ASX ANNOUNCEMENT

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Lithium Australia selects Lycopodium to assist with DFS of LFP production plant

HIGHLIGHTS

- **Lycopodium Minerals Pty Ltd ('Lycopodium'), an experienced global engineering and project delivery entity, will provide engineering support services for Lithium Australia's definitive feasibility study ('DFS') for a potential lithium ferro phosphate ('LFP') manufacturing facility.**
- **The DFS programme is already well underway.**
- **DFS activities have been expanded to include early-stage, semi-commercial LFP production, to support the final stages of product pre-qualification.**
- **The jurisdictional focus will be locations in Australia and North America.**
- **Customer offtake discussions will advance in parallel with the DFS.**

Lycopodium contract

As a wholly owned subsidiary of Lithium Australia NL (ASX: LIT), VSPC Pty Ltd ('VSPC') is pleased to announce that, following a competitive tender process, global engineering and project delivery entity Lycopodium has been selected to provide engineering support services for VSPC's DFS of a 10,000 tonnes per annum ('tpa') LFP manufacturing facility.

Lycopodium, which delivered an efficient, client-focused engineering solution for the DFS, has assembled technical specialists in key areas to support the scale-up and commercialisation of VSPC's patented RC Process for LFP cathode powder production.

Since completion of a pre-feasibility study (see ASX announcement of 14 April 2021), VSPC's DFS development activities have focused on providing samples for customer assessment (see ASX announcement of 8 July 2021) and developing a detailed understanding of product pre-qualification requirements for, in particular, the electric vehicle ('EV') sector.

DFS scope and pre-qualification requirements

VSPC has expanded the scope of the DFS to include assessment of an early-stage, semi-commercial production facility to service requirements for product pre-qualification prior to implementation of the 10,000 tpa commercial LFP manufacturing facility.

In a prospectus dated 10 February 2021, Lithium Australia noted a potential for acquisition of assets from Johnson Matthey PLC. That acquisition, which would potentially have provided facilities for LFP pre-qualification, failed to complete, resulting in plans for the construction of a pre-qualification plant being included as part of the DFS.

The path to production

Successful completion of the DFS for an LFP manufacturing facility would signal a major step-up in production capacity for VSPC, which currently owns and operates a research and development facility and pilot plant in Brisbane, Queensland, Australia.

VSPC will advance customer offtake discussions in parallel with the DFS.

Historically (and outside China), the lithium-ion battery ('LIB') market has embraced cathode chemistries featuring nickel and cobalt (NMC). However, in the last 18 months there has been a significant shift, with LFP-type LIBs emerging as the fastest growing segment of that market.

In 2020, global production of LFP cathode material reached 156,000 tonnes ('t'). By 2021, LFP had become the fastest growing class of cathodes, with production worldwide increasing more than 2.5 times – to 407,000 t.

ICCSino, China's leading battery supply chain analytics group, forecasts continued rapid growth of LFP until the end of the decade, projecting production of 1.7 million t ('Mt') by 2025, and more than 3 Mt by 2030 (representing a 35% CAGR).

According to Bloomberg NEF, in 2021 LFP eclipsed NMC for use in energy storage, and the former is expected be to the major LIB chemistry choice in the energy storage sector until at least 2030.

A more recent analysis by Wood Mackenzie Power & Renewables forecast that global demand for LFP will exceed 3 Terra-Watt hours (TWh) by 2030 and predicts that LFP will be the dominant battery chemistry (compared to NMC) by 2028.

That said, **less than 1% of LFP** is currently produced outside China; this means that, despite its modest size, VSPC's LFP project, if commercialised, would position VSPC as a significant (non-Chinese) producer of that product.

Choice of jurisdiction

In terms of jurisdiction, the lack of meaningful LFP production beyond China provides many supply opportunities. At present there is no LFP production in the United States ('US'), even though most EV producers there offer LFP battery options in their entry-level models, as well as in some high-end vehicles. The *US National Blueprint for Lithium Batteries 2021-2030* promotes the development of domestic supply chains for all lithium batteries and battery materials, including LFP, from resources through to chemicals and, finally, battery production. Ultimately, then, LFP needs to be produced locally, which is likely to position the US as a jurisdiction of very high demand for that product.

Worldwide, consumption of LFP as an active battery material seems set to burgeon, due to the rising demand for EVs and battery energy storage, and North America is likely to be one of the most rapidly expanding LFP markets during this decade. The North American opportunity will therefore be incorporated into the VSPC DFS.

Comment from Lithium Australia managing director Adrian Griffin

“Progress on VSPC's DFS has been strong over the past six months, with preparatory work undertaken by Lithium Australia. We will now use Lycopodium to drive the DFS to completion. Delivering a robust DFS is critical to ensuring that we are well-prepared for funding and development activities. Pre-qualification will be undertaken in parallel, to allow for the securing of offtake to support project financing.

"Construction of a dedicated small-scale production facility for the purpose of material accreditation is a critical part of the feasibility process. We are committed to the construction of such a facility, the design of which will form part of the DFS.”

Comment from Matt Allen, Lycopodium general manager – Brisbane

“We are very pleased to be partnering with Lithium Australia. LFP technology represents an exciting aspect of the battery chemical supply chain and we look forward to leveraging our battery metals expertise, including engagement with the FBICRC (Future Battery Industries Cooperative Research Centre), to assist in successful development of this project."

Authorised for release by the Board.

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Forward-looking statements

This announcement contains forward-looking statements. Forward-looking statements are subject to a variety of risks and uncertainties that it is beyond the Company’s ability to control or predict and which could cause actual events or results to differ materially from those anticipated in such forward-looking statements.

About Lithium Australia

Lithium Australia aims to ensure an ethical supply of energy metals to the battery industry by creating a circular battery economy that enhances both sustainability and resource security. Reprocessing spent lithium-ion batteries to create new ones is intrinsic to this plan, with the Company operating Australia's only fully integrated mixed-battery recycling business.

Having rationalised its portfolio of lithium projects/alliances, Lithium Australia continues its research into, and the development of, proprietary extraction processes for the conversion of *all* lithium silicates (including mine waste), and of fines generally discarded during conventional spodumene conversion, to lithium chemicals, from which it will produce advanced cathode materials – including LFP – for the battery industry globally. The Australian federal government has recognised the Company's progress by awarding of substantial research grants designed to progress the nation's advanced battery capabilities.

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By uniting resources and innovation, Lithium Australia seeks to vertically integrate lithium extraction, processing and recycling.

About Lycopodium

A leader in its field, Lycopodium provides its clients with targeted and integrated engineering, construction and asset management solutions for mineral processing and chemical plant developments.

Lycopodium has the expertise to deliver complex, multidisciplinary projects through the provision of feasibility studies and advisory services. Operating across the resources, infrastructure and industrial processes sectors, Lycopodium's diverse team of industry experts provides bespoke and innovative solutions across all commodity types, with offices in Australia, South Africa, Canada, Ghana and the Philippines.

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