



H1 FY2022 Results presentation

Monday 28 February 2022

Presented by Tim Harris, CEO + Trudy Walsh, CFO

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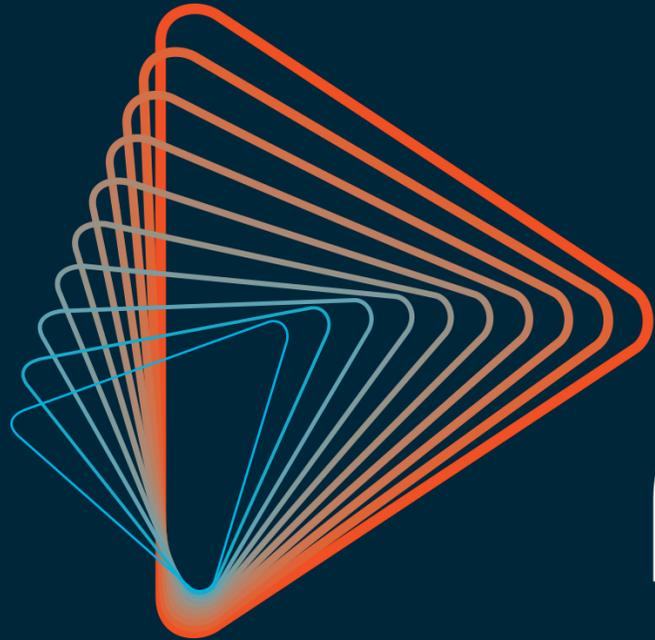
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redflow

Key messages



Industry leader with proven technology

Established market leadership in medium duration storage for renewable energy solutions.

Validated safety and sustainability advantages over Lithium.



Large market opportunities with embedded growth

US energy storage market to grow at 16% CAGR through 2025 to \$10.5bn annually¹.

Additional growth opportunities in Europe, Australia and India.



Sales momentum to drive strong revenue growth and shareholder value

Rapidly ramping up deployments, driving scale, revenue and profitability with high quality pipeline.

2 MWh project in California validates technology and provides 'live' reference for customers.



Ready to scale to meet opportunities

Manufacturing and deployment established, with capital-efficient scale-up plans to meet increasing customer orders

Resilient supply chain with capability to scale and less risk of disruption than lithium ion

¹ Wood Mackenzie, U.S. Energy Storage Monitor, Q4 2021

Delivered on growth strategy in H1 FY22

Executed on US expansion plan, with largest ever single deployment while progressing Gen3 development.

STRONG TOP LINE PERFORMANCE

- + Delivered \$1.2m revenue (+172% yoy), \$1.6m cash receipts (+156% yoy).
- + Cash balance of \$14.4m as at 31 December 2021, including \$10.8m raised for growth initiatives.
- + Active investment in capabilities, machinery and materials for scale up.

DELIVERED TO CUSTOMERS

- + Completed the 2MWh system for Anaergia in California, largest single deployment – critical live reference.
- + Completed deployment to Optus for Australian Government's Mobile Network Hardening Program, supporting 100+ power outages.
- + Achieved milestone of delivering over 2 GWh through Redflow batteries.

