

March 2023 Quarterly Activities Report

HIGHLIGHTS

Sparc Hydrogen

- ▶ Approval of ~A\$1.1m to be added to the budget for Stage 1 to further advance Sparc Hydrogen's photocatalytic water splitting process
- ▶ Increase in budget to be funded through R&D tax incentives
- ▶ Experienced project manager hired to lead on-sun prototyping and pilot development

Graphene

- ▶ **ecosparc®** graphene additive production facility now fully commissioned
- ▶ First commercial product **ecosparc®** available for coatings and composite materials
- ▶ Multiple coating companies undertaking product evaluation of **ecosparc®**

Batteries

- ▶ Multiple trials have produced hard carbon anodes averaging ~45% higher reversible capacities as compared to commercial hard carbon anode materials
- ▶ New hard carbon processing technology is significantly faster and less energy intensive than conventional pyrolysis

Corporate

- ▶ \$2.791m cash at bank as at 31 March 2023
- ▶ Subsequent to quarter end, Sparc has received \$934,000 R&D Tax Rebate for FY23
- ▶ Resignation of Managing Director Mike Bartels

Sparc Technologies Limited (ASX: SPN) (Sparc or the Company) is pleased to provide its March 2023 Quarterly Activities Report. During the quarter, Sparc was pleased to announce the commissioning of Sparc's **ecosparc®** commercial production facility. The state of the art facility enables Sparc to produce commercial quantities of the graphene additive product, **ecosparc®**. Target markets for **ecosparc®** include the global coatings industry, composites and other graphene additive applications.



Sparc also provided an update relating to Sparc Hydrogen which is a JV between the University of Adelaide, Fortescue Future Industries (**FFI**) and Sparc Technologies. Sparc Hydrogen is seeking to further develop and commercialise patent-pending photocatalytic water splitting technology with the aim of producing low-cost green hydrogen on a commercial scale (the Sparc Green Hydrogen process).

During the quarter, Sparc announced very encouraging results from its research program with Queensland University of Technology (**QUT**) into the development of sustainable hard carbon anode materials for sodium ion batteries. The combination of green bio-waste feedstock and faster, less energy intensive processing with a very high capacity anode material offers attractive potential for further research and development.

Post the end of the quarter Sparc advised that it has received a research and development (**R&D**) tax refund totalling \$934,195 as part of the Australian Government's R&D tax incentive, relating to the 2022 financial year. Furthermore, the Company will be lodging the R&D claim for the 2023 financial year which will reflect Sparc's continued R&D spend.

Sparc Hydrogen

The Sparc Hydrogen JV approved an ~A\$1.1m increase in funding for Stage 1 of the project, representing a ~50% increase in committed funding. The additional funds will be used to advance research and development activities and to accelerate on-sun demonstration of the technology. More specifically, approval has been given for the appointment of an experienced Project Manager, an increase in resources at the University of Adelaide, design and construction of an on-sun prototype reactor as a precursor to pilot scale design, and for additional working capital. The increase in funding is budgeted to be fully funded by R&D tax rebates, hence no increase in investment is required from the JV partners.

The additional funding will enable greater focus on testing the efficacy of the technology in real world conditions, in particular through an acceleration of on-sun prototyping as a precursor to pilot scale reactor design. The prototyping is expected to be undertaken at an existing concentrated solar field and would be the first demonstration of the technology outside of the laboratory. Sparc Hydrogen has engaged a consultant engineering firm to support this work which is targeted to be conducted in mid-2023. The results of the prototyping and further laboratory testing will feed into the development of the pilot plant which is ongoing.

Sparc Hydrogen has hired its first direct employee, Vinodhan (**Vinod**) Gopalan, in the role of Project Manager. Vinod has over 20 years' experience in the energy and power sector in engineering roles, most recently with Re.Group where he was primarily developing a waste-to-energy plant in NSW. Vinod's main role is to lead development of the pilot plant and support on prototyping and research activities. He commenced at Sparc Hydrogen in late March and is based in Adelaide.

First Commercial Production of Graphene Additive Product **ecosparc**®

Sparc advised the commissioning of Sparc's **ecosparc**® commercial production facility. The state of the art facility enables Sparc to now produce commercial quantities of the graphene additive product, **ecosparc**® for trials with global coatings companies.

