

# QUARTERLY ACTIVITIES REPORT

June 2024



Li-S Energy



*Image courtesy V-TOL Aerospace*

*Li-S Energy Limited (ASX: LIS) ("Li-S Energy" or "the Company") is pleased to provide the following activities report for the quarter ended 30 June 2024, pursuant to Listing Rule 4.7C*

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**\$1.35m grant awarded for drone development  
Phase 3 update & BMS Development  
Industry update: National Battery Strategy  
& Battery Breakthrough Initiative**

# CEO's REPORT

During the quarter ended 30 June 2024, our team drove substantial progress in several key areas:

## **Intelligent Battery Management System**

Our partners and future customers need battery packs — not just battery cells — to power their products. To accelerate testing and trials, and to further enhance our IP and potential revenue streams, we have designed and built a prototype intelligent battery management system (BMS), suited to our novel battery chemistry.

Developed in Australia — and currently being trained for our lithium metal and lithium sulfur battery packs — our intelligent BMS includes control and sensor systems to ensure effective battery operation, efficiency, safety and cell management. The company owns the design and related IP for this prototype.

## **Grant Award for Emerging Aviation Technology Partnerships (EATP)**

We were recently awarded a \$1.35M EATP Grant from Federal Government to design, build and demonstrate a beyond-line-of-sight (BLOS) drone with a “dawn til dusk” flight time.

Competition for the program was intense, with just 12 grants awarded nationwide.

The drone, codenamed Pegasus 1, will offer significant market potential for surveillance, mapping and monitoring missions which are currently limited by the short flight times of existing drone platforms.

Li-S Energy batteries are key to enabling this capability, packing more than twice the energy of traditional lithium-ion cells into the same cell weight. The Program is ideal for us to clearly demonstrate the strategic benefit of our cells in drone applications.

Our Australian partners V-TOL Aerospace and Halocell Energy are experts in drone design and solar cell technology respectively, and I am delighted to collaborate with them on this project. In due course we expect Pegasus 1 to attract significant interest and sales opportunities around the world.

## **Installation of Phase 3 Facility Complete**

The installation of the equipment for the 2MWh Phase 3 production facility is now complete.

Incorporating 55 pieces of the latest production equipment, this facility is the largest pouch cell manufacturing line in Australia. Currently the line is producing cells for calibration, process optimisation, and testing as we continue to enhance the production processes on each machine.

## **Phase 3S – Small Format Cell Production**

To meet an evolving need from our partners in the drone and defence sectors we are currently installing an additional cell fabrication line, Phase 3S, to make small format cells. This line is expected to be installed by 31 August 2024.

**Dr Lee Finniear**  
Chief Executive Officer



# Highlights, material developments and changes

## Q2 '24



Awarded \$1.35m grant for 'dawn-to-dusk' drone development



Phase 3 equipment installation complete



Phase 3 cells being produced for testing, design optimisation and machine calibration



Prototype intelligent Battery Management System developed



Installing new Phase 3S cell production line to make small format cells for partners



Announcement of Government's first National Battery Strategy including a \$523.2m Battery Breakthrough Fund and \$1.7b Future – Made in Australia Fund supporting advanced battery technologies



Hiring for key engineering and support roles sees additional team members join Li-S Energy



