ASX ANNOUNCEMENT

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Lithium Australia PFS vindicates high-value potential of LFP battery materials

HIGHLIGHTS

- **Superior performance of VSPC lithium ferro phosphate ('LFP') product demonstrated.**
- **Positive pre-feasibility study ('PFS') confirms veracity of independent LFP cathode powder production chain.**
- **US$253 million net present value ('NPV') and internal rate of return ('IRR') of 33% for 13 years of LFP production.**
- **LFP attributes driving demand and market growth include:**
  - **superior safety**
  - **low-cost**
  - **no conflict metals required.**
- **Lithium Australia has committed to a definitive feasibility study.**

Comment from Lithium Australia MD, Adrian Griffin

“Lithium Australia’s subsidiary VSPC Ltd ('VSPC') has demonstrated its capacity to produce some of the most advanced LFP cathode powders available and also higher energy density variants such as lithium manganese ferro phosphate (‘LMFP’). VSPC has completed a PFS that clearly demonstrates the value of establishing an alternative cathode powder supply chain using VSPC’s proprietary technology.

"These major milestones have been achieved in an environment in which the largest electric vehicle ('EV') producers are moving to incorporate LFP lithium-ion ('Li-ion') batteries into entry-level vehicles, due to their superior safety, lower cost, longer life and reduced exposure to conflict metals. These LFP attributes are also expanding its utilisation in stationary energy-storage applications. Indeed, major battery producers worldwide are racing to expand their LFP production to meet demand as LFP becomes the fastest growing sector of the battery industry.

"At present there is little LFP production outside of China, with original equipment manufacturers striving to secure alternative supply chains. Lithium Australia and VSPC aim to provide that supply chain security.”

VSPC, which has 17 years’ experience in the production of nano powders, operates a pilot facility in Brisbane, Australia, where it produces advanced LFP and LMFP cathode powders.

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Introduction

VSPC is a wholly owned subsidiary of Lithium Australia NL (ASX: LIT, 'the Company'). At its R&D facility in Brisbane, Australia, VSPC is developing LFP-based cathode powders and derivatives, as well as LMFP cathode powders.

VSPC's LFP is superior in quality and performance to most of the other LFP cathode powders currently available, and it has now completed a PFS for the proposed production of that LFP cathode powder. The PFS considered three jurisdictions for that production: Australia, Vietnam, and India.

Robust project economics

The PFS has confirmed robust project economics for the manufacture of VSPC's LFP cathode powder, with production to ramp up to a capacity of 10,000 tonnes per annum ('tpa') over a three-year period, reaching nameplate capacity in 2026. The case for locating the plant in India is revealed as the best financial outcome with a net present value ('NPV') of US$253 million and an internal rate of return ('IRR') of 33%.

The PFS is based on proprietary VSPC process technology that provides competitive, if not superior, performance when compared with other processes for the manufacture of advanced LFP materials, notably the more expensive sol-gel processes used in China and Vietnam.

While the PFS has provided a detailed evaluation of the three possible jurisdictions, further factors – such as strategic partnerships with upstream mining, refining and chemical producers – may provide further benefits for the commercialisation of VSPC cathode powders. Similarly, downstream partnerships (cathode and battery manufacturing) may provide additional financial benefits in other jurisdictions, and to that end the Company is evaluating specific opportunities in Australia, South Korea, Europe and the United States.

PFS base case

The PFS includes a base case for location of the plant in southern India, with a discount rate of 8%. Major indicators include:

- an LFP production rate of 10,000 tpa;
- an NPV of US$253 million (13 years' operation);
- an IRR of 33%;
- a payback period of five years;
- annual LFP sales revenue of US$140 million;
- EBITDA (earnings before interest, taxes, depreciation and amortisation) of US$66 million per annum;
- a free cash flow of US$56 million per annum, and
- plant investment of US$113 million in two stages over three years.

Further particulars of the PFS considerations are provided in Appendix I – Executive Summary.

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LFP market outlook strong

Over the past 12 months, global demand for LFP has increased by more than 25%, bringing Chinese LFP cathode powder manufacturing up to over 100,000 tpa. Only 2% of the global LFP cathode powder production originates from outside China.