READY FOR GROWTH

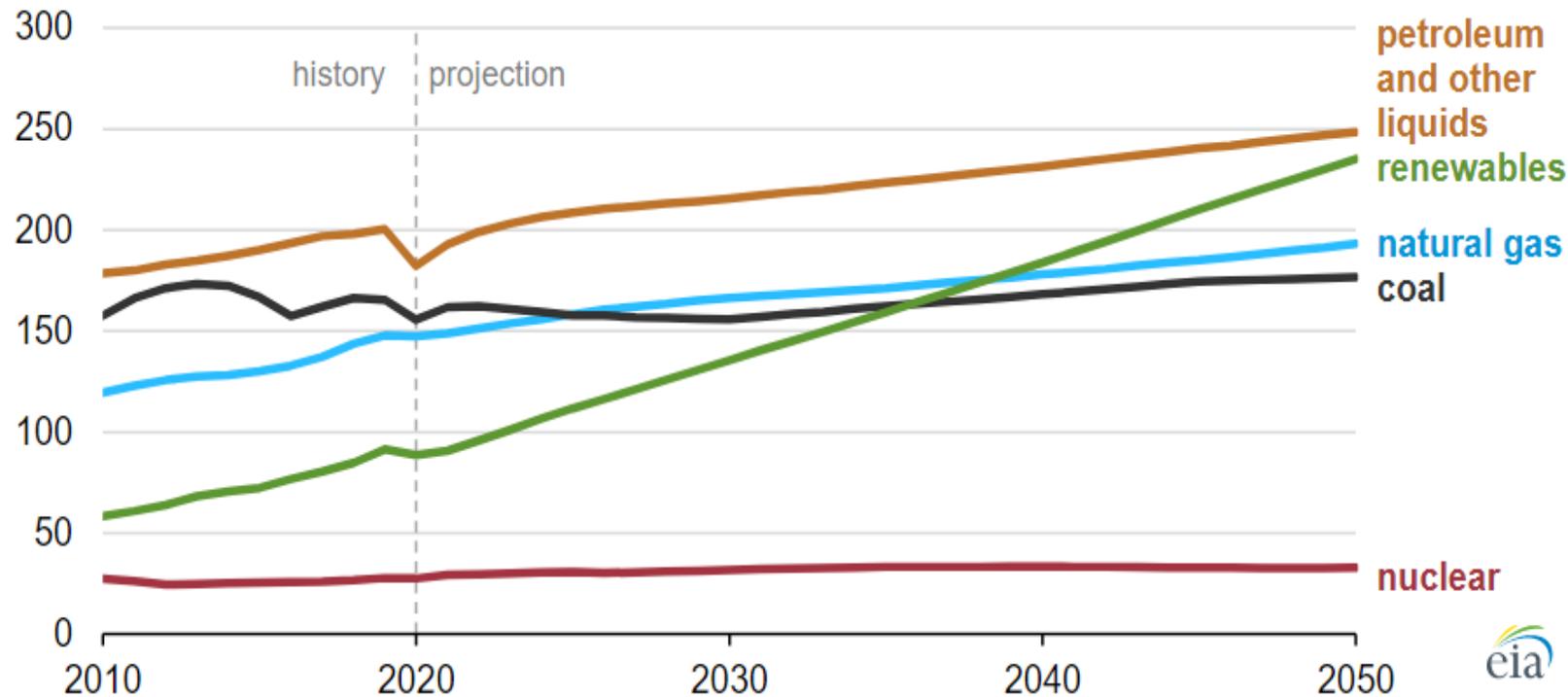
- + Strong and growing pipeline incl. growing interest in MWh scale systems.
- + Gen3 programme progressed ahead of Q4 FY22 launch.
- + New US team, additional capabilities and selected capital investments made to enable rapid scale up.
- + Progress on independent safety testing and UL certification.

Increasing renewable penetration

Energy Storage is increasingly critical to enabling renewable energy growth and addressing new challenges

Global primary energy consumption by source, IEO2021 Reference case (2010–2050)