The Company had \$22.8 million in cash and cash equivalents at 30 June 2024



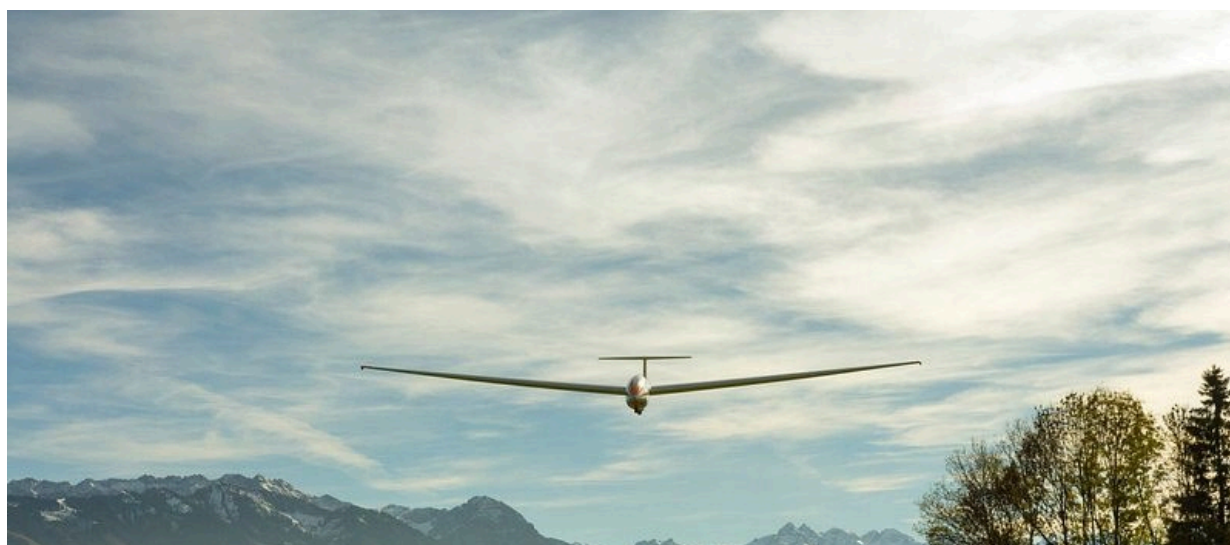
## Li-S Energy

## Li-S Energy awarded \$1.35m grant for ‘dawn-to-dusk’ drone development

In June, we were awarded a grant of \$1.35 million from the Commonwealth Government as part of the Emerging Aviation Technology Partnerships (EATP) program. This was a highly contested program with only 12 grants awarded. The first \$400,000 tranche of grant funding has already been received.

The project, codenamed Pegasus 1, aims to design, build and demonstrate a drone that combines a lightweight Li-S Energy battery pack, perovskite solar cells and a bespoke high efficiency drone airframe and power control system, to deliver world leading “dawn til dusk” flight times.

To deliver this ambitious project, we have partnered with some of Australia’s most innovative companies in their field, V-TOL Aerospace, a specialist Queensland based drone manufacturer and operator, and Halocell, a New South Wales based advanced solar cell manufacturer.



1. image courtesy of V-TOL Aerospace

Worldwide, there is substantial interest in long-duration drone flight technology. Using drones for mapping, asset and utility inspections, agricultural and wildlife monitoring and other surveillance missions all become more effective if drones can fly for an extended period. It enables drone pilots to cover more terrain, capturing more data, and monitor an area for an extended time in a single flight.

For Li-S Energy, this is an exceptional opportunity to clearly demonstrate the strategic benefits increased range and endurance that our lightweight, high energy density, nanomaterial enhanced cells can deliver for unmanned air systems, one of our key target markets.

Working with our partners we anticipate the progression of Pegasus 1 into commercial production, with battery packs manufactured from our current Phase 3 facility. Building on the anticipated success of this program, the partnership aims to develop a family of long endurance drones including high altitude aircraft that can operate for months at a time without landing.

V-TOL Aerospace Managing Director Mark Xavier commented:

*“Winning this grant is a significant acknowledgement by Government that the work V-TOL, Li-S Energy and Halocell are conducting is of national importance. This exciting opportunity, will enable our sovereign technology collaboration to design, develop & manufacture a family of world leading energy sustainable drones.”*

We look forward to keeping you updated on the project as it progresses through design, construction and flight testing.