With many major EV producers already manufacturing LFP-powered vehicles within China, and making these available in other jurisdictions, North America and Europe are likely to be areas of high demand. Added to this mix is the recent announcement by the Volkswagen Group ('VW') that its entry-level EVs will be powered by LFP. Major EV manufacturer, BYD has announced it will discontinue the production of batteries containing nickel and cobalt, directing all of its production capacity to LFP. The use of LFP in battery energy-storage systems (BESS) and marine application will further increase demand. This creates a great opportunity to supply into a market with little competition.

Global trends in LFP production are expected to follow what is occurring in China, where rising LFP demand, as forecast by Roskill (below), are likely to see it become the dominant Li-ion chemistry in the next few years, due to its greater safety characteristics, environmental, social and governance (ESG) values and more positive cost structure.

Roskill Base Case

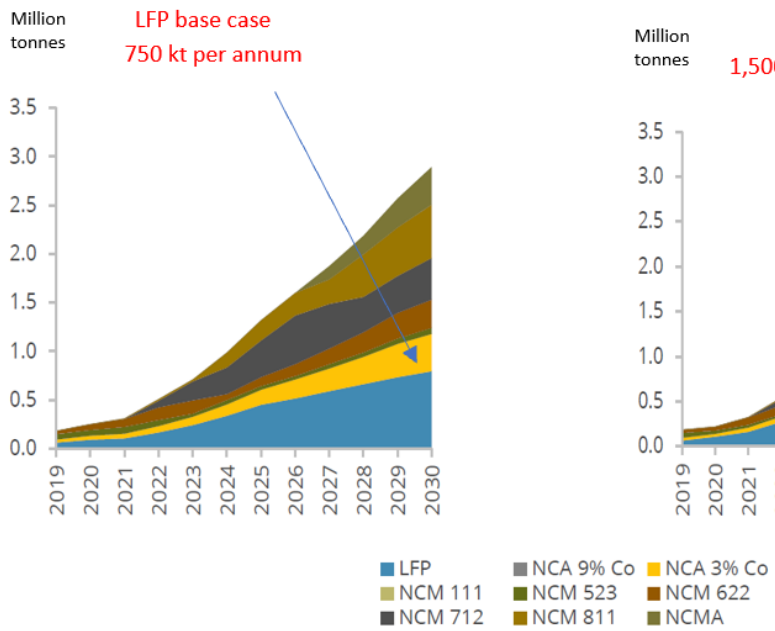
2030 750 kt LFP
requiring 184 kt LCE or LP
market value ~ USD 1.8b

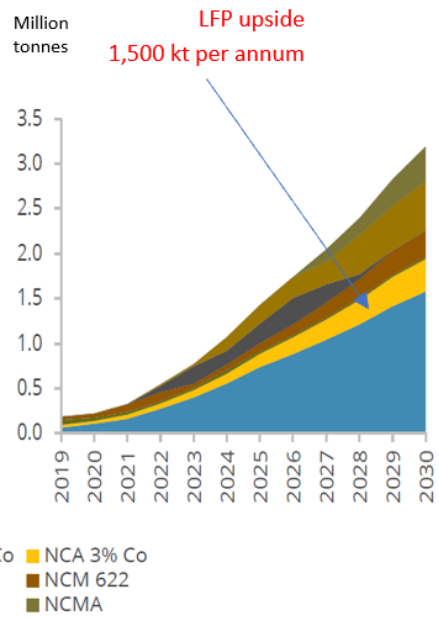
LCE = lithium carbonate equivalent

Roskill Scenario 2 - increased LFP adoption in global EV market

2030 ~1,500 kt LFP
requiring 367 kt LCE or LP
market value ~ USD 3.7b

LP = lithium phosphate





Sources: Roskill, June 2020. The resurgence of LFP cathodes (White paper); ITRI, November 2020. LFP Market report.

Next steps

These include:

- completing a business case review for the preferred Indian option;
- engaging an engineering firm for the definitive feasibility phase,
- confirmation of project location, as well as site selection, and
- conduct a Life Cycle Assessment analysis of the project to determine sustainability factors and identify opportunities to reduce carbon footprint and other sustainability initiatives.