quadrillion British thermal units



New challenges

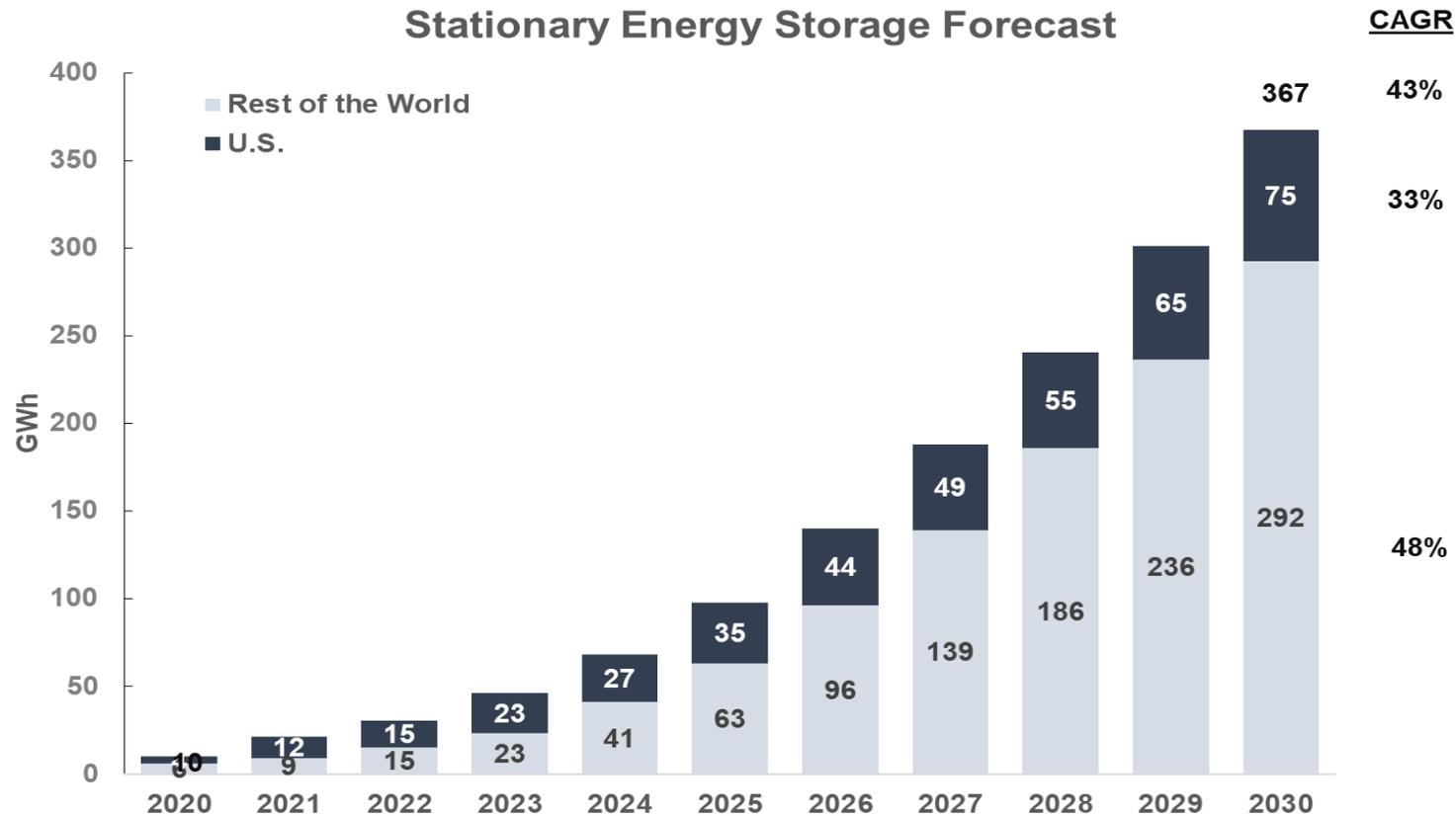
- + Overall electricity needs expected to double in next 25 years.
- + Ramping needs.
- + Managing system imbalances whilst maximising renewables.
- + Managing extreme weather events.
- + Market design – incentive and investment signals.

Source: U.S. Energy Information Administration, International Energy Outlook 2021 (IEO2021)

Note: Petroleum and other liquids includes biofuels.

Accelerated demand for energy storage

Global energy storage market expected to be 36x larger in 2030 than 2020.



