreements may not effectively prevent disclosure of confidential information and may not provide an adequate remedy in the event of unauthorised disclosure of confidential information. Costly and time-consuming litigation could be necessary to enforce and determine the scope of the proprietary rights, and failure to obtain or maintain trade secret protection could adversely affect the Company's competitive business position.

#### Information technology

The Company relies heavily on its computer hardware, software and information technology systems. Should these not be adequately maintained, secured or updated or the Company's disaster recovery processes not be adequate, system failures may negatively impact on its performance.

#### Dividends

There is no guarantee as to future earnings of the Company or that the Company will be profitable at any time in financial performance of the Company and by external factors over which the Directors and the Company have the future, and there is no guarantee that the Company will be in a financial position to pay dividends at any time in the future.

#### **Personnel risk**

Redflow may not be able to successfully recruit and retain skilled employees, particularly scientific, technical and management professionals.

The Company believes that its future success will depend in large part on its ability to attract and retain highly skilled technical, managerial and marketing personnel who are familiar with its key customers and are experienced in the battery industry. Industry demand for employees with experience in battery chemistry and battery manufacturing processes exceeds the number of personnel available, and the competition for attracting and retaining these employees is intense. This competition will intensify if the advanced battery market continues to grow, possibly requiring increases in compensation for current employees over time.

The Company cannot be certain that it will be successful in attracting and retaining the skilled personnel necessary to operate its business effectively in the future. Due to the highly technical nature of its battery, the loss of any significant number of the Company's existing engineering and project management personnel could have a materially adverse effect on its business and operating results.

The Company relies heavily on its senior executives and engineering team. There can be no assurance that the Company will be able to retain its key personnel or recruit suitable technical staff as replacements. The loss of key personnel could have a materially adverse impact on the Company.

#### **Exchange rates**

The Company is potentially exposed to movements in exchange rates. The Company's financial statements are expressed and maintained in Australian dollars. However, a portion of the Company's income and costs are earned in foreign currencies and this proportion may increase materially. Exchange rate movements affecting these currencies (including as a result of the circumstances surrounding COVID-19) may impact the profit and loss account or assets and liabilities of the Company (to the extent the foreign exchange rate risk is not hedged or not appropriately hedged) and the general competitiveness of the Company's products in the market.

#### **GENERAL RISK FACTORS**

#### Share market

The Company's shares may trade on the ASX at higher or lower prices than the price at which shares are issued. Investors who decide to sell newly acquired shares after the capital raising may not receive the amount of their original investment. The price at which newly acquired shares trade on the ASX may be affected by the financial performance of the Company and by external factors over which the Directors and the Company have no control.

These factors include movements on international share and commodity markets, local interest rates and exchange rates, domestic and international economic conditions, government taxation, market supply and demand and other legal, regulatory or policy changes.

#### Dependence on general economic conditions

The operating and financial performance of the Company is influenced by a variety of general economic and business conditions, including levels of consumer spending, inflation, interest rates and exchange rates, access to debt and capital markets, government fiscal, monetary and regulatory policies.

A prolonged deterioration in general economic conditions (whether or not due to COVID-19), including an increase in interest rates or a decrease in consumer and business demand, could be expected to have a materially adverse impact on the Company's business or financial condition. Changes to laws and regulations or accounting standards which apply to the Company from time to time could adversely impact the Company's earnings and financial performance.



There are also other changes in the domestic and global macroeconomic environment associated with the events relating to COVID-19 that are beyond the control of the Company and may be exacerbated in an economic recession or downturn. These include but are not limited to (i) high inflation and rising interest rates; (ii) changes in foreign currency exchange rates; (iii) changes in employment levels and labour costs; (iv) changes in aggregate investment and economic output; and (v) other changes in economic condition which may affect the revenue or costs of the Company.

#### **Ukraine conflict**

The war between Ukraine and Russia (Ukraine Conflict) is impacting global economic markets. The nature and extent of the effect of the Ukraine Conflict on the performance of the Company remains unknown. The Company's Share price may be adversely affected in the short to medium term by the economic uncertainty caused by the Ukraine Conflict.

The Ukraine Conflict has potential secondary and tertiary macroeconomic impacts, including the changes in pricing of commodity and energy markets, effects on global supply-chain and freight movements which would impact the supply of raw materials and delivery of finished goods and the potential of cyber activity impacting governmental or industry measures taken in response to the Ukraine Conflict.

#### Tax risk

Any change to the company income tax rate in jurisdictions in which the Company operates will impact on shareholder returns, as will any change to the income tax rates applying to individuals or trusts. Any change to the tax arrangements between Australia and other jurisdictions could have an adverse impact on future earnings and the level of dividend franking.

#### Legislative and regulatory changes

Legislative or regulatory changes in jurisdictions in which the Company operates, including property or environmental regulations or regulatory changes in relation to products sold by the Company, could have an adverse impact on the Company.