# Phase 3 update & Battery Management System

## Development of an intelligent Battery Management System

Central to our innovation strategy is the development of an intelligent Battery Management System (BMS), optimised for our lithium metal and lithium sulfur battery chemistries. This BMS development is critical to establishing Li-S Energy as a battery pack manufacturer, not just a cell manufacturer.

Providing the BMS will simplify partner adoption and the integration of our cells into partner devices, reducing barriers to entry.

The role of a BMS is to control, monitor and manage an array of battery cells in a battery pack, to provide power to the connected device in a predictable and safe manner.



2. Tim Hanley, Li-S Operations Manager holding a 20Ah cell manufactured on the Phase 3 line

Our intelligent BMS design simultaneously monitors each battery cell in the pack for performance, cell temperature and other characteristics. It manages both charge and discharge to maximise performance and cell life, and has enhanced safety capabilities to isolate a cell if it is operating outside its normal parameters.

Engineered in Australia and enhanced with proprietary control and sensor systems, we have now completed the intelligent BMS functional prototype. This is currently undergoing machine learning to train the

system to optimise the management of Li-S battery chemistries.

The Company owns the intelligent BMS design and related IP.

## Phase 3 Production Facility Update

The Phase 3 production facility installation is now complete. We expect CAPEX investment to reduce accordingly across FY25.

Production process optimisation is progressing as planned to ensure cell reliability and consistency when in volume production.

Our Phase 3 line, the largest and most complex pouch cell manufacturing facility in Australia, includes 55 pieces of advanced production equipment. We are now producing 20Ah multi-layer pouch cells on the production line for internal testing.



3. Part of the Phase 3 fabrication line inside our dry room

Recent efforts have focused on testing, calibration and optimising operational performance of each component of the cell production process and recording cell performance data during testing to build the cell data sheets required by our partners.

We anticipate substantial completion of commissioning by the end of Q3 CY24, subject to the availability of additional engineering resources. At that time the first cells will be sent to partners for testing. Once the production processes are optimised, the facility will have the capacity to produce up to 2MWh of pouch cells per year, depending on configurations and customer requirements.

# National Battery Strategy and the Battery Breakthrough Initiative

The recent Federal Government announcements, including the launch of the National Battery Strategy, the \$523 million Battery Breakthrough Initiative, and the “Future — Made in Australia” policy demonstrate the Australian Government’s commitment to advanced manufacturing, to the Australian Battery Industry and to becoming a Clean Energy Superpower.

By commissioning the largest battery pouch cell production line in Australia, Li-S Energy is already leading the charge, driving the very future the Federal Government seeks to create for Australia.

## The Strategies

Announced last month by the Prime Minister and Minister Ed Husic, the National Battery Strategy forms a crucial foundation for a robust Australian Battery Industry.

### Strategic battery priorities



Image source: <https://www.industry.gov.au/publications/national-battery-strategy/strategy-glance>

The National Battery Strategy underscores the Government’s commitment to a Future – Made in Australia, providing essential government support for competitive, sustainable, vertically integrated, and diverse battery manufacturing capabilities.

The Strategy's focus on advanced battery technologies, high energy density battery development, and battery manufacturing aligns well with Li-S Energy's goals.

Acknowledging the challenges in finding engineering and scientific talent, the Company welcomes the \$91 million allocated for the growth, training, and retention of Australian talent in the clean energy sector.

Li-S Energy benefits from \$5 million in Trailblazer funding from Federal Government, and have recently been awarded a \$1.35 million Emerging Aviation Technology Partnership (EATP) grant. We are actively engaging with the Industry Growth Fund, the Battery Breakthrough Initiative and the National Reconstruction Fund on key manufacturing development opportunities.

Li-S Energy is poised to play a leading role in delivering Australian-made batteries, supporting the Government’s vision of a “Future – Made in Australia”.

# Li-S Energy attracts new talent to bolster production, quality and safety

Attracting experienced and qualified professionals can be challenging in any sector. In Australia, with no current battery production industry, this challenge is all the more severe.

