

A new way to make green hydrogen even greener

Tuesday, Sep 6, 2022

Later this month, Adelaide's Sparc Technologies will release the technical economic assessment of its green hydrogen technology – and potentially deliver the knockout blow to Australia's fossil fuels.



Sparc Technologies executive chairman Stephen Hunt said the company is “looking forward to announcing some very positive results” with the release of the technical economic assessment (TEA) of its green hydrogen technology at the end of this quarter.

“The TEA will provide some economic metrics for the project and [an] understanding of how it may compare with the cost of hydrogen production against the more conventional electrolysis green hydrogen production – and, ultimately, also against fossil fuels,” Hunt said.

He expects the results to be of interest to “anyone who has an eye to the future of lowering greenhouse gas emissions and working towards net zero”.

ASX-listed Sparc Technologies, which made InDaily's South Australian Business Index for the first time last year coming in at 100, is also focused on the production of graphene-based additives for construction, manufacturing and next generation batteries.

Hunt said Sparc's green hydrogen photocatalytic water splitting technology has the potential to transform the green hydrogen and energy space. Unlike conventional green hydrogen processes, it does not use electrolysis, which requires electricity.

"There's no green energy needed ... It's just simply sunlight that's reacting on a catalyst with the water to split the water," he said.

Hunt said the scalability of Sparc's technology also made it more attractive.

"It will be more competitive [because] the economies of scale are not quite so important with our photocatalytic technology," he said.

However, Hunt is not preparing for a war between the technologies.

"We see that what we're doing could be very complementary to the more conventional electrolysis green hydrogen production," Hunt said.

"It will definitely aid in the transformation from [Australia] being a fossil fuel dominated export economy to a green energy export orientated economy."

He estimated the value of the green hydrogen market in 2050 to be in the "hundreds of billions".

The technology is being developed as a joint venture between Sparc, the University of Adelaide and Fortescue Future Industries (FFI).

Hunt considers FFI "one of the most ambitious hydrogen companies in the world" and said the company's involvement was a wonderful endorsement of the project.

Hunt said the company is also working closely with global coatings companies to incorporate graphene into their products. Graphene in its purest form is two hundred times stronger than steel and is antimicrobial, flexible, conductive and hydrophobic.

"We're finding that graphene is also very useful in the renewable energy space. So, there's this great synergy between what we're doing in graphene and renewable energy," Hunt said.

"We'd like to continue to build on that thematic of sustainability and renewable energy."