- + Global energy storage market expected to add cumulative 1,500 GWh capacity by 2030.
- + US market currently accounts for approximately 50% of current global energy storage market.
- + Material industry shift to medium to longer term energy storage needs which Lithium is challenged.
- + LDES analysis identifies need for 85-140 TWh of 8+ hour duration by 2040¹.

Source: Cairn ERA

1 Long Duration Energy Storage Council, Net Zero Power, December 2021. See www.ldescouncil.com

Looking beyond lithium

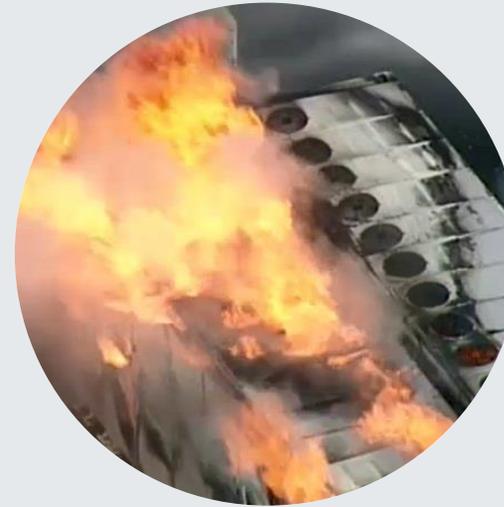
Fundamental drivers for energy storage and Redflow have never been stronger.



Rapid increasing renewable energy commitments and installations



Lithium supply chain challenges, risks and price increases



Lithium fire incidents and safety issues



Industry actively looking to next era of energy storage solutions

Attractive core drivers in priority US market



Climate change is at our front door, and we need to invest in innovative solutions, like better batteries, to combat it.

We've got to develop new technologies, technologies that perhaps don't use some of the rare earths and some of the mineral materials that we have to import. Let's look for solutions that can be homegrown.

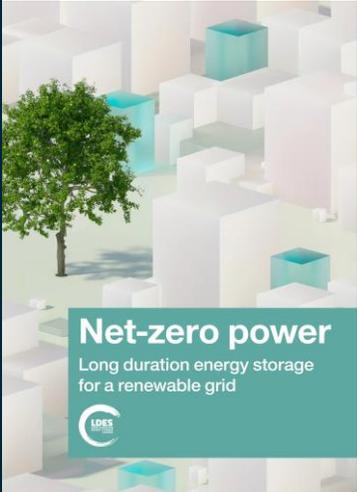
US Senator, John Hickenlooper

- 1 Accelerating renewable energy commitments.**
- 2 Grid reliability and stability.**
- 3 Active support for new storage technologies – including flow.**
- 4 Increasing demand for medium to longer duration storage.**
- 5 Active State and Federal support.**
- 6 Energy security – sourcing and manufacturing.**

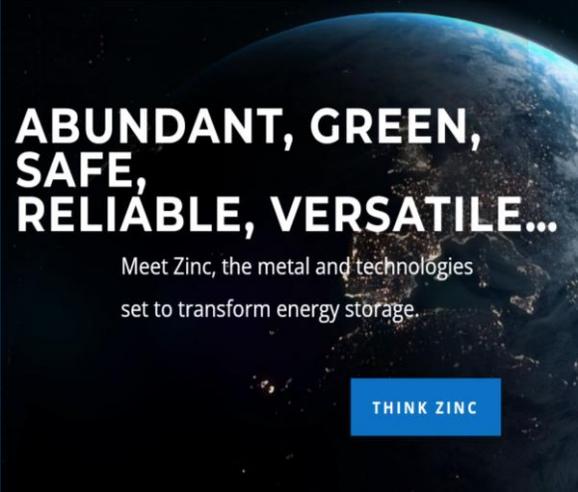
Accelerating industry recognition



Referenced as leading non-lithium energy storage solution in Australian Government low emissions technology roadmap.



Joined LDES in 2021 as Foundation technology provider member.



