

Powering for the long term

Novonix is building a battery materials business targeting the Electric Vehicle (EV) and Energy Storage Systems (ESS) markets. The company owns a battery testing and technology business in Nova Scotia, Canada, a synthetic graphite production operation in Chattanooga, US, and holds exploration licences on a natural graphite deposit at Mt Dromedary in Far North Queensland. NVX's battery testing business connects it with key participants in the battery value chain and gives it the advantage of ensuring its anode product will meet the technical requirements of its future customers. NVX was founded in 2012 as Graphite Corp and was listed on the ASX in 2015. The company has recently undergone a capital restructure, raising \$63m in a share placement and a non-renounceable rights issue, priced at \$0.29/share which allowed it to redeem all convertible notes, repaying all unsecured short-term loans and fund both the expansion of its 100% owned PUREgraphite anode business to 2,000tpa capacity over 2020 and 2021 (currently 250tpa capacity) and the commercialisation of its breakthrough and patented technologies, Dry Particle Micro Granulation (DPMG) and Single Crystal Cathode (SCC) through a new subsidiary company.

Business model

Novonix owns an existing battery testing business in Nova Scotia, Canada which services some of the key players in the EV and Lithium Ion Battery (LiB) markets such as Samsung, Panasonic, and Sony Corporation. The company generates sales from customers in 14 countries. In 2019, it also acquired 100% of its JV PUREGraphite which has developed a synthetic graphite production process which is in the process of being commercialised with shipments to its first customer Samsung SDI due to depart in October (four months later than expected due to COVID-19) and advancing production testing of their material under an MOU with Sanyo. Over the next two years, NVX will increase production at this facility from 250tpa currently to 2,000tpa. Novonix is also in the process of advancing its DPMG and SCC technologies to pilot stage with the intention to develop a lower-cost, lower waste cathode material for high energy density, ultra-long lifetime lithium-ion batteries.

Recent company commentary

Novonix has reported FY20 unaudited revenues of \$5m (in line with consensus) which was more than 100% revenue growth year on year and predominantly generated by its battery testing business. In its quarterly report released late July, the company noted that COVID-19 had forced the shutdown of its PUREgraphite operations in April and May but that processing had restarted in June after recommissioning. June was the first month of operation with new plant with time spent optimising equipment, setting and operator training.

Consensus forecasts for strong revenue growth in FY21 & FY22

Consensus forecasts (one analyst) are for strong growth in revenues in FY21 and FY22 (at 30 August these forecasts respectively were \$12.5m and \$45.2m) with an expectation that Novonix will deliver its maiden profit of \$1.7m in FY22. It should be noted, however, that analyst estimates have historically been higher and that the current COVID-19 environment could present further delays to commercialisation. In terms of comparable listed peers, Redflow (ASX:RFX) is a flow battery company seeking to develop, manufacture and sell its zinc-bromine flowing electrolyte battery technology. Lithium Australia (ASX:LIT) which owns proprietary processes to develop high-spec cathode materials.

Historical earnings and ratios

Year end	Revenue (A\$m)	Gross Profit (A\$m)	EBITDA Adj* (A\$m)	NPAT Adj* (A\$m)	NPAT Rep	EPS Adj*	EPS Rep (c)	EV/Sales [^] (x)
06/17a	0.2	0.1	(1.8)	(2.6)	(6.1)	(3.1)	(7.5)	425.2
06/18a	2.4	1.4	(1.7)	(4.0)	(10.3)	(3.5)	(8.9)	31.9
06/19a	2.3	1.5	(3.7)	(6.1)	(26.1)	(5.0)	(21.2)	29.8
06//20a	5.0	n.a	n.a	n.a	n.a	n.a	n.a	53.1

Source: Company data [^]Based on share price at year end *Adj for non-cash/one time items

Energy Infrastructure

4 September 2020

Share details

ASX Code	NVX
Share price (3-Sep)	\$1.68
Market Capitalisation	\$566.2M
Shares on issue	348.5M
Net cash at 30/06/2020	\$37.7M
Free float	58.9%

Share performance (12 months)



Upside Case

- Leveraged to EV and LiB demand
- Strong established reputation as a battery testing business servicing EV manufacturers
- Samsung secured as first synthetic graphite customer

Downside Case

- Risk of alternate technology displacing lithium batteries
- Sensitive to fluctuations in petroleum coke prices and battery anode costs
- Still two years+ from profits (consensus)

Catalysts/upcoming events

Confirmation that first shipments of PUREgraphite proceed in October as planned

Advance PUREGraphite production to 2,000tpa by H2 FY21

Advance DPMG & Single Crystal Cathode technologies from lab to pilot stage

Comparable companies (Aust/NZ)

Lithium Australia (ASX:LIT) Redflow (ASX:RFX)

Top 5 shareholders

St Baker Energy Holdings Pty Ltd	17.48%
Greg Baynton (Exec Dir)	8.61%
Philip St. Baker (Group MD)	6.10%
Washington H Soul Pattinson	4.75%
Regal Funds Management	3.23%

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FINANCIAL SERVICES GUIDE

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