Sparc Technologies

SPN.AX

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Disrupting and Transforming Industry

Equity Research Australia
Materials

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NEED TO KNOW

- **Ecosparc market ready - revenues forecast for FY25**
- **Green hydrogen - significant global demand**
- **Valuation implies substantial upside from current levels**

Ecosparc first commercial sales imminent: SPN's anti-corrosive graphene-based additive (GBA), Ecosparc, is market ready with >4 years of R&D and positive data demonstrating its commercial readiness. In addition, SPN has commissioned a production facility capable of producing commercial quantities of Ecosparc capable of dosing ~7m litres of paint, delivering potential revenue of ~A$11.1m p.a. Multiple global coatings companies are performing in-house R&D currently; their adoption of Ecosparc could lead to rapid growth for this business.

Sparc Hydrogen, an alternative green hydrogen production technology: SPN, Fortescue and the University of Adelaide have entered into a joint venture (JV), Sparc Hydrogen, that aims to validate and commercialise a photocatalytic water splitting technology capable of producing green hydrogen cost effectively and without renewable electricity or electrolysers.

Investment Thesis

Strong technology that resonates with key ESG theme: SPN has a strong suite of technologies at various stages of commercial development that have huge potential as emissions-reduction options in hard-to-abate industries. As organisations worldwide look to navigate a path to net zero, early-stage technologies will continue to gain significant attention.

Ecosparc has massive potential globally with increased need for anti-corrosion products: Industry reports suggest the global anti-corrosion coatings market will grow to nearly US$50 bn by 2030, given ageing infrastructure in developed economies and increased marine demand. We believe Ecosparc's ability to prolong the time between maintenance events will drive healthy uptake.

Significant global demand for green hydrogen: The current commercial demand for hydrogen is ~95 million tons per annum (Mtpa), primarily as a feedstock in ammonia, petroleum refining and heavy industry. However, the production of hydrogen currently uses fossil fuel feedstocks that generate >1Gt of CO_2 annually; this is ~2.5% of global emissions, similar to the entire aviation sector. We anticipate this technology has the potential to be acquired before first revenues.

Valuation & Risks

Valuation implies ~100% upside from current levels: We initiate coverage with a valuation per share of **A$0.48**, generated from our discounted cash flow (DCF) valuation for Ecosparc and JV valuation for Sparc Hydrogen. Despite its strong technology, the stock is trading at a substantial discount to its hydrogen peer group. With Ecosparc generating revenues (forecast to start in FY25) and sodium-ion battery anode material potential (not included in our valuation), this presents an attractive entry point, in our view. **Key risks** include funding, technology delays, and increased capital costs.

Sparc Technologies Limited (ASX:SPN) is an Australian company pioneering new technologies to transform while seeking to deliver a more sustainable world. Sparc has established offices in Australia, Europe and North America and is focussed on pioneering new technologies in coatings and composites, green hydrogen, and sodium-ion batteries.

https://sparctechnologies.com.au

Valuation	**A$0.48**
Current price	**A$0.22**
Market cap	**A$21M**
Cash on hand	**A$3.6M**

Upcoming Catalysts / Next News

Period	
2HFY24	Coatings company trial results
2HFY24	Results from CSIRO trial
1HFY25	SA DIT trial results
1HFY25	Stage 2 of Sparc Hydrogen JV

Share Price (A$)

Source: FactSet, MST Access

Figure 1: SPN financial summary

Sparc Technologies Ltd — SPN-AX

Year end 30 June

MARKET DATA

Price	**$**	**0.22**
Valuation per share	**$**	**0.48**
52 week low / high	$	0.19/0.45
Market capitalisation	**$m**	**21.0**
Shares on issue (basic)	no.	95.6
Options / rights	no.	23.1
Other equity	no.	0.0
Shares on issue (diluted)	no.	118.7

12-MONTH SHARE PRICE PERFORMANCE

INVESTMENT FUNDAMENTALS		FY22A	FY23A	FY24F	FY25F	FY26F
Reported NPAT	$m	(14.2)	(4.9)	(3.8)	(1.3)	1.4
Normalised NPAT	**$m**	**(14.2)**	**(4.9)**	**(3.8)**	**(1.3)**	**1.4**
Reported EPS (undiluted)	¢	(0.1)	(0.1)	(0.0)	(0.0)	0.0
EPS Normalised	**¢**	**(0.1)**	**(0.1)**	**(0.0)**	**(0.0)**	**0.0**
....Growth	%	**n/m**	**(0.7)**	**(0.2)**	**(0.7)**	**(2.1)**
PER normalised	**x**	**n/m**	**(4.3)**	**(5.6)**	**(16.8)**	**15.0**
Operating cash flow per share	¢	(4.8)	(2.6)	(3.9)	(1.4)	2.1
Free cash flow per share	¢	(4.8)	(2.6)	(4.3)	(1.8)	1.6
Price to free cash flow per share	**x**	**(4.6)**	**(8.5)**	**(5.1)**	**(12.2)**	**13.4**
FCF yield	%	(21.9)	(11.8)	(19.5)	(8.2)	7.5
Dividend	**¢**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Payout	%	0.0	0.0	0.0	0.0	0.0
Yield	**%**	**0%**	**0%**	**0%**	**0%**	**0%**
Franking	%	0.0	0.0	0.0	0.0	0.0
Enterprise value	**$m**	**18.9**	**18.1**	**20.1**	**20.1**	**18.8**
EV/EBITDA	x	n/m	n/m	n/m	(27.3)	6.0
EV/EBIT	x	n/m	n/m	n/m	(16.3)	9.3
Price to book (NAV)	x	7.1	6.8	19.5	11.8	6.4
Price to NTA	x	6.4	5.9	12.3	8.4	5.1

KEY RATIOS		FY22A	FY23A	FY24F	FY25F	FY26F
EBITDA margin	%	n/m	n/m	n/m	n/m	n/m
EBIT margin	%	n/m	n/m	n/m	n/m	n/m
NPAT margin	%	n/m	n/m	n/m	n/m	n/m
ROE	%	n/m	n/m	n/m	n/m	n/m
Net debt /(cash)	$m	(2.1)	(3.0)	(0.9)	(1.0)	(2.3)
Interest cover (EBIT / net interest)	x	n/m	n/m	n/m	n/m	n/m
Gearing (net debt / EBITDA)	x	n/m	n/m	n/m	n/m	n/m
Leverage (net debt / (net debt + equity)	x	n/m	n/m	n/m	n/m	n/m

GROWTH PROFILE		FY22A	FY23A	FY24F	FY25F	FY26F
Operating revenue	%	n/m	56.6	170.1	114.6	100.0
EBITDA	%	n/m	67%	-24%	79%	-525%
EBIT	%	n/m	92%	22%	93%	122%
Operating NPAT	%	n/m	65%	-24%	67%	-263%
Normalised EPS	%	n/m	65%	-24%	67%	-212%

DUPONT ANALYSIS		FY22A	FY23A	FY24F	FY25F	FY26F
Net Profit Margin	%	(2,321.7)	(515.2)	(145.9)	(22.6)	12.6
Asset Turnover	x	0.2	0.3	1.5	2.2	2.7
Return on Assets	%	(415.1)	(135.9)	(215.6)	(49.1)	33.8
Financial Leverage	x	1.1	1.2	1.6	1.4	1.3
Return on Equity	**%**	**(475.4)**	**(158.5)**	**(349.3)**	**(70.4)**	**42.8**

PROFIT AND LOSS		FY22A	FY23A	FY24F	FY25F	FY26F
Total revenue	$m	0.6	1.0	2.6	5.5	11.1
EBITDA	**$m**	**(14.0)**	**(4.6)**	**(3.5)**	**(0.7)**	**3.1**
Depreciation & amortisation	$m	(0.2)	(0.3)	(0.3)	(0.5)	(1.1)
EBIT	$m	(14.2)	(4.9)	(3.8)	(1.2)	2.0
Net interest	$m	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Non-operating income	$m	0.0	0.0	0.0	0.0	0.0
Pretax Profit	$m	(14.2)	(4.9)	(3.8)	(1.3)	2.0
Tax expense	$m	0.0	0.0	0.0	0.0	(0.6)
Minorities	$m	0.0	0.0	0.0	0.0	0.0
Operating NPAT	**$m**	**(14.2)**	**(4.9)**	**(3.8)**	**(1.3)**	**1.4**
Significant items	$m	0.0	0.0	0.0	0.0	0.0
Reported NPAT	$m	(14.2)	(4.9)	(3.8)	(1.3)	1.4