Referenced as global leader in zinc-based energy storage solution.



Engagement across international industry events – focus on Australia and United States.

Redflow batteries offer a compelling solution



MEDIUM TO LONGER DURATION

Up to 12 hours¹ (and potential to extend in hibernation mode)

<1 second response time



COST & PERFORMANCE

Deep daily discharge and sustained energy output

Long life, multi cycle design

Ability to value stack – frequency control and energy shifting



FLEXIBILITY

10 kWh modular design – scalable to multi MWh system

Core design allows for redundancy. Expand as needs increase

Hibernation mode allows for extended duration – weeks/months



SAFETY & DURABILITY

No risk of thermal runaway
- Non flammable materials

Excellent tolerance for high ambient temperatures w/out external cooling

Remote monitoring and diagnostics plus self-protection features



SUSTAINABILITY

Abundant low cost materials

Proven recyclable and reusable components

¹ Redflow 10 kWh battery rated at 3kW constant, 5 kW peak. Longer durations may impact total energy capacity. See [redflow.com](https://www.redflow.com) for further information

Global leader in target market



Highest energy density across all commercial flow batteries



Proven operational experience



Flexibility in deployment



Agility in performance

Demonstrated sustainability impact

Redflow installed 160 kWh energy storage system to offset a diesel generator at an Optus telecommunications site in 2019.

- 65% reduction in generator operation run time
- 17% Increase in generator efficiency
- ~6000 L of diesel fuel saved every year
- 16 tonnes of CO₂ abated per annum
- Est. savings of >\$10,000 every month

Source: Redflow Analysis



Validated fire risk credentials

Proven and credible fire-safe alternative to lithium based systems

- + Tests recently conducted to align with US National Fire Protection Association requirements - the dominant authority in the US regarding protection for fire hazards.
- + Results validated by independent engineering consultants.
- + Testing supports credentials against critical UL 9540A standards (fire risk for battery systems).
- + Validation of low fire risk characteristics important differentiation in target markets.



ASTM D93 Flash
point measurement
December 2021



ZBM Short-Circuit
Test
January 2022

Major global target markets

COMMERCIAL & INDUSTRIAL



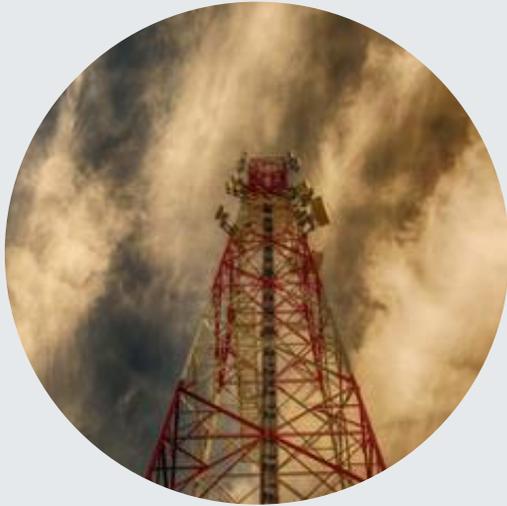
Energy focused applications

UTILITY



Frequent cycling e.g. solar shifting, peak shaving

TELCO



Medium to longer term duration requirements

REMOTE & COMMUNITY SYSTEMS



Conditions that rapidly degrade other chemistries

Anaergia installation

- + Completed 2 MWh energy storage system at Anaergia's Rialto Bioenergy Facility in California.
- + The energy storage system contains 192 zinc-bromine flow batteries, designed to reduce the microgrid's peak energy use.
- + Each battery string has passed critical acceptance testing.
- + New Energy Pods (pioneered for Anaergia project) are broadening Redflow's reach into MWh systems.
- + A number of customers and EPC hosted visits

A high visibility MWh reference installation for our growth into the United States and other global markets



Executing on US growth strategy with a growing pipeline

2 MWh Reference Deployment with Anaergia generated significant interest and pipeline – incl. site visits.

New experienced US team to lead US efforts.