In that light, the Company is particularly pleased to report it has recently secured several new engineers to drive forward our Phase 3 production capability.

Quality and safety are two key areas where the Company is strategically investing as it brings its Phase 3 facility online. Production engineering talent with advanced manufacturing experience will accelerate our production development, while we are also strengthening our battery testing team.



We believe that hiring the right people is crucial to our success, and we are delighted to have found such strong candidates for each role, including:

**Quality Manager:** To enable our cells and test results to be accepted by large global partners in high-risk applications, Li-S Energy must demonstrate it is using an effective quality management system. The Quality Manager will spearhead our progressive implementation of the ISO:9001 quality management system to enhance our internal processes, while also qualifying us to become accredited to participate in large collaborative projects.

**OH&S Officer:** Occupational Health and Safety (OH&S) is something the company takes extremely seriously. The new full-time OH&S Officer will build on our current OH&S system and will play a vital role in maintaining the highest safety standards within our research and production facilities.

**Production Development Engineer:** This person joins our existing Production Engineering team to accelerate production development outcomes, and then to manage and maintain the production line to ensure it continually operates at the high precision and accuracy required to deliver cells for partner tests and trials.



**Battery Characterisation Engineer:** As we scale up cell production from the Phase 3 and 3S lines, our Battery Testing Centre must meet the scale and breadth of internal and partner testing requirements for both individual cells and battery packs. The Battery Characterisation Engineer will conduct testing, develop novel systems to simulate and enhance cell behaviour in specific applications, and analyse cell test results.

We are pleased to welcome our new team members to Li-S Energy. Their contributions will be instrumental as we continue to scale up our technology and deliver on its potential.

## Summary of expenditure

Please refer to Appendix 4C below for the detailed quarterly cash flow report, including a summary of the Company's expenditure on the above activities.

Net cash outflows used in operating activities during the quarter were \$413,000. This was primarily driven by:

- Total staff costs of \$602,000, of which \$357,000 was reallocated to investing activities and capitalised against intellectual property and property, plant and equipment;
- Payments for administration and corporate costs of \$894,000, consisting of payments for management support services to a subsidiary of PPK Group Limited of \$210,000, and other administration and corporate costs of \$684,000; and
- Partly offset by government grants of \$400,000, interest income of \$302,000 and a GST refund received of \$48,000.

The net cash outflows used in investing activities during the quarter were \$1,853,000, consisting primarily of:

- Payments for property, plant and equipment of \$1,147,000, primarily related to equipment purchases associated with the phase 3 production facility of \$858,000, and capitalisation of employee costs of \$289,000;
- Payments for intellectual property of \$609,000, mainly reflecting payments to Deakin University for development activities of \$508,000, and capitalisation of employee costs against the development activities undertaken of \$68,000;
- Payments for investments of \$800,000; and
- Partly offset by government grants received in relation to payments for intellectual property and plant and equipment of \$703,000.

The net cash outflows from financing activities for the quarter were \$53,000, consisting of repayments to its lease liabilities, accounted for in accordance with AASB 16 *Leases*.



## Use of funds

Pursuant to Listing Rule 4.7C.2, the Company provides in Table 1 below, a comparison of its actual expenditure on the individual items in the “use of funds” statement since the date of admission to the official list against the estimated expenditure on those items in the “use of funds” statement in the IPO prospectus and an explanation of any material variances.