BALANCE SHEET		FY22A	FY23A	FY24F	FY25F	FY26F
Cash	$m	2.1	3.0	0.9	1.0	2.3
Receivables	$m	0.6	0.1	0.2	0.5	0.7
Inventory	$m	0.0	0.0	0.2	0.6	1.0
Other	$m	0.0	0.0	0.0	0.0	0.0
Current Asserts	**$m**	**2.8**	**3.1**	**1.4**	**2.1**	**4.0**
Prop, plant & equip	$m	0.5	0.5	0.3	0.4	0.1
Intangibles	$m	0.1	0.0	0.0	0.0	0.0
Other	$m	0.0	0.0	0.0	0.0	0.0
Non current Assets	**$m**	**0.6**	**0.5**	**0.4**	**0.5**	**0.1**
Total assets	**$m**	**3.4**	**3.6**	**1.7**	**2.5**	**4.1**
Accounts Payable	$m	0.3	0.4	0.6	0.7	0.8
Borrowings	$m	0.0	0.0	0.0	0.0	0.0
Other	$m	0.1	0.1	0.1	0.1	0.1
Total liabilities	**$m**	**0.4**	**0.5**	**0.7**	**0.8**	**0.9**
Shareholder's equity	**$m**	**3.0**	**3.1**	**1.1**	**1.8**	**3.3**

CASH FLOW		FY22A	FY23A	FY24F	FY25F	FY26F
EBITDA	$m	(14.0)	(4.6)	(3.5)	(0.7)	3.1
Change in provisions	$m	0.0	0.0	0.0	0.0	0.0
Change in working capital	$m	0.4	(0.7)	(0.2)	(0.6)	(0.5)
Net interest	$m	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Tax paid	$m	0.0	0.0	0.0	0.0	(0.6)
Other	$m	9.1	2.8	0.0	0.0	0.0
Operating cash flow	**$m**	**(4.6)**	**(2.5)**	**(3.7)**	**(1.3)**	**2.0**
Capex	$m	0.0	0.0	(0.4)	(0.4)	(0.4)
Acquisitions	$m	0.0	0.0	0.0	(1.0)	0.0
Disposals	$m	0.3	(0.2)	0.0	0.0	0.0
Investing cash flow	**$m**	**0.3**	**(0.2)**	**(0.4)**	**(1.4)**	**(0.4)**
Equity	$m	3.5	3.5	2.3	3.0	0.0
Increase / (decrease) in borrowings	$m	0.0	0.0	0.0	0.0	0.0
Dividend/other	$m	0.0	0.0	0.0	0.0	0.0
Financing cash flow	**$m**	**3.5**	**3.5**	**2.3**	**3.0**	**0.0**
Free cash flow	**$m**	**(4.6)**	**(2.5)**	**(4.1)**	**(1.7)**	**1.6**

Source: Company presentations and MST Access

Investment Thesis: Market Ready for Revenues; Exciting Technology Opportunities

Sparc Technologies Limited (ASX:SPN) is an Australian company listed in 2020, with established offices in Australia, Europe and North America. In collaboration with multiple Australian universities, SPN looks to develop and ultimately commercialise different technologies that have the potential to disrupt and transform different global industries, all with a strong sustainability focus. Through the leverage of capital markets, SPN has been able to incubate and develop its unique technology portfolio which ranges in maturity from commercialisation ready (the Ecosparc graphene-based additive) to earlier-stage R&D.

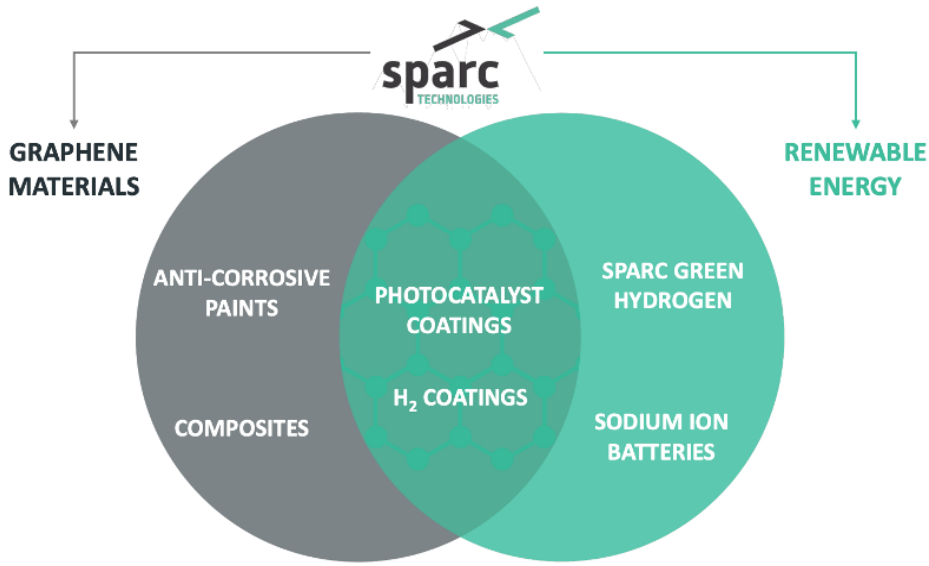
Company profile: a diversified portfolio of promising, sustainable technologies

SPN's three key business areas are:

- **Ecosparc: a graphene-based additive** (GBA) for coatings and composites, designed to increase the anticorrosion capabilities of commercially available epoxy coatings. This product is market ready with revenues set to start in FY25
- **Sparc Hydrogen: green hydrogen** – SPN is a majority shareholder of a company pioneering the development of photocatalytic water splitting (PWS) green hydrogen production technology in partnership with the University of Adelaide and Fortescue
- **sodium-ion batteries** – SPN is developing sodium-ion battery hard carbon anode technology which utilises sustainable agricultural biowaste feedstock. This business is still in its early stages.

SPN's unique technology portfolio is focused on sustainability and positive environmental outcomes for heavy industry. SPN has two core technology areas (see Figure 2): graphene materials for high performance anticorrosive and protective coatings, and renewable energy solutions through green hydrogen and sodium-ion batteries.

Figure 2: Overview of SPN technology portfolio



Source: Company presentations

Financials

P&L – We expect the Ecosparc division to contribute the majority of revenues for SPN in the forecast period as the only commercially ready product in the portfolio. We anticipate meaningful revenues for FY25 and FY26 with positive EBITDA impact for FY26 (see Figure 3). Our estimate for FY26 revenues implies a 2% share of the anti-corrosive paint market. We view the uptake of Ecosparc at a paint manufacturing level as a significant driver of rapid revenue growth, with multiple global coating companies currently undertaking product evaluation of Ecosparc in anti-corrosive coatings (results due in 2HFY24). Positive results could be a meaningful revenue driver.

Figure 3: Key P&L items (A$m)

	FY22A	FY23A	FY24F	FY25F	FY26F
Sales	0.6	1.0	2.6	5.5	11.1
EBITDA	(14.0)	(4.6)	(3.5)	(0.7)	3.1
EBIT	(14.2)	(4.9)	(3.8)	(1.2)	2.0
NPAT	(14.2)	(4.9)	(3.8)	(1.3)	1.4

Source: Company presentations, MST estimates.

Cash flow and balance sheet: We have forecast a A$3m capital injection as some point in FY25 on the back of Stage 2 of the Sparc Hydrogen JV.

Valuation of $0.48/share, based on sum of the parts

We derive a valuation for SPN using sum of the parts, combining a DCF for the Ecosparc division with the value of its majority shareholding in the Sparc Hydrogen JV. The combination of the DCF and JV value generates a valuation for SPN of A$0.48 per share, implying ~100% upside from the current price.

Ecosparc component: A$0.45 on DCF

Our Ecosparc DCF of A$0.45 is based on conservative assumptions, including a WACC of 13.5%, terminal growth rate of 2.0%, equity risk premium of 6.0% and beta of 2.0. For FY27F–34F (a period for which we do not have explicit forecasts), we assume that:

- EBITDA grows at 10% p.a. due to a combination of market penetration and enhanced efficiencies improving margins – we view this as extremely conservative
- capex remains consistent at current levels.

Sparc Hydrogen component: $0.03 based on the Stage 2 value of the JV

SPN is a majority shareholder of a JV which is pioneering the development of photocatalytic water splitting (PWS) green hydrogen production technology, in partnership with the University of Adelaide and Fortescue. The value of SPN's holding in the Sparc Hydrogen JV is A$3.28m, assuming that the JV moves into Stage 2 as planned (at which time SPN would have a 36% share). This gives Sparc Hydrogen a valuation of A$0.034 per share. Large valuations for early-stage low emissions hydrogen production technologies are very common. We believe this valuation is very modest and has significant upside based off the current value of ASX-listed hydrogen peers.