Target markets for **ecosparc**® include the global coatings industry, composites and other graphene additive applications. The Company is currently undertaking evaluations with potential global end users with results from these evaluations expected in Q3 and Q4 CY23 respectively. In parallel, the



company is pursuing opportunities to target Australian coatings companies that are looking to enhance the anti-corrosive and environmental performance of their products, with the addition of **ecosparc®**.

ecosparc® can also be incorporated into composites and other bulk materials to improve environmental outcomes. Sparc is also engaged with product trials for global and domestic companies in these markets.

Batteries

During the quarter Sparc provide an update on its project with Queensland University of Technology (**QUT**) targeting development of sustainably sourced hard carbon anode material for sodium ion batteries (**SIBs**).

In line with the project schedule, QUT delivered the first project milestone report which describes the results of SIB half-cell battery testing and material characterisation for a sustainably sourced anode material under a range of process conditions. Whilst further optimisation, testing and process development work is required, reversible capacities for a batch of materials under the same testing conditions exceeded 535mAh/g and averaged 477mAh/g across five separate trials. This was well beyond (~45% higher) the benchmark of 330mAh/g set at the beginning of the research program based on what is believed to represent commercial hard carbon anode materials (See Figure 1).

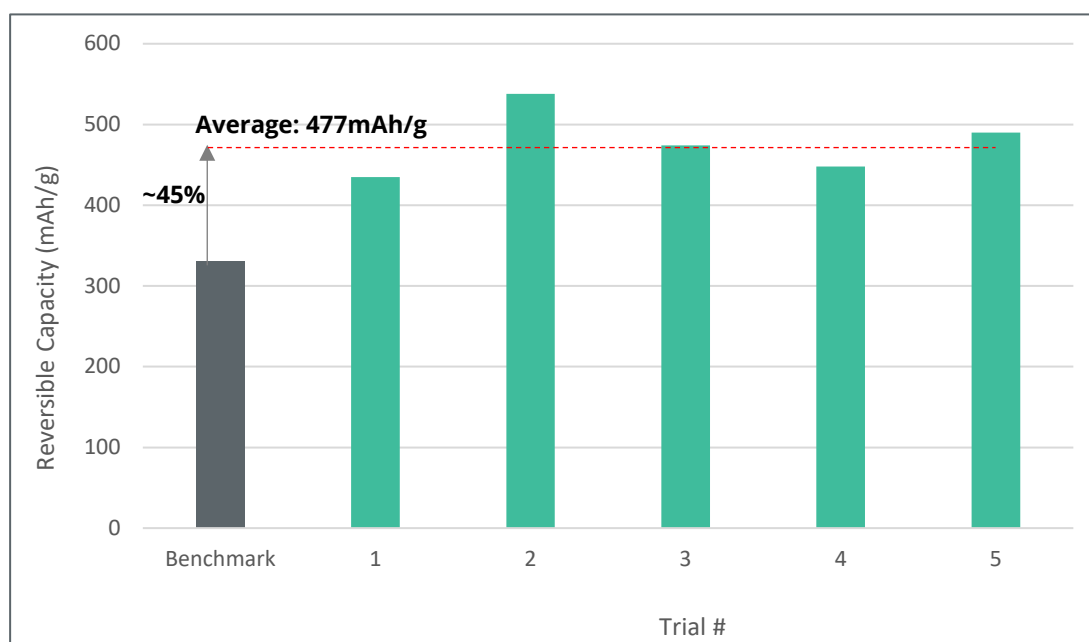


Figure 1 – Hard carbon anode discharge capacity from preliminary optimised process conditions (QUT research project)

Significant progress has been made since commencing the research project with QUT in September 2022. Preliminary optimisation of the process conditions under which the hard carbon is produced has been performed and the initial results demonstrate substantial improvement in reversible capacities of the anode materials in a SIB versus traditional pyrolysis methods.



Corporate

R&D Tax Refund

Post the end of the quarter Sparc received a research and development (**R&D**) tax refund totalling \$934,195 as part of the Australian Government's R&D tax incentive, relating to the 2022 financial year. Furthermore, the Company will be lodging the R&D claim for the 2023 financial year which will reflect Sparc's continued R&D spend.