Ongoing progress across US UL (Underwriter Laboratory) certification, independent performance testing.

Consultation and testing of US suppliers for key battery materials.

Engagement across a number of leading EPC partners.



New team to lead drive into critical US Market



Mark Higgins, President Americas and Chief Commercial Officer

- + Mark Higgins is a globally-recognised leader in energy storage strategy and an experienced executive with deep connections throughout North America's energy ecosystem.
- + Mark has served as chair of the US Department of Commerce's Renewable Energy & Energy Efficiency Advisory Committee
- + Held past leadership roles at PG&E, Strategen, SunEdison, Fotowatio Renewable Ventures (FRV), MMA Renewable Ventures, and the California Energy Storage Alliance.
- + Additional US roles recruited include energy veteran Paul Kelleher as VP of Project Engineering & Business Development. Previously at Primus Power, a California based zinc bromine flow battery company.

"As energy storage buyers increasingly move towards longer duration solutions, I joined Redflow because it is poised to lead this market."

"I consider Redflow to be the only non-lithium battery tech that has scaled up and is delivering to customers worldwide today."

Mark Higgins, February 2022

Preparing for Gen3 launch and ramp up

100% Redflow owned,
ISO9001 accredited
Thailand facility.

Highly scalable, low
capex rapid scale up
manufacturing model.

Successfully navigated
COVID19 dynamics
over last 12 months.



- + Redflow engineering team in Thailand for Gen3 New Product Introduction (NPI).
- + Phase 1 automation program – separator stitching.
- + New facility management in place.
- + On target for Gen3 commercial production Q4 FY22.
- + Active planning for larger scale up model beyond current facility.

H1 FY22 Financials



TIEC Kalyakool Farm,
Muckenburra, WA

Profit & Loss

Revenue up 172% to \$1.2m

- + Underpinned by Anaergia project completion. Strong growth despite COVID-19 impacting sales conversion opportunities and delivery of orders.
- + H1 FY22 other income is the R&D Tax rebate, the pcp included JobKeeper payments and Government Cash Flow Boost.
- + Raw materials and consumables used increased to \$2.2m due to increase in production volume.
- + Other Expenses increase by payroll expenses, increase share-based payment expenses and removal of COVID austerity actions, increase professional fees including commencement of UL Certification for US expansion.
- + Order backlog of 105 batteries at 31 December 2021.

A\$N	H1 FY22	H1 FY21
Revenue	1,174.2	431.2
Other Income	1,360.8	2,445.4
Expenses		
Raw Materials and Consumables Used	(2,226.7)	(1,641.9)
Other Expenses	(5,498.9)	(4,166.9)
Profit/ (Loss) before Income Tax	(5,190.5)	(2,932.1)
Income Tax Expense	(3.1)	(17.3)
Profit/ (Loss) after Income Tax	(5,193.6)	(2,949.5)
Other Comprehensive Income	(1.9)	(34.2)
Total Comprehensive Loss	(5,195.6)	(2,983.7)

Sum of individual items may not equal total due to rounding effects

Balance Sheet

Strong net cash position of \$14.4m

Current assets

- + Trade and other receivables down 38.3% due to the completion of projects.

Non-current assets

- + Increase in PP&E reflects planned investments in manufacturing capabilities ahead of production ramp up.

Current liabilities

- + Trade and other payables has been restated for 30 June, due to a change in audit opinion on the accounting treatment of a portion of the NTCG share placement agreement. Circa \$1m increase in equity (Non cash impacting).