Sodium-ion battery component: no value assigned – potential future upside

At this stage, we do not assign any value to the sodium-ion battery anode business, given the early stage of this technology.

Key catalysts

- Multiple global coating companies are currently undertaking product evaluation of Ecosparc in anti-corrosive coatings. Results for this independent testing, due in 2HFY24, should be a significant catalyst in delivering first meaningful revenues for Ecosparc. If this testing validates SPN's internal data, we expect other coatings companies to adopt the technology in their products soon after driving a potential re-rate in the share price.
- A decision by the Sparc Hydrogen board and shareholders including Fortescue, to move to Stage 2 and commit the additional $2.5m investment to fund construction of the pilot plant and ongoing lab work is due in the middle of 2024. Stage 2 of the Sparc Hydrogen JV is focused on developing a pilot plant to demonstrate end-to-end hydrogen production using linear Fresnel mirrors and Sparc's unique PWS reactor. This plant is expected to be built proximal to Adelaide and will be a first-of-its-kind facility globally in the field of PWS. The CSIRO on-sun trials allowed Sparc Hydrogen to collect data and information for the design of the pilot plant PWS reactor, and a pre-FEED study was completed on the plant in late 2023.

- First meaningful revenues in FY25 for the Ecosparc business unit. Ecosparc presents significant potential benefits for both its end customers (asset owners) and intermediate customers (paint manufacturers). We note that SPN is ready now to provide commercial volumes of Ecosparc, meaning that these benefits are available to customers in the short term. We view this as a significant driver of share price value for SPN in the short term.

Risks

We think that the key risks to our valuation is one or a combination of the following:

- Execution risk associated with commercialisation and delivery of Ecosparc revenue due to one or a combination of the following elements:
- Market penetration to key coatings companies.
- Unforeseen problems and costs associated with the integration of the additive in the current anti-corrosive supply chain.
- Commercialisation timeline delays leading to further funding required.
- R&D costs required to maintain and continue to develop the Sparc hydrogen and sodium-ion battery anode technologies.
- Funding risks associated with access to capital to support growth longer term.
- A significant change in the key exchange rates as majority of sales will likely be in US$.
- The market appetite for companies with sustainable technology solutions.

Ecosparc Business: Generating Meaningful Revenues from FY25 with Anti-Corrosion Product

SPN's Ecosparc business has developed a graphene-based additive (GBA) on the back of >4 years of research and product development (see below for an introduction to graphene). The flagship Ecosparc product is designed for paint products and, when added in tiny amounts (~2%), it supercharges the market-leading coatings currently used to protect steel assets from corrosion.

The benefits of Ecosparc-enhanced paint include:

- significant anti-corrosion improvement: the Ecosparc GBA has reduced corrosion by up to 73% when added to commercially available epoxy coatings
- cost and emissions savings: these are the direct result of the GBA extending the time between maintenance events by 18–21%, as assessed in an independent lifecycle assessment which was published in 2023.

The Ecosparc GBA product is on track to achieve meaningful commercial sales in FY25 on the back of ongoing work with global paint manufacturers and paint additive suppliers.

Ecosparc's key ingredient: What is graphene?

Graphene is a single layer of carbon atoms arranged in a two-dimensional honeycomb lattice. It is a unique material with remarkable properties, including high electrical conductivity, excellent thermal conductivity, mechanical strength, and flexibility. Since its discovery in 2004, graphene has received significant attention due to its potential applications in various fields such as electronics, energy storage, composite materials, sensors, and biomedicine. Its exceptional properties make it a promising candidate for next-generation technologies.

The problem of corrosion: why Ecosparc is needed

Corrosion is expensive, inefficient and dangerous

Corrosion is a universal enemy to almost all steel infrastructure, and is inevitable to a certain degree, even with intervention to mitigate it. As products and production processes across industries become more complexthe penalties for corrosion failures have become more expensive, increased awareness has been generated around preventative maintenance – as demonstrated, for example, by the seemingly constant scaffolding on the Sydney Harbour Bridge due to recoating and corrosion prevention works.

According to data from the *Financial Times,* the global direct and indirect cost of corrosion is ~A$3.8 trillion per annum. These costs are associated with but not limited to asset shutdowns for steel maintenance and replacement across the oil and gas, transport, mining, construction, and renewable energy industries, for cases in which corrosion is the primary cause. Asset shutdowns inevitably reduce productivity for the affected organisation. Unaddressed corrosion can also lead to increased personal safety risks.

Anti-corrosion technologies have a significant opportunity

We view the costs associated with corrosion as a significant opportunity for new and emerging anti-corrosive technologies to deliver significant value. Strong product development, technology differentiation, meaningful long-term data, and real-world examples of anti-corrosion properties could lead to significant market penetration and swift adoption from asset owners and coatings companies.

Competitive advantage: benefits of the Ecosparc technology

Ecosparc presents significant potential benefits for both its end customers (asset owners) and intermediate customers (paint manufacturers). We note that SPN is ready now to provide commercial volumes of Ecosparc, meaning that these benefits are available to customers in the short term.

Benefits to asset owners (end customers)

In August 2023, SPN published the results of an independent lifecycle assessment which calculated the potential cost and emissions savings of using conventional paint enhanced with Ecosparc to extend the time between maintenance events. The report assessed three pieces of large steel infrastructure (a port, mining infrastructure and grain silos). Reported benefits included:

- **cost savings:** the assessment saw a minimum savings in re-coatable steel maintenance costs of 19–23%

- **reduced carbon emissions:** the assessment measured carbon emissions reductions associated with asset maintenance and paint manufacturing of 18–21%.

Benefits to paint manufacturers (intermediate customers)

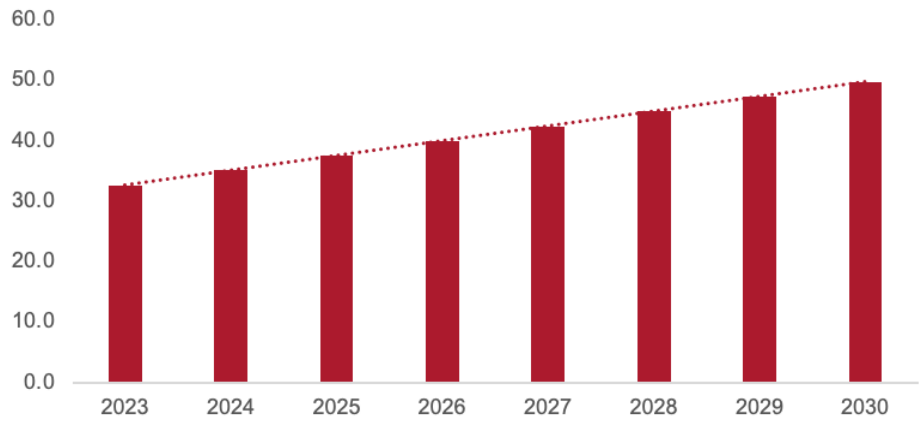
- **enhanced performance and reputation:** better performing products and an enhanced reputation for innovation
- **improved revenues and profitability:** an opportunity to increase margins and increase market share
- **improved sustainability:** paint manufacturing has well known ESG concerns, which the use of Ecosparc would alleviate.

Market overview for anti-corrosion coatings: CAGR >5% to 2030

Anti-corrosion coatings are designed to slow or prevent electrochemical processes (rust) that degrade the structural integrity of steel over time. A Skyquest report valued the global anti-corrosion coatings market at US$32.56 bn in 2022 and indicated that it is poised to grow to US$49.69 bn by 2030, representing a CAGR of 5.21% in the forecast period (2023–2030) (see Figure 4).

Major demand drivers are an increase in demand from the marine industry and ageing infrastructure in developed economies. We believe anti-corrosion technology is relevant to a wide range of end-user sectors, including marine, oil and gas, industrial, construction, energy (power plants, solar, wind turbines) and automotive, all of which would benefit from extending the time between maintenance events for steel assets and infrastructure.