Sparc's research and development activities for the fiscal year ending on June 30 2022 have been acknowledged through the receipt of an incentive refund. This refund, along with the anticipated refund for the upcoming fiscal year of 2023, will provide continued support for Sparc's work on projects involving graphene, green hydrogen, and sustainable batteries.

The R&D Tax Incentive scheme is a program jointly administered by the Australian Taxation Office and AusIndustry, under which companies can receive up to a 48.5% refundable tax offset of eligible expenses on research and development activities.

Resignation of Managing Director

Stemming from the significant milestones being met by the Graphene division at Sparc, Managing Director, Mr. Mike Bartels announced his resignation effective 30th March. Dr. Denis Wright has been appointed General Manager, Graphene and Mr. Nick O'Loughlin has been appointed General Manager, Renewable Energy. Both positions will report directly to Executive Chairman, Mr. Stephen Hunt. Sparc personnel based internationally, Mr. Ian Rowell in the USA and Aidan Mernin in the UK, remain key figures with managing relationships with global coatings and composites companies in the USA and Europe, respectively.

Cash

As at 31 March 2023, the Company had a reported cash position of \$2.791m. In addition, FY22 R&D rebate \$934,195 was received 24 April 2023.

Related Party Payments

In line with its obligations under ASX Listing Rule 5.3.5 Sparc Technologies Limited notes that the only payments to related parties of the Company, as advised in the Appendix 4C for the period ended 31 March 2023, pertain to payments to directors for reimbursement of arrears of Directors Fees, salary and superannuation.

-ENDS-

Authorised for release by: Stephen Hunt, Executive Chairman.

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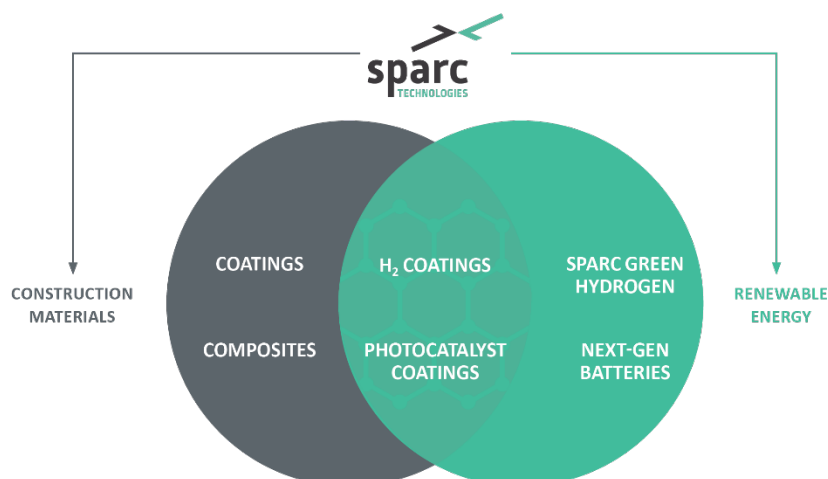
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About Sparc Technologies



Sparc Technologies Limited (ASX: SPN) is an Australian company pioneering new technologies to disrupt and transform industry while seeking to deliver a more sustainable world. Sparc Technologies has established offices in Europe and North America.

Graphene, a major focus for Sparc Technologies and now being produced at a dedicated commercial production facility, is a 2-dimensional material made of carbon atoms arranged in a hexagonal lattice which creates unique and powerful properties that can be imparted on products to improve performance. Sparc Technologies is commercialising graphene in a number of applications including Graphene Based Additives for the Protective and Marine Coatings market along with applications in the renewable energy and construction materials sectors.

Sparc Technologies, via its majority interest in Sparc Hydrogen, is also focussed on developing photocatalytic green hydrogen technology that does not require solar and/or wind farms, nor electrolyzers as with conventional green hydrogen processes.

Forward Looking Statements

Some information included in this release constitutes forward-looking statements. Forward-looking statements are statements that are not historical facts and are generally, but not always, identified by words such as the following: expects, plans, anticipates, forecasts, believes, intends, estimates, projects, assumes, potential and similar expressions. Forward-looking statements also include reference to events or conditions that will, would, may, could or should occur.

These forward-looking statements are necessarily based upon a number of estimates and assumptions that, while considered reasonable at the time they are made, are inherently subject to a variety of risks and uncertainties which could cause actual events or results to differ materially from those reflected in the forward-looking statements, including, without limitation the matters set out in this announcement.