A\$'000	31 Dec 21	30 June 21 (restated)
Cash and cash equivalents	14,454.3	9,808.3
Trade and other receivables	583.4	944.8
Inventories	3,236.1	3,346.5
Other current assets	1,960.3	236.9
Total current assets	20,234.2	14,336.5
Property plant and equipment	776	617.8
Intangible assets	445.2	415.7
Right of use assets	493.4	75.1
Total non-current assets	1,714.6	1,108.6
Total assets	21,948.8	15,445.2
Trade and other payables	5,359.7	5,153.2
Other current liabilities	1,119.1	953.5
Provisions	1,753.1	1,724.8
Total current liabilities	8,231.9	7,831.4
Total non-current liabilities	134	112.2
Total liabilities	8,365.9	7,943.7
NET ASSETS	13,582.9	7,501.5

Sum of individual items may not equal total due to rounding effects

Cash Flow

Receipts from customers substantially higher by 156%

- + Reflects project milestone payments received.
- + Payments to suppliers and employees up 61% to \$6.8m, due to increased production and selected hires in key markets.
- + Increase in payments for property plant and equipment includes deposit for equipment for planned increased manufacturing capabilities ahead of production ramp up.
- + Capital raising activities:
 - \$10.9m raised from July 2021 Entitlement Offer and August Shortfall Placement.

A\$'000	H1 FY22	H1 FY21
Cashflows from operating activities		
Receipts from customers	1,574.7	615.5
Payments to suppliers and employees	(6,783.2)	(4,210.1)
Grants R&D tax incentive received	-	2,498.6
Other	(8.1)	(21.1)
Net cash (outflows) from operating activities	(5,216.6)	(1,117.2)
Cashflows from investing activities		
Payment for property plant and equipment	(526.1)	(69.8)
Payments for intangible assets	(27.8)	(98.6)
Proceeds from sales of PP&E	-	29.2
Net cash (outflows) from investing activities	(533.9)	(139.1)
Cashflows from financing activities		
Proceeds from capital raising activities	10,859.8	6,919
Transaction costs related to equity issues	(357.8)	(269.3)
Principal elements of lease payments	(89.3)	(87.3)
Net cash (outflows) from financing activities	10,412.7	6,562.3
Net increase/(decrease) in cash and cash equivalents	4,642.2	5,306.1

Sum of individual items may not equal total due to rounding effects

Looking ahead



Key priorities for H2 FY22

Converting attractive pipeline into contracts to drive sales growth

Launch Gen3 battery into production in Q4, delivering lower cost of production.

Accelerate US presence to support sales pipeline and growth.

Invest for growth whilst maintaining prudent cost management.

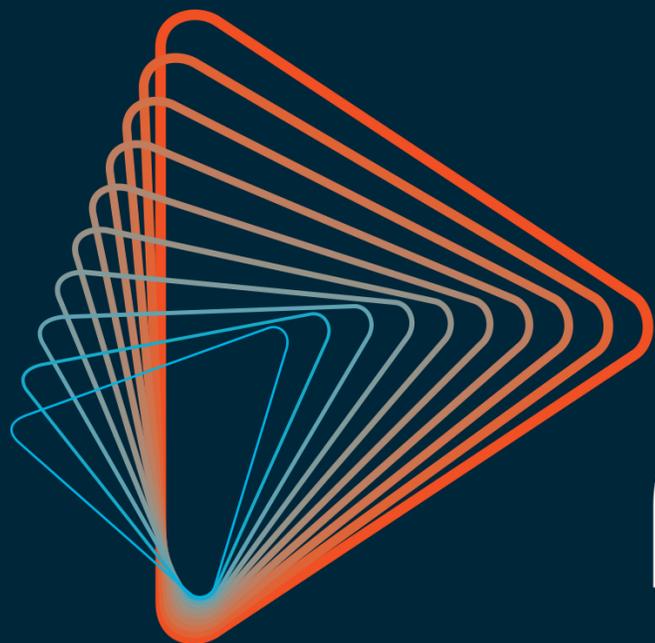
Drive sales conversion and business development activity – focus on Australian and US markets.

Extend technology leadership with focus on electrolyte, separator and supplier performance.

Progress strategic investment and partnership discussions.

Questions





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