Figure 4: Anti-corrosion coatings forecast market growth from 2023-2030 (US$billions)



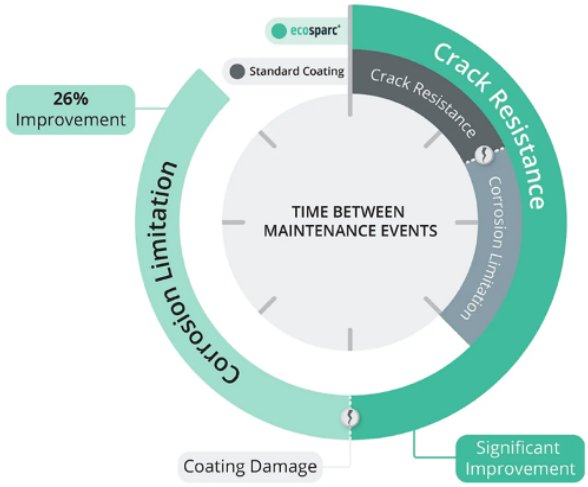
Source: Skyquest

Validation and performance testing

Ecosparc shows positive performance results

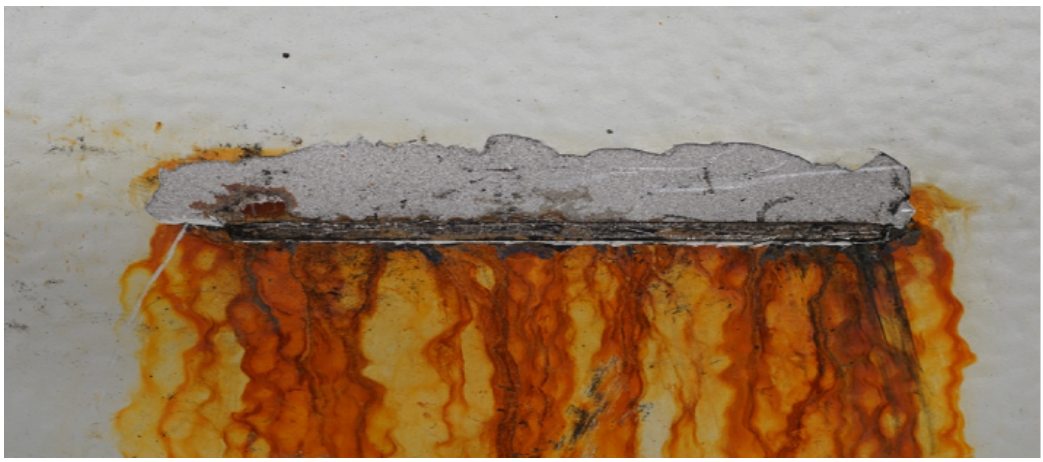
SPN has performed a vast body of testing on the Ecosparc product over >4 years. Much of this work has focused on incorporating Ecosparc into anti-corrosive paints and assessing the scribe creep improvement (effectively a mm measure of rust propagation) over 3- to 6-month accelerated corrosion testing to international standards. Figure 6 shows an example of a scribe creep test panel that has had a uniform damage created representing a real-world situation. Announced results have consistently shown improvement in scribe creep of 26–73% (see Figure 7). These results are significant, and we agree with the company's assessment that it is the most advanced globally when it comes to its data package and commercial readiness for a GBA in the anti-corrosion coatings market.

Figure 5: Example of Ecosparc's performance benefits compared to standard anti-corrosion coatings



Source: Company presentations

Figure 6: Scribe creep test example



Source: Company presentations

Figure 7: Scribe creep testing results

% improvement - scribe creep	Absolute Values - Unmodified	Absolute Values - Ecosparc	Test Regime	Duration of Test (hrs)	Date of Announcement
73	5.7	1.4	ISO12944	1680	2021
62	8.84	3.37	ISO9227	1344	2021
40	7.17	4.33	ISO12944	4200	2021
26	10	7.4	ISO12944	4200	2023

Source: Company announcements

In August 2023, SPN also announced strong performance from Ecosparc-enhanced coatings in thermal-cycle testing, impact resistance, wearability, and repeat scribe testing. Thermal-cycle testing is performed on materials to determine the resistance of exposure to alternating extremes of high and low temperatures that can often result in cracking as seen in Figure 8.

Cracking is known to be a primary cause of coating deterioration which in turn leads to corrosion and asset degradation. This test work, along with past results focused on scribe creep announced by SPN, completes the full suite of testing across the relevant performance criteria for anti-corrosion coatings. SPN is planning further work to quantify the relative cracking improvement in order to add to the data on relative performance benefits (26–73%) seen in the scribe creep tests.

Figure 8 shows two identical coated panels, one treated with Ecosparc's GBA (right) and the other not (left). The panels were put through 252 thermal-cycle tests at -20 ^{o}C to 90^{o}C, resulting in obvious cracking in the untreated panel. This test is just one example of the >10,000 data points compiled over 4 years of product R&D completed by SPN, which have consistently demonstrated improvements in anti-corrosive performance versus conventional coatings.

Figure 8: Results from thermal-cycle resistance testing

Source: Company announcements

Field trials – SA Department of Infrastructure

In March 2024, SPN announced a trial agreement with South Australia's Department for Infrastructure and Transport (DIT) to undertake field trials on government-owned steel assets. The trials will take place at the West Beach bridge in Adelaide and the Streaky Bay Jetty on the Eyre Peninsula. The locations have been selected for their highly corrosive coastal environments (see Figure 9 and Figure 10). The DIT has approximately A$45 bn in infrastructure assets across the state.

During the trials, the Ecosparc-enhanced product will be compared with a control area coated with a market-leading anti-corrosive paint and independently tested by a third-party expert. Meaningful application and adhesion data will be available within 6 months of the trial start date. We view the selection of the corrosive environment and the direct product comparison as a positive signal in regard to SPN's confidence in the product.

Figure 9: Streaky Bay Jetty

Source: Company announcements

Figure 10: West Beach Bridge

Source: Company announcements

Production: current manufacturing capacity

In March 2023, SPN commissioned a GBA production facility capable of producing sufficient commercial quantities of product to dose ~7m litres of paint per annum (the Sydney Harbour Bridge uses ~30,000 litres of paint per coat). In other words, this facility would give Ecosparc the ability to produce enough GBA to paint ~230 similar assets annually.

Commercialisation: pathway to market

Multiple global coating companies are currently undertaking product evaluation of Ecosparc in anti-corrosive coatings. Results for this independent testing, due in 2HFY24, should be a significant catalyst in delivering first meaningful revenues for Ecosparc. If this testing validates SPN's internal data, we expect other coatings companies to adopt the technology in their products soon after. SPN has started targeting asset owners directly to conduct field trials, aiming to further validate the product, deliver real-world results and demonstrate market demand for GBA. SPN is also targeting field trials across key industry segments including government, mining, oil & gas, and defence.

Key competitors and peers

Although no directly comparable graphene-coating peers exist, there is significant demand for other listed companies with graphene-based technologies. Strong valuations for graphene peers give us confidence in our valuation of SPN. We provide two examples of comparable ASX-listed companies below, with business descriptions provided by the respective companies on their websites. Noting both companies below have delivered no meaningful revenues similar to SPN and are at different levels of commercial readiness.

Talga Group Ltd – TLG

Talga is building a European source of battery anode and graphene additives, to offer graphitic products to its customers'.

Share price – A$0.71

Market cap – A$263m

First Graphene Limited – FGR

First Graphene Ltd. is an early-stage company and supplier of graphene products. The company has a manufacturing platform based upon captive supply of raw materials and an established 100 tonne/year graphene production capacity.

Share price – A$0.06

Market cap – A$40m

Sparc Hydrogen Business: Potential for Positive Disruption in an Area of High Need

In partnership with the University of Adelaide and Fortescue, SPN has established a joint venture (JV) called Sparc Hydrogen. The JV aims to validate and commercialise a photocatalytic water splitting (PWS) technology capable of producing green hydrogen in a cost-effective way without the use of renewable electricity or electrolysers. Sparc Hydrogen's technology has the potential to disrupt the current green hydrogen market and contribute to the adoption of hydrogen as a fuel source across multiple industries.

The problem: why is green hydrogen required?

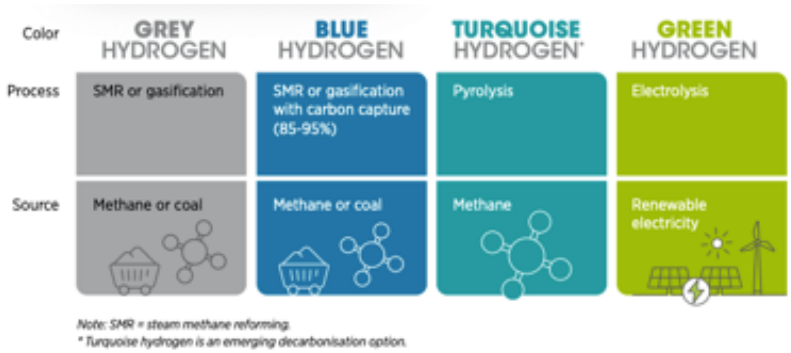
Hydrogen is well known as a fuel source that is capable of powering almost any vehicle and a multitude of industrial purposes with only water as a by-product, unlike other fuels that have a similar power density. The current commercial demand for hydrogen is ~95 million tons per annum (Mtpa). Currently Hydrogen is used primarily as a feedstock in ammonia, petroleum refining and heavy industry.