Lithium Australia will continue to evaluate opportunities for downstream partnerships, particularly in jurisdictions where demand for LFP consumption is likely to increase rapidly; in, for example, Europe and North America.

Authorised for release by the Board.

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About Lithium Australia

Lithium Australia aims to ensure an ethical and sustainable supply of energy metals to the battery industry by creating a circular battery economy and enhancing energy security in the process. Recycling spent Li-ion batteries to create new ones is intrinsic to this plan. The Company is rationalising its portfolio of lithium projects/alliances while furthering its research into, and development of, proprietary extraction processes for the conversion of all lithium silicates (including mine waste), and of unused fines from spodumene processing, to lithium chemicals. Lithium Australia will use those chemicals to produce advanced components for the battery industry globally and for stationary energy-storage systems within Australia. By uniting resources and innovation, the Company is working to vertically integrate lithium extraction, processing and recycling to create a more sustainable battery industry.

About VSPC

VSPC is a wholly owned subsidiary of Lithium Australia. It operates a battery material R&D facility and pilot plant in Brisbane, Queensland, Australia, where it has developed advanced processes for the manufacture of cathode powders applicable to all Li-ion battery chemistries, as well as anode materials like lithium titanate ('LTO'). VSPC's simple, scaleable processes for the production of nano-structured battery cathode powders allow precise control of chemical composition, particle size and surface characteristics; moreover, they are flexible and cost-competitive (given their ability to use low-cost raw materials and recycled lithium as feed) and readily adaptable to a range of nanostructured materials. Currently, VSPC is commercialising its process technology for the manufacture of cathode material for LFP- and LMFP-type Li-ion batteries.

Forward-looking statements

This document contains forward-looking statements. Forward-looking statements are necessarily based on a number of estimates and assumptions that, while considered reasonable by the Company, are inherently subject to significant technical, business, economic, competitive, political and social uncertainties and contingencies, involve known and unknown risks and uncertainties that could cause actual events or results to differ materially from estimated or anticipated events or results reflected in such forward-looking statements, and may include, among other things, statements regarding targets, estimates and assumptions in respect of commodity prices, operating costs and results, capital expenditures, ore reserves and mineral resources and anticipated grades and recovery rates and are, or may be, based on assumptions and estimates related to future technical, economic, market, political, social and other conditions.

The Company disclaims any intent or obligation to update publicly any forward-looking statements, whether as a result of new information, future events or results or otherwise. The words ‘believe’, ‘expect’, ‘anticipate’, ‘indicate’, ‘contemplate’, ‘target’, ‘plan’, ‘intends’, ‘continue’, ‘budget’, ‘estimate’, ‘may’, ‘will’, ‘schedule’ and other, similar expressions identify forward-looking statements. All forward-looking statements made in this presentation are qualified by the foregoing cautionary statements. Investors are cautioned that forward-looking statements are not guarantees of future performance and, accordingly, investors are cautioned not to put undue reliance on forward-looking statements due to the inherent uncertainty therein.

Many known and unknown factors could cause actual events or results to differ materially from estimated or anticipated events or results reflected in such forward-looking statements. Such factors include, but are not limited to: competition; mineral prices; ability to meet additional funding requirements; exploration, development, operating and sales risks; uninsurable risks; uncertainties inherent in ore reserve and resource estimates; dependence on third-party smelting facilities; factors associated with foreign operations and related regulatory risks; environmental regulation and liability; currency risks; effects of inflation on results of operations; factors relating to title to properties; native title and Aboriginal heritage issues; dependence on key personnel, and share-price volatility. They also include unanticipated and unusual events, many of which it is beyond the Company’s ability to control or predict.

APPENDIX 1 – PFS executive summary

1.1 BACKGROUND

VSPC is a developer of process technology for the manufacture of nanostructured materials used in applications such as catalysts and Li-ion batteries. Over a 15-year period, VSPC has developed novel process technologies for the manufacture of LFP cathode powders, one of several Li-ion battery materials for which strong demand is forecast. VSPC's LFP cathode materials are advanced products with performance characteristics equivalent to the leading products in the market produced by more expensive sol-gel and hydrothermal processes.