\$'000	Use of funds estimate (per Prospectus)	% of Funds	Cash payments to 30 June 2024	% of actual funds expended against Cash Payments to 30 June 2024
<b>Project Expenditure</b>	29,113	85.63%	19,174	68.11%
<b>Costs of the Offer</b>	3,582	10.54%	2,236	7.94%
<b>Other Working Capital</b>	1,305	3.84%	6,743	23.95%
<b>TOTAL</b>	<b>34,000</b>	<b>100.00%</b>	<b>28,153</b>	<b>100.00%</b>

**Table 1** – Comparison of “use of funds” statement per prospectus to cash payments since the date of admission to the official list of the ASX to 30 June 2024

For the purposes of the above “use of funds” table, the Company has allocated significant administration and corporate costs to the ‘Other Working Capital’ category. Per section 5.11 of the Prospectus, the Company held additional funds from pre-IPO capital raisings for the purpose of funding working capital requirements. The ‘Other Working Capital’ cash payments to 30 June 2024 includes the secured loans advanced in the year ended 30 June 2023, along with cash outflows related to the acquisition of investments. The total cash at the date of IPO was \$50,563,000. Total cash as at 30 June 2024 was \$22,811,000.

The material variances above are a result of both the inclusion of all cash payments in the table versus the use of funds estimate, which excluded the pre-IPO capital raisings, along with the timing of the actual cash payments versus the use of funds period estimate utilised in the IPO prospectus, being the period to 30 June 2024. Furthermore, expenditure does not occur in a linear manner, with actual cash payments evolving as the Company progresses towards the completion of the construction and fitout of the phase 3 facility.

## Payments to associates or related parties

In accordance with Listing Rule 4.7C.3, the Company advises that it paid \$930,000 to related parties of the Company during the quarter, consisting of:

- payments to Deakin University of \$508,000 relating to project activities undertaken in relation to the Recycling and Clean Energy Commercialisation Hub Research Framework Agreement, which forms part of the Federal Government's Trailblazer Universities Program;
- payments to Deakin University of \$102,000 relating to various lease agreements for production bays at Deakin's ManuFutures advanced manufacturing hub in Geelong, Victoria;
- payments to a subsidiary of PPK Group Limited of \$210,000 for management support services provided in accordance with the relevant agreement, and as disclosed in section 12.6 of the Prospectus; and
- payments to subsidiaries of PPK Group Limited of \$110,000 for purchase of nano materials, recovery of contracted labour costs, and pass through of cost incurred on behalf of the Company.



Stock image

## CORPORATE DIRECTORY

Li-S Energy Ltd ABN 12 634 839 857

A public company incorporated in Queensland and listed on the ASX (code LIS)

Chief Executive Officer	Dr Lee Finniear
Chief Financial Officer	Ms Sarah Price
Board of Directors	Mr Benjamin Spincer Mr Robin Levison Ms Hedy Cray Mr Marc Fenton
Company Secretaries	Mr Will Shiel Mr Liam Fairhall
Registered Office	Level 13 120 Edward St Brisbane QLD 4000 p +61 7 3054 4555 e info@lis.energy w lis.energy
Stock Exchange Listing	ASX Code LIS
Auditor	Ernst & Young
Share Registry	Automic Share Registry Level 5, 126 Phillip Street Sydney NSW 2000 www.automicgroup.com.au
Media Enquiries	Ben Ready RGC Media + Mkting ben@rgcmm.com.au

## Appendix 4C

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

**Name of entity**

Li-S Energy Limited

**ABN**

12 634 839 857

**Quarter ended ("current quarter")**

30 June 2024

<b>Consolidated statement of cash flows</b>	<b>Current quarter \$A'000</b>	<b>Year to date (12 months) \$A'000</b>
<b>1. Cash flows from operating activities</b>		
1.1 Receipts from customers	-	-
1.2 Payments for		
(a) research and development	-	-
(b) product manufacturing and operating costs	-	-
(c) advertising and marketing	-	-
(d) leased assets	-	-
(e) staff costs	(245)	(980)
(f) administration and corporate costs	(894)	(4,464)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	302	1,415
1.5 Interest and other costs of finance paid	(24)	(87)
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	400	400
1.8 Other – GST refunds	48	776
<b>1.9 Net cash from / (used in) operating activities</b>	<b>(413)</b>	<b>(2,940)</b>