The production of hydrogen currently uses fossil fuel feedstocks that generate >1Gt of CO_2 annually, equating to ~2.5% of global emissions (similar to the entire aviation sector). Due to demand in current industries and the urgent need for decarbonisation strategies across the world, green hydrogen production is required.

Hydrogen production has been classified by groups (colours) which consider the feedstock and production process used (see Figure 11). Grey and blue hydrogen currently make up approximately 99% of all hydrogen in the market and produce a significant amount of carbon; turquoise generates significantly less carbon but the technology is in its infancy.

Green hydrogen uses renewable electricity to split water through electrolysis. While electrolysers have been around for over a century, the use of electrolysis to split water on an industrial scale has only been considered in recent years and there are several challenges to overcome before these green hydrogen projects are established.

Figure 11: Hydrogen production categories – from least to more sustainable



Source: World Economic Forum

Current green hydrogen technology: electrolysis

Electrolysis is a promising option for carbon-free hydrogen production using renewable energy sources such as wind and solar. Electrolysis is the process of using electricity to split water into hydrogen and oxygen. This reaction takes place in a unit called an electrolyser. Electricity represents ~50% of the cost of producing hydrogen through electrolysis, which is an issue with rising energy prices across the globe.

While electrolysers are a promising technology, some significant barriers remain before green hydrogen via electrolysis is commercially and technically ready at scale. These barriers include:

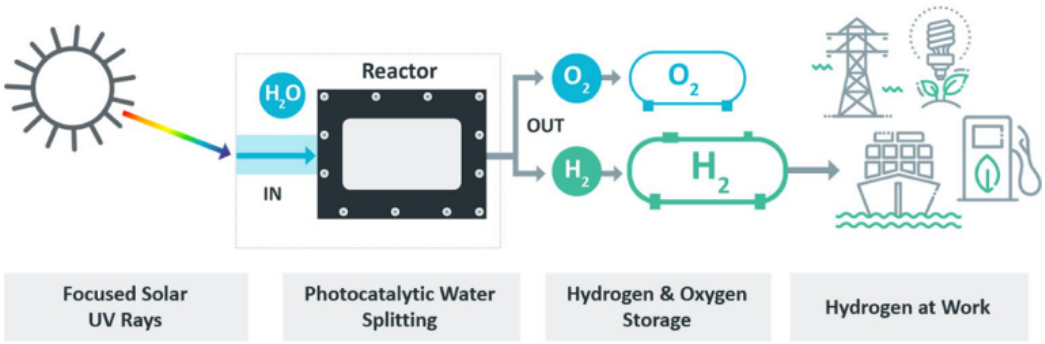
- **electrolyser technology limitations** – electrolyser manufacturing technology is expensive and is yet to be effectively scaled
- **solar PV + wind + battery challenges** – sustainable green power generation plays a significant role in the electrolysis process. These technologies are mature with limited cost-improvement capabilities and have social licence issues

- **insufficient transmission lines –** to transport the electricity required by the electrolysers, significant transmission line infrastructure is required, involving lengthy development times and raising social licence issues.

Technology: photocatalytic water splitting

Photocatalytic water splitting (PWS) is an alternative method of producing renewable green hydrogen. It is often referred to as direct solar-to-hydrogen technology as it avoids the need to convert solar energy into electricity to split water via electrolysis. In photocatalysis, the sun's energy is concentrated on a highly specialised photocatalyst that forms reactive sites which triggers the dissociation of water into hydrogen and oxygen. PWS has been known about in scientific circles for more than 50 years. Sparc Hydrogen is pioneering reactor technology with the aim of commercialising PWS to produce green hydrogen at large scale. A simplified PWS commercialisation technology schematic is shown in Figure 12.

Figure 12: Sparc Hydrogen photocatalytic water splitting technology schematic.



Source: Company announcements

SPN's unique approach

Sparc Hydrogen aims to combine its PWS technology with concentrated solar to maximise the photocatalysis reaction in each reactor minimising the need for a large number of reactors. The benefits of Sparc Hydrogen's novel approach to PWS are as follows:

- Lower photocatalyst use for given volume of hydrogen production.
- Incorporation of PWS into a modular, scalable concentrated solar field; Sparc Hydrogen is aiming to buy off the shelf linear Fresnel mirrors and retrofit the existing receiver (typically used to produce heat in the form of steam) with its patent pending solar reactor; and
- The potential to use the heat generated in the reactor for industrial uses or energy production providing the opportunity for a dual revenue source with the hydrogen production. By developing its reactor technology to fit into a modular size unit that is designed for a commercially available linear Fresnel mirrors system that concentrates solar heat. The production process also generates steam as a by-product which could hypothetically be used by nearby industry that require steam like chemical, pharmaceutical production and many more.

Linear Fresnel mirror systems have already been adopted for energy and steam production technologies for industry requirements at significant scale. Examples of the commercial deployment of linear Fresnel mirror systems include:

- **Spain's Heineken brewing facility** – Heineken had a Fresnel mirror system installed in 2024 transitioning to clean energy through thermal energy, the innovative Fresnel technology plays a crucial role in transitioning to renewable thermal energy, aligning with HEINEKEN's goal of net-zero emissions across its value chain by 2040. This system is expected to reduce CO^2 emissions for the facility by 1,300 tons annually and involves the deployment of a 6,000m^2 mirror field.
- **Puerto Errado 2** – Puerto Errado 2 is a liner Fresnel mirror thermal power plant located in Spain, capable of producing 50,000MWh annually powering 12,000 Spanish homes. Figure 13 shows the mirror system, Sparc Hydrogen is looking to replace the existing receiver (top of FIgure 14) in the system with its PWS reactor.

Figure 13: View looking over the mirror field

Source: Puerto Errado 2 liner Fresnel mirror power plant, Spain

Figure 14: Looking upward toward the solar reciever

Source: Puerto Errado 2 liner Fresnel mirror power plant, Spain

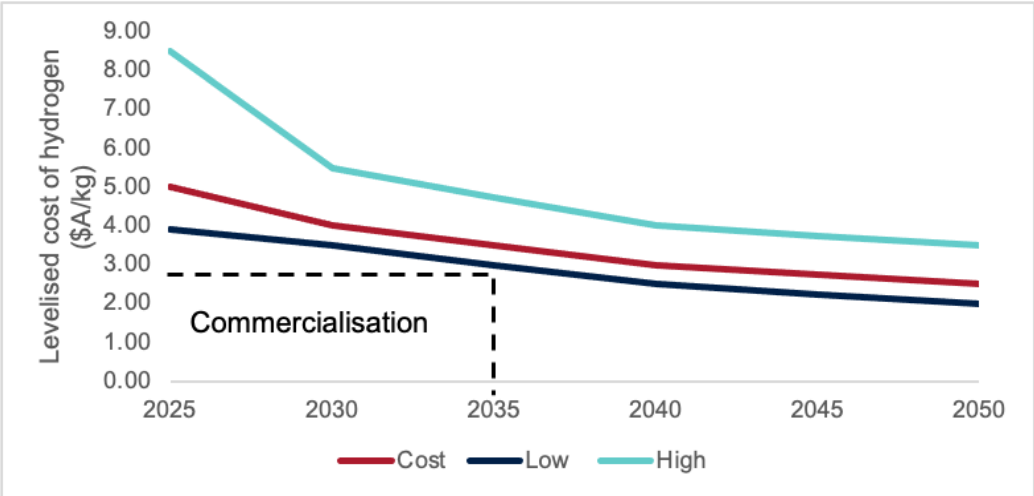
Commercialisation window

To achieve net-zero targets set by governments and organisations around the world, specific goals have been established for promising energy sources such as hydrogen. In 2021, the US Department of Energy set an ambitious green hydrogen production cost goal of A$1.50/kg within the decade. The objective is to make the technology become price competitive with current technologies in order to reduce emissions and enable widespread commercialisation of hydrogen and fuel cell technologies. Many other governments and organisations around the world have set similar objectives. SPN sees a strategic opportunity to disrupt this market by providing an alternative green hydrogen solution to electrolysers.