This PFS is for a 10,000 tpa LFP production facility, located in the Indo-Pacific region, to serve the growing demand for LFP cathode material globally. The project assumes production commencing October 2023, reaching full capacity in July 2025. Three country options have been evaluated; namely, India, Vietnam and Australia.

1.2 PFS OUTCOMES

The study concluded that projects in India and Vietnam would have similar and very attractive financial outcomes, while a project in Australia, although still financially strong, would be less attractive, due to higher capital costs and marginally higher operating costs.

The Indian project, which has an NPV of USD 253 million (8% discount rate, 2036 – 13 years' production) and an IRR of 33%, is the most favourable due to competitive operating costs and a corporate tax rate of 17.2%. Locating a project in India has strategic appeal in terms of it serving both the international and emerging domestic market.

1.3 GLOBAL MARKET FOR LFP CATHODE MATERIAL

Global production of LFP in 2020 was approximately 120,000 tpa and constituted approximately 20% of total cathode material production. The Industrial Technology Research Institute (ITRI) forecasts strong adoption of LFP across the major application segments, and that overall demand for LFP will be 150 gigawatt hours ('GWh') or 305,000 tonnes ('t') LFP in 2025, and 331 GWh or 675,000 t LFP in 2030. The growth rate is strongest for the EV segment at 25% compound annual growth rate ('CAGR'). Roskill further proposed a more aggressive scenario for adoption of LFP in the EV market that would see demand grow more than four-fold to 500,000 tpa by 2025 and 1.3 million tpa by 2030 (Roskill, 2020).

Global LFP consumption in recent years has been predominantly within China, while the non-China market for LFP is estimated to have been less than 10,000 tpa and confined to a limited number of cell makers in Japan, Taiwan, France and South Korea. A resurgence in demand outside China is expected as cell making becomes established in the major global markets, including the Indo-Pacific region, Europe and North America. VSPC estimates that the non-China market will be at least 65,000 tpa by 2030, assuming only 10% of global LFP cell making occurs outside China.

India is an important emerging market, with strong government incentives for the establishment of 50 GWh of cell-making capacity in the next 5 years. If 30% of that capacity is LFP, then the domestic market in India alone will be 30,000 tpa in 2025.

Expansion of LFP cathode material capacity is required in China and internationally as demand increases for LFP batteries for EV applications and to replace lead-acid batteries in automobiles, back-up power supplies and stand-alone power for remote site applications.

Given the strong forecast growth in demand for LFP cathode material, the VSPC business plan is to service the expected growing market for LFP outside China. This study is for development of a 10,000 tpa LFP project in the Indo-Pacific region to serve markets in Asia, Europe and North America.

LFP applications

LFP cathode material is experiencing strong demand and growth due to its cost and performance attributes. LFP battery packs cost less than nickel cathode material alternatives. LFP outperforms nickel cathode materials in terms of thermal and chemical stability, and therefore offers better safety attributes and longer service life than nickel cathode materials.

LFP has advantages in terms of resource utilisation and requires 20% less lithium versus nickel cathode materials per kWh (kilowatt hour) of storage capacity. LFP is also manufactured with common iron and phosphate raw materials, with no dependence on metals that may be in short supply and experience volatile pricing.

LFP cathode material and cells have a lower specific energy density compared to nickel chemistry alternatives, although in recent years the leading LFP cell makers have developed cell designs that achieve energy densities above 200 watt-hour per kilogram ('Wh/kg') and the energy density gap with nickel-based chemistries (250 Wh/kg) has narrowed.

In 2020, LFP emerged as the standard battery chemistry in China and more broadly for lower cost and standard range EVs (up to a 400-kilometre range). In China, LFP accounts for more than 40% of passenger EV models, and battery platforms for e-buses and special vehicles (logistics trucks, rubbish trucks, road cleaners) are almost exclusively LFP battery-powered.

LFP's importance as a Li-ion cathode material has been confirmed by recent industry trends, including Tesla's manufacture of the Model 3 with an LFP battery for markets in China and Europe, and the decision by CATL (Contemporary Amperex Technology) to invest in new LFP manufacturing capacity in China. VW has invested in Gotion High-Tech Co. Ltd. (a large Chinese battery maker and LFP manufacturer), which is seen as a strategic move to provide access to LFP cell and pack technologies.

