

1 July 2024

RE: H1 2024 Review

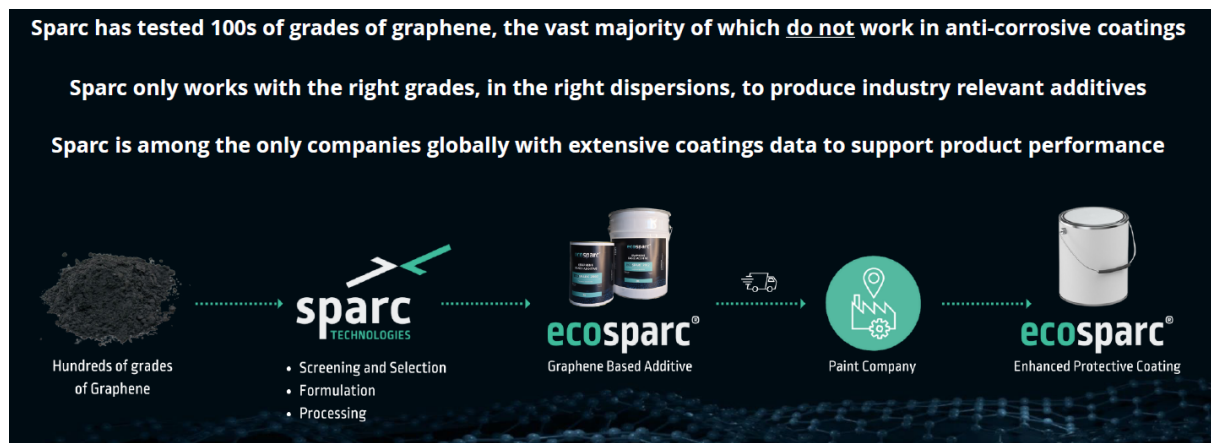
After 6 months as Managing Director, I am pleased to provide a brief overview of Sparc Technologies' key activities in 2024 and some of my thoughts on the substantial opportunities that lie ahead for the Company.

Firstly, I would like to reiterate Sparc Technologies' mission: to develop technology solutions that will contribute to and benefit from the global shift to decarbonisation and enhanced sustainability. This is quite unique in the listed space in Australia but less so globally. With a highly motivated team and tailwinds building in our key markets, I believe the future looks bright for Sparc Technologies.

2024 may well go down as a year of reckoning for the green hydrogen industry. Projects in Australia and globally are being strangled by high electricity prices, representing the main cost input when producing 'conventional' green hydrogen via electrolysis. In addition, the industry is coming to terms with electrolyser technology limitations and social licence issues, particularly associated with transmission lines. These issues and risks are flowing through to heavily out-of-the-money business cases for green hydrogen projects. Anecdotal 'farm-gate' costs for current feasibility stage projects in Australia are in the range of A\$10 - \$15/kg of hydrogen. This is well in excess of what is required to make green hydrogen a competitive energy source or chemical feedstock – note the Australian Government's target ('H2 under 2') is to produce hydrogen at a cost of below A\$2/kg. Is there a pathway to getting costs down from where they are today? Undoubtedly, yes. But you have to seriously consider how quickly the industry can get from >A\$10/kg to a target of A\$2/kg when doing so is reliant on power prices (specifically wind & solar) reducing by more than 75%. This is where Sparc Hydrogen's next-generation technology comes in.

Sparc Hydrogen is developing a different method for producing green hydrogen at scale based on **photocatalysis** rather than *electrolysis*. This approach de-couples the linkage between power prices and green hydrogen costs and holds significant potential to deliver the step-change required to make low-cost green hydrogen a reality. Our joint venture with Fortescue and the University of Adelaide has entered its third year, and substantial progress has recently been made on the technology and commercial development pathway. With Federal Government grant funding assistance, Sparc Hydrogen successfully demonstrated our PWS reactor technology in a prototype at the CSIRO Energy Centre in Newcastle, New South Wales. In June, we announced that Sparc Hydrogen had signed a Collaboration Framework Agreement with Shinshu University in Japan. Shinshu is a leading developer of photocatalyst materials and a perfect partner for Sparc Hydrogen as we seek to accelerate the commercialisation of our reactor technology. They are among several leading photocatalyst developers with whom Sparc Hydrogen is looking to collaborate. These positive developments, along with site selection and continued progress on reactor design, bode well as we look towards the construction of a first-of-its-kind pilot plant during H2. Upon development, we believe this pilot plant will firmly establish Sparc Hydrogen as the pre-eminent photocatalysis reactor technology globally.

The commercialisation of our **ecosparc**[®] graphene-based additive technology into high-performance anti-corrosive coatings remains a core focus for Sparc. Since commencing as Managing Director of the Company in January, I have, working closely with our team, spent a lot of time understanding the technology & product, developing our market positioning and speaking with customers and end-users. The additive significantly improves the anti-corrosive performance of current market-leading protective coatings, based on repeat testing to international standards (>10,000 data points over 5 years). I am confident in saying that the anti-corrosion protective coatings market is substantial and that we have a commercial model that can deliver high margins. We are also demonstrating that the end-user demand is there, as evidenced by the strong response we have had with respect to field trials. Understandably, end-users like the South Australian Dept of Infrastructure and Transport and 29Metals are very interested in better-performing coatings, which can save them money by reducing maintenance and prolonging the life of their steel assets. They are also attracted by the sustainability benefits of using better, longer-lasting paints, as we demonstrated in a life cycle assessment completed in August 2023. In my opinion, our value proposition is compelling, as summarised in the infographic below.



Our key challenge is to convince a risk-averse coatings industry to update paint formulations, which, in some cases, have barely changed in decades. I am pleased to report that we are making progress on testing with several major players in the coatings industry. Some of this progress is being pushed collaboratively by asset owners interested in graphene-enhanced coatings, which we see as a significant positive. We are also working to establish relationships with tier 2 coatings manufacturers and suppliers within the industry who can potentially move more nimbly to get the product to market. Whilst it is frustrating that a lot of our good work with the coatings industry is yet to bear fruit via public announcements, I am confident that we do have a pathway forward with some globally significant companies and that market acceptance and talk around graphene in the coatings industry is increasing providing some additional tailwinds.

With respect to our sustainable anode project for sodium-ion batteries (SIBs), we completed our final research milestone with QUT during H1 2024. Following the completion of this work, our focus has shifted to discussions with industrial partners in the battery industry to progress the project collaboratively. We believe this is important to ensure the industrial applicability of the technology in a highly competitive and technical market for battery materials. We look forward to feedback from the market around what we believe is an attractive technology.

In addition to our core projects, we continue to progress work in adjacent technology areas that leverage our skills, particularly in the sourcing, characterisation, and dispersion of graphene in coatings and polymers.

Our financial position is strong, with a healthy cash balance, no debt, and continued support from R&D tax incentives and government grants. We received a fantastic response to the capital raise completed in April 2024, and I would like to thank both existing and new shareholders for their support. This financial stability is crucial as we continue to innovate and build value in our technological footprint.

Thank you for your continued interest and support.

Sincerely,

Nick O'Loughlin
Managing Director
Sparc Technologies Limited