According to the Deloitte 2023 Green Hydrogen Outlook, green hydrogen production via electrolysis will take up to 15 years to achieve a A$3/kg production cost (see Figure 15). In March 2024, research house BloombergNEF found that the cost of producing and installing electrolysers in China, the US, and Europe has risen by more than 50% compared to the previous year, driving up the cost of green hydrogen production and potentially putting the cost goals set by global governments and organisations into serious doubt.

We view this as a significant tailwind for the advancement of Sparc Hydrogen's production technology as it aims to disrupt the hydrogen market. The slow pace of electrolyser cost reduction gives Sparc Hydrogen a substantial window to commercialise this technology and provide low-cost hydrogen solutions to heavy industry in hard-to-abate sectors.

Figure 15: Forecast cost of green hydrogen via electrolysis



Source: Deloitte – Green hydrogen – Energizing the path to net zero and company presentations

Sparc Hydrogen ownership structure

In February 2022, SPN announced a joint venture (JV) with the University of Adelaide (UoA) and Fortescue aimed at progressing the PWS reactor technology. The JV comprised two stages, with Stage 1 ownership outlined in Figure 16. Stage 2 will see Fortescue and SPN invest further capital and Fortescue will increase its ownership in the JV through proportionately higher additional funding, as shown in Figure 18. March 2023 saw a further A$1.1m investment in the JV to be funded through R&D tax incentives, no increased investments were made by the JV partners at this time.

Figure 16: Sparc Hydrogen current ownership structure

Source: Company announcements

Project development

Stage 1: Lab-based development and prototyping

Key milestones in Stage 1 included:

- developing a technical economic assessment (TEA)
- optimising, constructing, testing and commissioning a lab-scale reactor
- designing and constructing a prototype scale photo-thermal reactor for on-sun operation. On-sun testing and hydrogen production was achieved through the recent prototype testing at the CSIRO Energy Centre in Newcastle (Figure 17), supported through the CSIRO's Kick-Start program and ~A$470k in grant funding provided through the Federal Government's AEA Seed Round.

Figure 17: Prototype Testing at CSIRO Energy Centre, Newcastle

Source: Company announcements

The CSIRO Kick-Start program is an initiative designed to support innovative Australian start-ups and small businesses in accessing CSIRO's research expertise and capabilities to foster growth and development. The first round of testing, completed in November 2023, highlighted various reactor design modifications that were successfully incorporated into a second round of testing completed in April 2024. One of the flagged aims for this project was to move the technology readiness level (TRL) from 4 to 5; this was achieved and brings the technology one step closer to commercialisation. The Technology Readiness Level (TRL) index is a globally accepted benchmarking tool for tracking progress and supporting development of a specific technology through the early stages of the innovation chain, from blue sky research (TRL 1) to actual system demonstration over the full range of expected conditions (TRL 9).

SPN described the data from the repeated on-sun trials at the CSIRO as a significant milestone, not only for Sparc Hydrogen, but for the advancement of PWS technology as a green hydrogen production technology that does not require capital-intensive electrolysers.

Stage 2: Pilot plant

Stage 2 of the JV is focused on developing a pilot plant to demonstrate end-to-end hydrogen production using linear Fresnel mirrors and Sparc's unique PWS reactor. This plant is expected to be built proximal to Adelaide and will be a first-of-its-kind facility globally in the field of PWS. The CSIRO on-sun trials allowed Sparc Hydrogen to collect data and information for the design of the pilot plant PWS reactor, and a pre-FEED study was completed on the plant in late 2023.

A decision by the Sparc Hydrogen board and shareholders to move to Stage 2 and commit the additional $2.5m investment to fund construction of the pilot plant and ongoing lab work is due in the middle of 2024. The company believes the facility can be built and operational ~6 months from the funding being committed by the shareholders. Due to its clean nature and advancement of the technology, we believe Sparc Hydrogen is well positioned to benefit from funding support from Australia, the US, EU and other jurisdictions with clean hydrogen policies becoming more prevalent as governments commit to emissions targets.

Figure 18: Sparc Hydrogen staged investment structure and process

Sparc Hydrogen JV	University of Adelaide	Sparc Technology	Fortescue
Stage 1	IP Contribution	Pays A$0.45m and issues 3m SPN shares	Pays A$1.8m for intial share
Ownership	**28%**	**52%**	**20%**
Stage 2	Remains the same	Pays A$1.025m and dilutes holding	Pays A$1.45m increasing share
Ownership	**28%**	**36%**	**36%**
Total value Stages 1 & 2 = A$9.1m	A$2.55m	A$3.275m	$3.275m

Source: Company presentations

Key competitors and peers

Current listed low-emissions hydrogen production peers have large valuations based on the technology alone as they are both without meaningful revenues. This gives us confidence that there is significant valuation upside potential for this part of SPN's business. We provide two examples of comparable ASX-listed companies below, with business descriptions provided by the respective companies on their websites.

Hazer Group Limited – HZR

Hazer Group is an Australian technology company, driving global decarbonisation efforts through the commercialisation of technologies. Commercialising the production of hydrogen gas from methane with negligible carbon dioxide emissions and the co-production of a graphite. The technology is approximately 1–2 years ahead in the commercialisation process in comparison to Sparc Hydrogen.

Share price – A$0.49; market cap – A$110m

Gold Hydrogen Limited – GHY

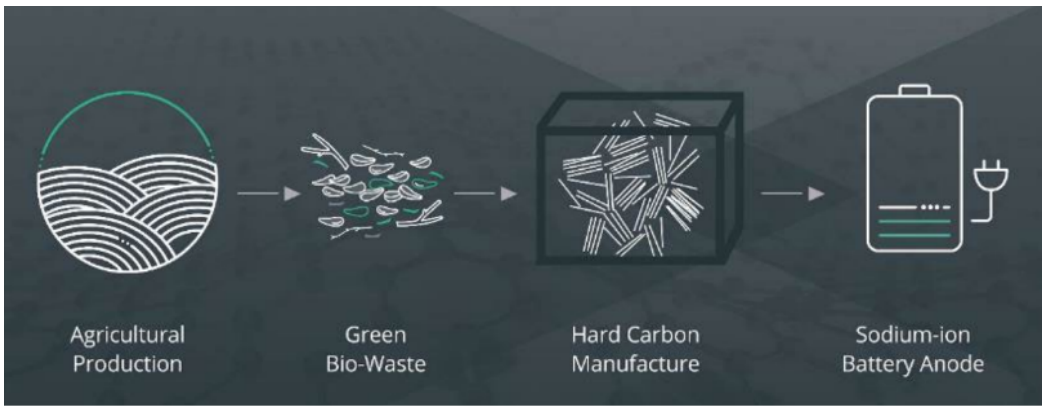
Gold Hydrogen is exploring and developing hydrogen assets in Australia. The company is focused on the discovery and development of natural hydrogen and helium gases in a province in South Australia. This region has recently had its natural hydrogen and helium potential confirmed by the company via its maiden drilling campaign. Domestic and global demand for hydrogen and helium, combined with new exploration techniques provide Gold Hydrogen with an opportunity to produce natural hydrogen and helium gas province. The company is early stage with maiden drilling complete, so has a significant journey to production.

Share price – A$1.29; market cap – A$209m

Sodium-Ion Batteries Business: Early Stages

SPN is in the early stages of developing a high-performing, sustainable sodium-ion battery (SIB) anode technology with Queensland University of Technology (QUT). In September 2022, SPN announced the partnership agreement signed with QUT to commence a project within the SIB anode space. The project aims to develop a novel process to produce hard carbon using readily available, sustainable bio waste material (see Figure 19 for process diagram). Initial testing of the anode material saw positive results, with the hard carbon anode delivering performance improvements of up to a 63% increase in reversible capacity versus a commercially available benchmark. SPN in collaboration with QUT has outlined it will use some capital from the most recent capital raise to continue the R&D process to further validate this technology.