Applications dominated by LFP include back-up power supplies for data centres, communications towers and new 48-volt battery formats for hybrid vehicles.

LFP has also been proven to outperform nickel-based chemistries for grid-service energy-storage applications in terms of cost, efficiency, stability and service life, as well as safety (Pacific Northwest National Laboratory PNNL 2019).

Further, LFP is being widely adopted as a cathode material in Li-ion batteries in applications traditionally served by lead-acid batteries. Leading lead-acid battery manufacturers have Li-ion battery programs for which LFP is the preferred cathode material due to its cost, stability and performance at low temperatures (below 0 degrees Celsius).

International market, patent licensing, intellectual property

The trade of LFP cathode material outside China has for the past two decades been subject to licensing of technology related to the chemistry and carbon coating of the LFP powder. The technology has been licensed to international LFP suppliers by intellectual property consortium LiFePO4+C AG, whereas in China no licensing was required and the LFP industry developed strongly. The last of the primary LFP patents expires in September 2021 (2025 for USA) and VSPC is not aware of patents that limit its freedom to operate in the international LFP market post September 2021.

IP Australia has had accepted a VSPC Australian patent application (June 2020) for new-generation process technology that delivers significant manufacturing cost savings for LFP manufacture, and this is the technology that will be deployed for the commercial project. International patent filing is planned for mid-2021.

In addition, VSPC has developed intellectual property for the manufacture of high-quality iron chemicals from low-cost iron raw materials and this is also the subject of an Australian patent application.

1.4 VSPC PROCESS TECHNOLOGY

The VSPC process is a novel chemical process involving processing steps that include solution preparation, crystallisation, light milling and carbon addition, followed by thermal treatment to form the LFP phase with the desired chemical and physical properties. Starting with all materials in solution provides precise control of the chemistry and phase purity and, unlike conventional LFP processes, the VSPC process does not require jet milling at the final stage to achieve the desired particle size. The process is readily scalable and employs equipment common to the cathode material industry.

VSPC's process technology has the flexibility to utilise a number of lithium raw materials, including lithium carbonate, lithium hydroxide and lithium phosphate. The latter is important in the context that lithium phosphate is a cost-effective form in which to recover lithium from certain mineral types (e.g., lepidolite, amblygonite and spodumene), as well as from recycling of Li-ion batteries. VSPC's process technology produces an advanced LFP cathode material at prices estimated to be competitive with those of standard LFP manufacturers in China.

The VSPC process is relatively simple and utilises standard process equipment compared to the alternate sol-gel and hydrothermal processes used for advanced LFP manufacture elsewhere.

1.5 VSPC LFP CATHODE MATERIAL

The VSPC process enables precise control of stoichiometry (ratio of lithium: iron: phosphate) and uniform product composition, which is difficult to achieve consistently with some alternate processes for LFP manufacture; e.g., solid-state iron phosphate process. The process also allows for control of the LFP crystallite size at nano-scale, as well as control of properties for the agglomerated LFP product, which is important for the cell-making process. LFP products for both energy and power applications can be made with the VSPC process.

The electrochemical performance of VSPC LFP cathode material has equivalent to that of leading advanced LFP cathode materials in the market. Specific capacity is approximately 160 mAh/g (milliampere hours per gram), with excellent rate and low temperature performance.

Testing of VSPC cathode material in 18650 cells has demonstrated performance equivalent to that of the leading product in the Chinese market and superior performance at low temperatures, which is important for auto-starter battery and some energy-storage applications.

1.6 TARGET MARKET

Customers for VSPC LFP cathode material fall into three categories:

- cell makers aligned with EV manufacturers;
- cell makers for the energy-storage market and specialty applications, and
- lead-acid battery companies that are developing LFP battery products to replace lead-acid batteries in applications such a back-up power supply, low-speed vehicles and automotive.

1.7 LFP PRICE AND COMPETITIVENESS

An LFP price of USD 14/kg (ex-works) has been assumed for the project. This price was determined based on analysis of LFP pricing in the international market in recent years and an assessment of LFP manufacturing costs for plants in China and internationally, and taking into account the long-term pricing forecast for lithium carbonate of USD 10.50/kg (UBS Nov 2020).

