

## Sparc Hydrogen on Track to Meet Key Project Milestones

### HIGHLIGHTS

- ▶ Preliminary Techno Economic Assessment (TEA) for Sparc Green Hydrogen technology on track for delivery in Q3 2022
- ▶ Specialist engineering consultant engaged to complete gap analysis and costing review for the TEA
- ▶ Research continues to demonstrate advances in Solar to Hydrogen efficiencies under a range of conditions and reactor designs
- ▶ Patent application lodged in Q2 2022 with opportunities for other patent application filings relating to additional photocatalytic equipment being explored
- ▶ Work ongoing at Sparc Technologies' laboratory on improving photocatalyst coatings

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**Sparc Technologies Limited (ASX: SPN) (Sparc or the Company)** is pleased to provide an update on progress at its Sparc Hydrogen Joint Venture (**Sparc Hydrogen**). Sparc Hydrogen is on track to meet key project milestones which were cited in the [Sparc Green Hydrogen Investor Presentation released in February 2022](#).

### Sparc Executive Chairman, Stephen Hunt, commented:

*"Sparc is pleased to report that significant progress is being made with the Sparc Hydrogen JV and importantly, the release of the preliminary TEA is on track to be delivered this quarter. Developments with the project continue to be very positive on a number of fronts and in particular in relation to the economic benefits that this game-changing technology may deliver."*

### Preliminary Techno Economic Assessment (TEA)

- Highly regarded engineering consultant onboarded to complete gap analysis and costing review;
- Targeting announcement of TEA results during the current quarter which will demonstrate the relationship between Solar to Hydrogen efficiency (**STH %**) (within the ranges targeted in the R&D phase) and Levelised Cost of Hydrogen (**LCOH**), among other things;
- Multiple options to optimise the system and opportunities for future development have been identified through completing the preliminary TEA which will be updated as R&D work progresses.

### R & D

- Research continues to demonstrate advances in STH % under a range of conditions in the solar reactor;
- Various designs of solar reactor have been developed and tested with a focus on improving reaction rates and gas flow;
- Additional Research Assistant hired to accelerate testwork;

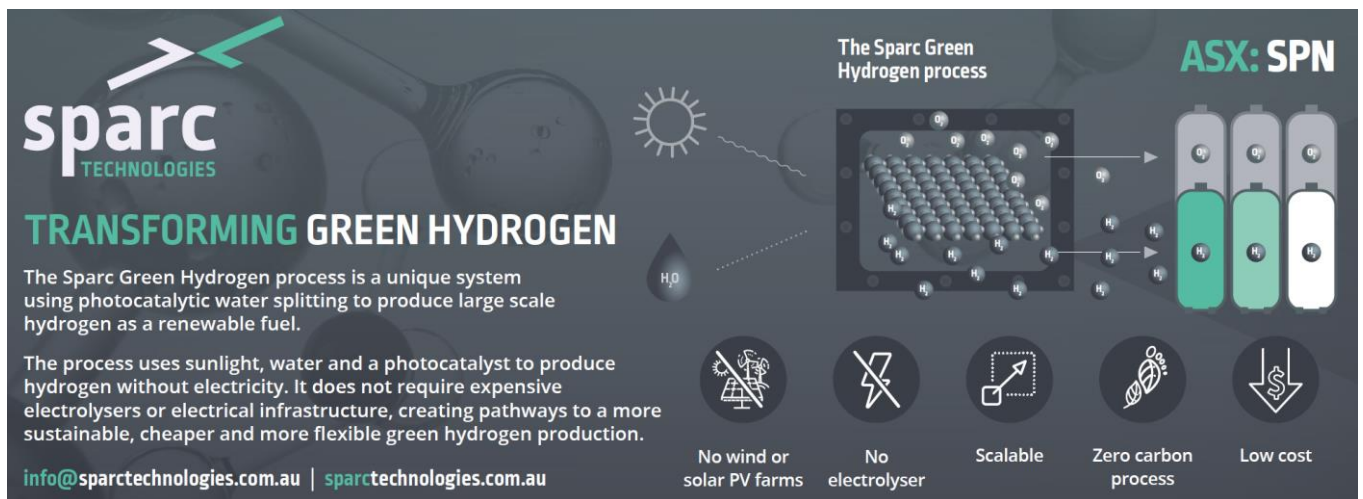


### Photocatalyst coating project

- Sparc Technologies is leveraging its significant coatings expertise to develop a more durable and better adhered photocatalyst coating;
- Potential IP opportunity within Sparc Technologies should a successful coating be developed.

### Intellectual Property (IP)

- Patent application was lodged in Q2 2022;
- Patent application claims the solar reactor developed by UoA and Flinders University;
- Opportunities for other patents relating to additional photocatalytic equipment are being explored.



### About the Sparc Hydrogen Joint Venture

In February 2022, Sparc Technologies announced that it had entered into binding Agreements with global green energy company Fortescue Future Industries (FFI) (100% subsidiary of Fortescue Metals Group, ASX: FMG) and the University of Adelaide, forming the Sparc Hydrogen Joint Venture.

Sparc Hydrogen is seeking to commercialise a process which applies photocatalytic water splitting technology to produce green hydrogen directly from water and sunlight (**Sparc Green Hydrogen Project**). The technology has been progressed closer to commercialisation by the University of Adelaide (UoA) and Flinders University with their solar reactor design. Sparc is currently the majority shareholder in the joint venture and is guiding the commercial aspects of the project and is applying its expertise to develop better photocatalyst coatings. FFI is also supporting on commercial and technical aspects of the project providing valuable insight and knowledge given its position as an emerging world leader in green hydrogen production.

Photocatalysis employs energy from sunlight in conjunction with a highly engineered photocatalyst to split water into hydrogen and oxygen. Adopting this novel process to produce green hydrogen at scale is an alternative to electrolysis which requires large amounts of renewable electricity from wind farms and/or photovoltaic solar panels and expensive electrolyzers. The lower infrastructure and electricity requirements of this technology make it potentially more flexible and scalable than electrolysis. This is important when considering the ability to adopt the process at remote sites (i.e. mining), reducing the reliance on long distance hydrogen transportation and/or electricity transmission.

**-ENDS-**

**Authorised for release by:** Stephen Hunt, Executive Chairman.

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**About Sparc Technologies**

Sparc Technologies Limited (ASX: SPN) is a South Australian based company that is focussing on the development of innovative technology solutions.

Graphene, which is a major focus for Sparc, can be extracted from graphite. It is a 2-dimensional nano material made of carbon atoms arranged in a hexagonal pattern, giving it unique and powerful properties that, with the right technology, can be imparted on products to improve performance. Sparc is commercialising a number of graphene products in industrial materials applications, as well as health.

Sparc is also focussed on developing photocatalytic green hydrogen technology that does not require solar and/or wind farms, nor electrolysis as with conventional green hydrogen.