Figure 19: Sodium-ion battery anode manufacturing process



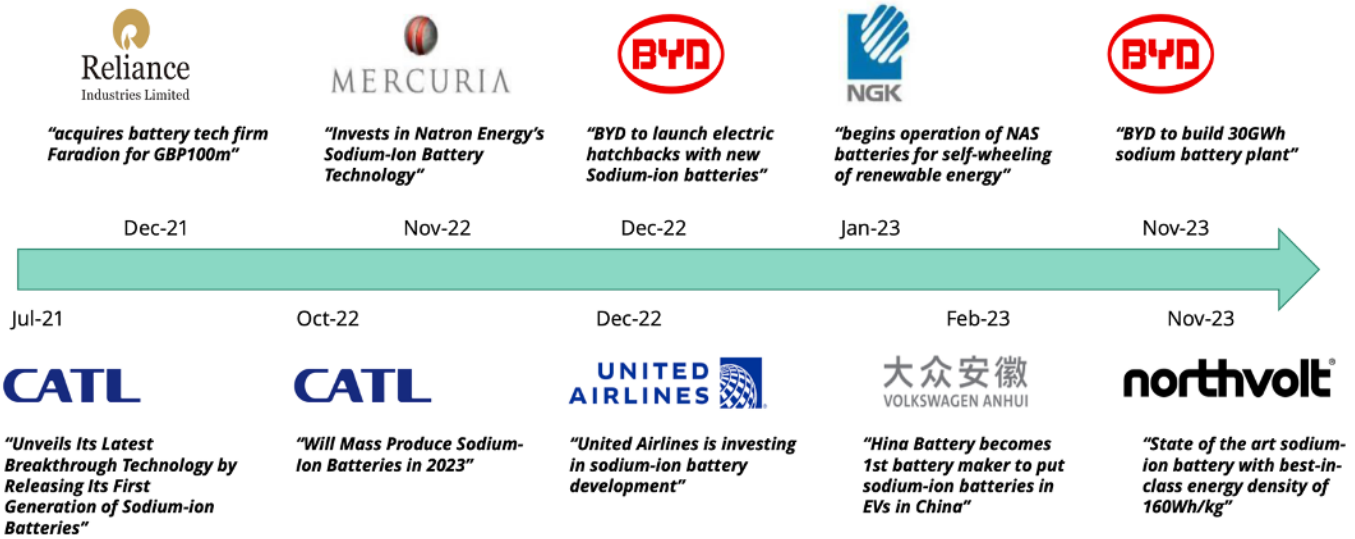
Source: Company announcements

Battery market momentum

SIBs are a safer, cheaper and more sustainable alternative to the popular lithium-ion batteries. Battery manufacturers all over the world have begun commercialising SIBs, with IDTechEx research expecting the SIB market to grow from next to nothing to US$11.6 bn in 2033 driven by an uptake in stationary energy storage and light electric vehicles. See Figure 20 for a timeline of the world's largest battery manufacturers committing to SIBs.

Sodium is ~1,000x more abundant than lithium and is significantly cheaper to mine. Along with SIB technology's cost reduction potential, it also has a superior safety profile due to its higher thermal stability and therefore lower risk of causing fire or explosions. Lithium-ion batteries have been the cause of fires across the globe and March 2024 saw the first fatality from a lithium-ion–caused fire in Australia.

Figure 20: Sodium-ion battery market timeline



Source: Company announcements

Key Customers and Technology Partners

A track record of research and university collaboration

SPN has invested significant time and energy into cultivating key partnerships, which has helped the company develop its strong portfolio of industry-disrupting technologies built on its initial strategic relationship with the University of Adelaide. SPN has established a strong track record of working with the Australian research and university sector, which is a competitive advantage as the company continues to develop and add to its portfolio of technologies.

Promising commercial partnership with Fortescue

We view Sparc Hydrogen's commercial partnership with Fortescue as a strong validation of not only the PWS technology but the management team's ability to engage an organisation of that calibre with and deliver a strategic partnership. This gives confidence for future commercial partnerships to be executed with similar efficiency.

Figure 21: Key partners

Source: Company announcements and MST Access

Australian Economic Accelerator (AEA) grant program

The Australian Government has committed to investing in the higher education sector using a stage-gated funding program, the AEA grant program, in order to encourage university research to be translated and commercialised. The AEA grant program was designed by the government to fund promising technologies that have been developed in universities around the country, with a total of A$10m to award to worthy recipients.

SPN has been awarded two grants under the AEA program totalling ~A$850K for both the hydrogen and sodium-ion battery anode technologies. This means that SPN was able to secure ~9% of the total funding across two different technologies with two different universities among hundreds of applications. This further validates the potential of the portfolio and SPN's credentials as a technology developer and gives an insight into its possible future value.

Assumptions and Financials

Key assumptions

Figure 22 outlines our key assumptions for SPN for the Ecosparc division. We expect this division to contribute the majority of revenues for SPN in the forecast period as the only commercially ready product in the portfolio. We anticipate meaningful revenues for FY25 and FY26 with positive EBITDA impact for FY26.

We view the uptake of Ecosparc at a paint manufacturing level as a significant factor in our forecast rapid revenue increase. Multiple global paint companies are currently undertaking product evaluation of Ecosparc additive in their anti-corrosive coatings, with results for this testing due in 2HFY24. Results from this independent testing should be a significant catalyst in delivering a meaningful revenue uplift for Ecosparc.

The key drivers of our FY24–26 forecasts relate to Ecosparc's use in paint manufacturing, specifically:

- Ecosparc's anti-corrosion coatings market share, implying the number of litres of anti-corrosion paint dosed – we assume 2% market share in FY26 with our forecast of 7m litres of anti-corrosive paint dosed.
- the number of 20kg Ecosparc units required to dose this paint.

Figure 22: Key assumptions

		FY25F	FY26F	FY27F
Anti-corrosion paint	M.Ltrs	3.5	7.0	10.5
Ecosparc kg	kg	70000	140000	210000
Ecosparc units	20kg	3500	7000	10500
Revenue	A$m	5.5	11.1	16.6
EBITDA	A$m	-0.7	3.1	6.5

Source: MST Access

Summary P&L

Incorporating the assumptions in Figure 22 into our financial model generates strong revenue growth over the forecast period (FY24F-FY26F) as shown in Figure 23. We anticipate Sales of A$11.1m in FY26F generating EBITDA of A$3.1m.

Figure 23: Key P&L items (A$m's)

	FY22A	FY23A	FY24F	FY25F	FY26F
Sales	0.6	1.0	2.6	5.5	11.1
EBITDA	(14.0)	(4.6)	(3.5)	(0.7)	3.1
EBIT	(14.2)	(4.9)	(3.8)	(1.2)	2.0
NPAT	(14.2)	(4.9)	(3.8)	(1.3)	1.4

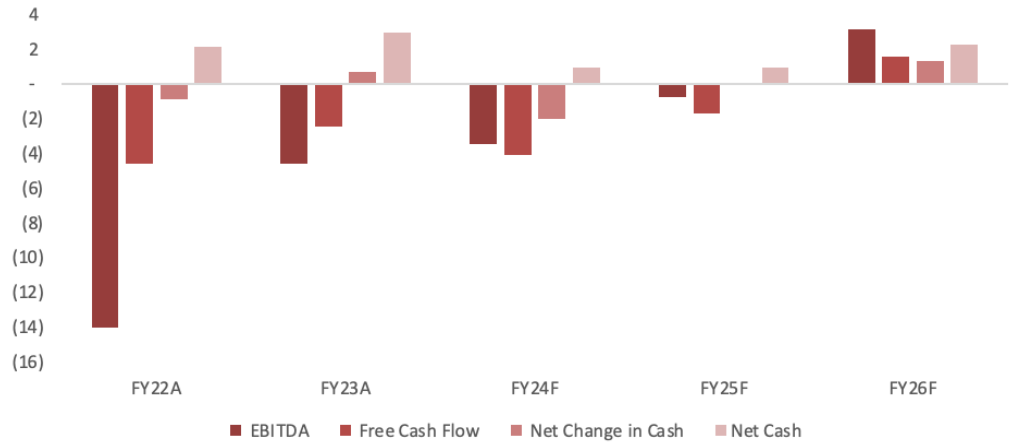
Source: MST Access

Cashflow and Balance Sheet

As shown in Figure 24, the company will likely have to improve balance sheet potentially through a capital injection in FY25, which we expect on the back of Stage 2 of the Sparc Hydrogen JV. We forecast a A$3m capital injection at some point in FY25.

We forecast that growing revenue with solid EBITDA growth and free cash flow generation will see the business generate NPAT of A$1.4m in FY26F.

Figure 24: Cashflow and Balance Sheet



Source: Company presentations, MST estimates

Valuation of A$0.48 Implies Substantial Upside

We initiate coverage of SPN with a sum-of-the-parts–based valuation of A$0.48 per share. This combines a DCF valuation for the Ecosparc business and the value of the Sparc Technologies JV.

Valuation methodology

Ecosparc valuation

Our DCF valuation for Ecosparc is based on conservative assumptions including.