Although the Company attempts and has attempted to identify factors that would cause actual actions, events or results to differ materially from those disclosed in forward looking statements, there may be other factors that could cause actual results, performance, achievements or events not to be as anticipated, estimated or intended, and many events are beyond the reasonable control of the Company. Accordingly, readers are cautioned not to place undue reliance on forward looking statements. Forward looking statements in these materials speak only at the date of issue. Subject to any continuing obligations under applicable law or any relevant stock exchange listing rules, in providing this information the Company does not undertake any obligation to publicly update or revise any of the forward-looking statements or to advise of any change in events, conditions or circumstances on which any such statement is based.



Appendix 4C

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

Name of entity

Sparc Technologies Limited

ABN

13 009 092 068

Quarter ended ("current quarter")

31 March 2023

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (9 months) \$A'000
1. Cash flows from operating activities		
1.1 Receipts from customers	1	10
1.2 Payments for		
research and development	(159)	(423)
product manufacturing and operating costs	(28)	(695)
advertising and marketing	(76)	(128)
leased assets	0	0
staff costs	(534)	(962)
administration and corporate costs	(212)	(1,673)
1.3 Dividends received (see note 3)	0	0
1.4 Interest received	0	0
1.5 Interest and other costs of finance paid	0	0
1.6 Income taxes paid	0	0
1.7 Government grants and tax incentives	0	608
1.8 Other (provide details if material)	0	0
1.9 Net cash from / (used in) operating activities	(1,010)	(2,663)

2. Cash flows from investing activities		
2.1 Payments to acquire or for:		
entities	0	0
businesses	0	0
property, plant and equipment	(1)	(116)
investments	0	0
intellectual property	(5)	(5)
other non-current assets	0	0



Consolidated statement of cash flows		Current quarter \$A'000	Year to date (9 months) \$A'000
2.2	Proceeds from disposal of:		
	entities	0	0
	businesses	0	0
	property, plant and equipment	1	1
	investments	0	0
	intellectual property	0	0
	other non-current assets	0	0
2.3	Cash flows from loans to other entities	0	0
2.4	Dividends received (see note 3)	0	0
2.5	Other (provide details if material)	0	0
2.6	Net cash from / (used in) investing activities	(5)	(120)

3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	0	3,333
3.2	Proceeds from issue of convertible debt securities	0	0
3.3	Proceeds from exercise of options	0	105
3.4	Transaction costs related to issues of equity securities or convertible debt securities	0	0
3.5	Proceeds from borrowings	0	0
3.6	Repayment of borrowings	0	0
3.7	Transaction costs related to loans and borrowings	0	0
3.8	Dividends paid	0	0
3.9	Other (provide details if material)	0	0
3.10	Net cash from / (used in) financing activities	0	3,438

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	3,806	2,136
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(1,010)	(2,663)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(5)	(120)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	0	3,438



Consolidated statement of cash flows		Current quarter \$A'000	Year to date (9 months) \$A'000
4.5	Effect of movement in exchange rates on cash held		
4.6	Cash and cash equivalents at end of period	2,791	2,791

5.	Reconciliation of cash and cash equivalents 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	2,791	3,806
5.2	Call deposits		
5.3	Bank overdrafts		
5.4	Other (provide details)		
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	2,791	3,806

6.	Payments to related parties of the entity and their associates	Current quarter \$A'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1	240
6.2	Aggregate amount of payments to related parties and their associates included in item 2	
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.		



7.	Financing facilities <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>	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
7.1	Loan facilities		
7.2	Credit standby arrangements		
7.3	Other (please specify)		
7.4	Total financing facilities	0	0
7.5	Unused financing facilities available at quarter end		0
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.		

8.	Estimated cash available for future operating activities	\$A'000
8.1	Net cash from / (used in) operating activities (item 1.9)	(1,010)
8.2	Cash and cash equivalents at quarter end (item 4.6)	2,791
8.3	Unused finance facilities available at quarter end (item 7.5)	0
8.4	Total available funding (item 8.2 + item 8.3)	2,791
8.5	Estimated quarters of funding available (item 8.4 divided by item 8.1)	2.76
<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:		
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:		



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:

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.

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:28 April 2023.....

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.