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (12 months) \$A'000
<b>2. Cash flows from investing activities</b>		
2.1 Payments to acquire or for:		
(a) entities	-	-
(b) businesses	-	-
(c) property, plant and equipment	(1,147)	(5,216)
(d) investments	(800)	(2,000)
(e) intellectual property	(609)	(2,172)
(f) other non-current assets	-	-
2.2 Proceeds from disposal of:		
(a) entities	-	-
(b) businesses	-	-
(c) property, plant and equipment	-	-
(d) investments	-	-
(e) intellectual property	-	-
(f) other non-current assets	-	-
2.3 Cash flows from loans to other entities	-	-
2.4 Dividends received (see note 3)	-	-
2.5 Other (proceeds from government grants)	703	2,892
<b>2.6 Net cash from / (used in) investing activities</b>	<b>(1,853)</b>	<b>(6,496)</b>

<b>3. Cash flows from financing activities</b>		
3.1 Proceeds from issues of equity securities (excluding convertible debt securities)	-	-
3.2 Proceeds from issue 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	-	-
3.5 Proceeds from borrowings	-	-
3.6 Repayment of borrowings	(53)	(239)
3.7 Transaction costs related to loans and borrowings	-	-
3.8 Dividends paid	-	-
3.9 Other (purchase of shares in Li-S Energy Limited by the employee share trust)	-	(965)
<b>3.10 Net cash from / (used in) financing activities</b>	<b>(53)</b>	<b>(1,204)</b>

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (12 months) \$A'000
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<b>4.</b>	<b>Net increase / (decrease) in cash and cash equivalents for the period</b>		
4.1	Cash and cash equivalents at beginning of period	25,130	33,451
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(413)	(2,940)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(1,853)	(6,496)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	(53)	(1,204)
4.5	Effect of movement in exchange rates on cash held	-	-
<b>4.6</b>	<b>Cash and cash equivalents at end of period</b>	<b>22,811</b>	<b>22,811</b>

<b>5.</b>	<b>Reconciliation of cash and cash equivalents</b> at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	22,811	25,130
5.2	Call deposits	-	-
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
<b>5.5</b>	<b>Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>22,811</b>	<b>25,130</b>

<b>6.</b>	<b>Payments to related parties of the entity and their associates</b>	Current quarter \$A'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1	422
6.2	Aggregate amount of payments to related parties and their associates included in item 2	508

*Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments.*

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

<b>7. Financing facilities</b>	<b>Total facility amount at quarter end \$A'000</b>	<b>Amount drawn at quarter end \$A'000</b>
<i>Note: the term "facility" includes 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>		
7.1 Loan facilities	-	-
7.2 Credit standby arrangements	-	-
7.3 Other (please specify)	-	-
7.4 <b>Total financing facilities</b>	-	-
7.5 <b>Unused financing facilities available at quarter end</b>		-
7.6 Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.	N/A	

<b>8. Estimated cash available for future operating activities</b>	<b>\$A'000</b>
8.1 Net cash from / (used in) operating activities (item 1.9)	(413)
8.2 Cash and cash equivalents at quarter end (item 4.6)	22,811
8.3 Unused finance facilities available at quarter end (item 7.5)	-
8.4 Total available funding (item 8.2 + item 8.3)	22,811
8.5 <b>Estimated quarters of funding available (item 8.4 divided by item 8.1)</b>	55.2
<i>Note: if the entity has reported positive net operating cash flows 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>	
8.6 If item 8.5 is less than 2 quarters, please provide answers to the following questions:	
8.6.1 Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?	
Answer: N/A	
8.6.2 Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?	
Answer: N/A	
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?	
Answer: N/A	
<i>Note: where item 8.5 is less than 2 quarters, all of questions 8.6.1, 8.6.2 and 8.6.3 above must be answered.</i>	

**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 gives a true and fair view of the matters disclosed.

Date: 31 July 2024

Authorised by: .....The Board.....  
(Name of body or officer authorising release – see note 4)

**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.