- a WACC of 13.5%
- a terminal growth rate of 2.0%
- an equity risk premium of 6.0%
- a beta of 2.0.

Figure 25: DCF Valuation for Ecosparc

DCF Valuation (A$m)		FY24F	FY25F	FY26F	FY27F	FY28F	FY29F	FY30F	FY31F	FY32F	FY33F	FY34F
Total EBITDA		**-3.5**	**-0.7**	**3.1**	**4.9**	**6.0**	**6.6**	**7.2**	**8.0**	**8.8**	**9.6**	**10.6**
Corporate Tax Paid		0.0	0.0	-0.6	-0.9	-1.1	-1.3	-1.4	-1.5	-1.7	-1.9	-2.0
Change in working capital		-0.2	-0.6	-0.5	-0.5	-0.5	-0.5	-0.6	-0.6	-0.6	-0.6	-0.6
Total Capital expenditure		-0.4	-0.4	-0.4	-0.5	-0.5	-0.6	-0.6	-0.7	-0.8	-0.9	-0.9
Free cash flow		**-4.1**	**-1.7**	**1.6**	**2.9**	**3.8**	**4.2**	**4.6**	**5.1**	**5.7**	**6.3**	**7.0**
Total discounted free cash flow	20	**Key assumptions**										
PV of perpetual free cash flow	22	Risk free rate				4.0%		Cost of debt (before tax)				5.0%
Enterprise Value	**42**	Equity market risk premium				6.0%		Tax rate				30.0%
Net Debt	-1	Net debt/net debt + equity ratio				20%		Cost of debt (after tax)				3.5%
Equity Value	**43**	Equity beta				2.0		**WACC**				**13.5%**
Number of shares on issue (Fully Diluted)	95.6	Cost of equity				16.0%		**Terminal growth rate**				**2.0%**
Value per share	**0.45**											

Source: MST Access

In addition, we have made the following financial assumptions for the period covering FY27F-34F, where we do not have explicit forecasts:

- EBITDA grows at 10% p.a. from FY27F-FY34F, due to a combination of market penetration and enhanced efficiencies improving margins. We view this as extremely conservative.
- Capex remains consistent at its current level to FY26F, with inevitable expansion of operations we have forecast this to increase gradually from FY27F and beyond.

The combination of these assumptions generates a DCF valuation for the Ecosparc business of **A$0.45** per share, which implies substantial upside to the current share price. While we believe our DCF valuation methodology is sound, we recognise that it is sensitive to certain assumptions.

Sparc Hydrogen valuation

SPN is the majority shareholder of Sparc Hydrogen, a company pioneering the development of photocatalytic water splitting (PWS) green hydrogen production technology in partnership with the University of Adelaide and Fortescue. Large valuations for early-stage low-emissions hydrogen production technologies are very common.

The ownership structure outlined in Figure 18 (assuming that the JV moves into Stage 2 as planned) implies a value for SPN's 36% holding in the JV of **A$0.034** per share. We believe this valuation is very modest and has significant potential upside based off the current value of ASX-listed hydrogen peers.

Sodium-ion battery business valuation

We have not assigned any value to the sodium-ion battery anode business segment at this stage, as the technology is early stage and there has been no reported value. As this technology evolves we will provide a valuation and will drive an upgrade to our valuation.

Catalysts

- Multiple global coating companies are currently undertaking product evaluation of Ecosparc in anti-corrosive coatings. Results for this independent testing, due in 2HFY24, should be a significant catalyst in delivering first meaningful revenues for Ecosparc. If this testing validates SPN's internal data, we expect other coatings companies to adopt the technology in their products soon after driving a potential re-rate in the share price.

- A decision by the Sparc Hydrogen board and shareholders including Fortescue, to move to Stage 2 and commit the additional $2.5m investment to fund construction of the pilot plant and ongoing lab work is due in the middle of 2024. Stage 2 of the Sparc Hydrogen JV is focused on developing a pilot plant to demonstrate end-to-end hydrogen production using linear Fresnel mirrors and Sparc's unique PWS reactor. This plant is expected to be built proximal to Adelaide and will be a first-of-its-kind facility globally in the field of PWS. The CSIRO on-sun trials allowed Sparc Hydrogen to collect data and information for the design of the pilot plant PWS reactor, and a pre-FEED study was completed on the plant in late 2023.
- First meaningful revenues in FY25 for the Ecosparc business unit. Ecosparc presents significant potential benefits for both its end customers (asset owners) and intermediate customers (paint manufacturers). We note that SPN is ready now to provide commercial volumes of Ecosparc, meaning that these benefits are available to customers in the short term. We view this as a significant driver of share price value for SPN in the short term.

Risks to our view

We think that the key risks to our valuation is one or a combination of the following:

- Execution risk associated with commercialisation and delivery of Ecosparc revenue due to one or a combination of the following elements:
- Market penetration to key coatings companies.
- Unforeseen problems and costs associated with the integration of the additive in the current anti-corrosive supply chain.
- Commercialisation timeline delays leading to further funding required.
- R&D costs required to maintain and continue to develop the Sparc hydrogen and sodium-ion battery anode technologies.
- Funding risks associated with access to capital to support growth longer term.
- A significant change in the key exchange rates as majority of sales will likely be in US$.
- The market appetite for companies with sustainable technology solutions.

Board and Management Team

Nick O'Loughlin, Managing Director: Nick has 12 years of experience in investment banking and corporate finance in Australia and London. Nick was an Associate Director (Vice President) at Rothschild & Co in London from 2017 to 2020, where he advised on several landmark transactions in the resources sector. Prior to that, he was in Standard Chartered Bank's Mining & Metals team. \, Nick has held consulting roles with Rio Tinto on renewable energy projects and he was the Chief Development Officer for NYSE listed, Battery Future Acquisition Corp. Nick has been working for Sparc Technologies since January 2022 and commenced as Managing Director in January 2024

Stephen Hunt, Non-Executive Chairman: Stephen is currently Executive Chairman of Sparc Technologies (ASX:SPN). Since May 2017, Stephen has also been a Non Executive Director of 5E Advanced Materials. (ASX: 5EA, NASDAQ: FEAM). 5EA owns the Fort Cady Borate and Lithium mining project in California. In addition, Stephen is Executive Chairman and a Non Executive Director of ASX listed company, Volt Resources Ltd, (ASX: VRC), Non Executive Director of Magnis Resources Ltd. (ASX: MNS), IMX Resources Ltd and Australian Zircon Ltd. Cumulatively he has over 20 years as a Director of ASX listed minerals companies. Stephen is also a Director of a start-up, Chooze, (www.chooze.com.au), which is an online marketplace especially designed to ease the purchasing process of goods for NDIS participants. Stephen is a Member of the Australian Institute of Company Directors.

Daniel Eddington, Non-Executive Director: Dan has over 20 years experience in the financial markets with experience across multiple sectors including the resource, energy and industrial sectors. Dan specialises in equity capital markets and has been responsible for IPO's, placements, reverse takeovers, underwritings, corporate negotiations and corporate advisory for companies predominantly in the resource and technology sectors. Dan is also a non-executive director of Jade Gas Holdings (ASX:JGH).

Adrien Wing, Company Secretary: Adrien Wing began his professional career practising in the audit and corporate advisory divisions within a boutique-chartered accounting firm. Mr Wing has a pedigree in the life sciences industry being the founder of Rhythm Biosciences Ltd (ASX:RHY) and bringing that entity to the ASX in 2017. Mr Wing currently serves as an officer/director on the following company boards: (i) Cleo Diagnostics Ltd (ASX: COV) - Non-Executive Chair; (ii) Red Sky Energy Ltd (ASX: ROG) – Director and Joint Company Secretary; (iii) New Age Exploration Ltd (ASX: NAE) – Director and Joint Company Secretary; and (iv) Osmond Resources Ltd (ASX: OSM) – Company Secretary.

Personal disclosures

Peter Spurling received assistance from the subject company or companies in preparing this research report. The company provided them with communication with senior management and information on the company and industry. As part of due diligence, they have independently and critically reviewed the assistance and information provided by the company to form the opinions expressed in this report. They have taken care to maintain honest and fair objectivity in writing this report and making the recommendation. Where MST Financial Services or its affiliates has been commissioned to prepare content and receives fees for its preparation, please note that NO part of the fee, compensation or employee remuneration paid has, or will, directly or indirectly impact the content provided in this report.

Company disclosures

The companies and securities mentioned in this report, include:

Sparc Technologies (SPN.AX) | Price A$0.22 | Valuation A$0.48;

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