In determining an appropriate target price for VSPC's LFP cathode material, a range of assumptions, pricing strategies and methodologies was considered. It was determined that USD 14/kg is a reasonable target price for VSPC cathode material for the international market (outside China).

The key assumptions and drivers that formed the basis of the rationale underpinning the target price include but are not limited to the following.

1. ***Price point at or below leading international LFP providers***

   Assuming existing processing technology and current raw material prices, a sales price of USD 14.00/kg would be sub-economic and loss-making for existing producers utilising sol-gel and hydrothermal processes.

2. ***Chinese processes set up internationally***

   Project modelling indicates that the VSPC project has a price structure (inputs, operations and margin) that is comparable to that of existing Chinese domestic operations setting up operations in the same locations as those outlined in the VSPC PFS.

3. ***Pricing for comparative products***

   International prices for LFP cathode materials are in the range USD 12-30/kg, depending on supplier and volume. Trade statistics show that LFP export prices from Vietnam ranged from USD 22.00 to 18.50/kg over the past 3 years for an advanced LFP product with performance comparable to that of VSPC's LFP product. A long-term price of USD 14.00/kg was selected for project financial modelling.

4. ***Lithium carbonate price***

   A long-term price of USD 10.50/kg (UBS November 2020) has been assumed for the financial modelling. Cathode material prices are expected to increase on 2020 levels due to higher pricing for lithium carbonate and the increased demand for LFP cells.

LFP manufacturing costs

Cathode material production costs are driven primarily by the cost of chemical reagents and, to a lesser extent, the cost of electricity, energy and labour. Variable costs typically account for 90% of the manufacturing cost of LFP cathode material. Competitive LFP manufacture is dependent upon the availability of reagents and energy at competitive prices, and having an automated, large-scale plant (>5,000 tpa) to enable economy of scale and consistent product quality.

The VSPC process technology has been developed to include a slurry-based alternate flowsheet that has lower reagent costs compared to the primary solution process. This process is termed the VSPC-RC process.

This study has included the evaluation of location and raw material options, and evaluation of costs for LFP production using the VSPC process in China, India, Vietnam and Australia. The VSPC-RC process technology is competitive with solid-state processes – the conventional technology for LFP manufacture in China – and modelling indicates the VSPC process is less expensive than the sol-gel and hydrothermal processes utilised to produce the leading products in the market.

The VSPC-RC process using magnetite or another low-cost, high-grade iron oxide material has a manufacturing cost which compares favourably to conventional processes used in the industry.

1.8 LOCATIONS

Countries evaluated as possible production locations in this study were India, Vietnam and Australia. India was selected due the large emerging market for EVs and energy-storage applications employing Li-ion batteries there. India has only one Li-ion cell-making plant at present but is expected to be a major manufacturer of, and market for, Li-ion batteries by 2025. India also has a mature chemical industry that can competitively supply chemical reagents, as well as a suitably qualified and experienced industrial workforce. Indian government policy and incentives are in place to foster the

establishment of cell making and EV manufacture in India. India also has an attractive corporate tax rate of 17.2%.

Vietnam was evaluated as alternate production location given its proximity to China for the supply of process equipment and ready access to chemical reagents from within Vietnam and also China.

Australia has been evaluated, given the potential fit with upstream lithium mining and refining, the availability of iron raw materials and the potential market for battery energy-storage in Australia and cell-making projects that may be established.

Other locations that are also relevant but not modelled in this study are Thailand, Malaysia and possibly South Korea.

1.9 VSPC LFP CATHODE MATERIAL PROJECT

A location in southern India has been identified as a base-case location for the project. The location is central to a number of recently announced EV and giga-factory projects. India generally is well-positioned for the supply of chemical reagents and the location identified has ready access to a container port to service international customers.

The study assumes completion of a definitive feasibility study in March 2022 and commencement of construction in July 2022, with the plant constructed in two phases over 2 years. Production is ramped up to a capacity of 10,000 tpa over 2 years, commencing September 2023 and reaching nameplate capacity in July 2025 (Figure 1-1).

Further expansion of capacity can be anticipated, and the project site will be configured to cater for doubling of production.

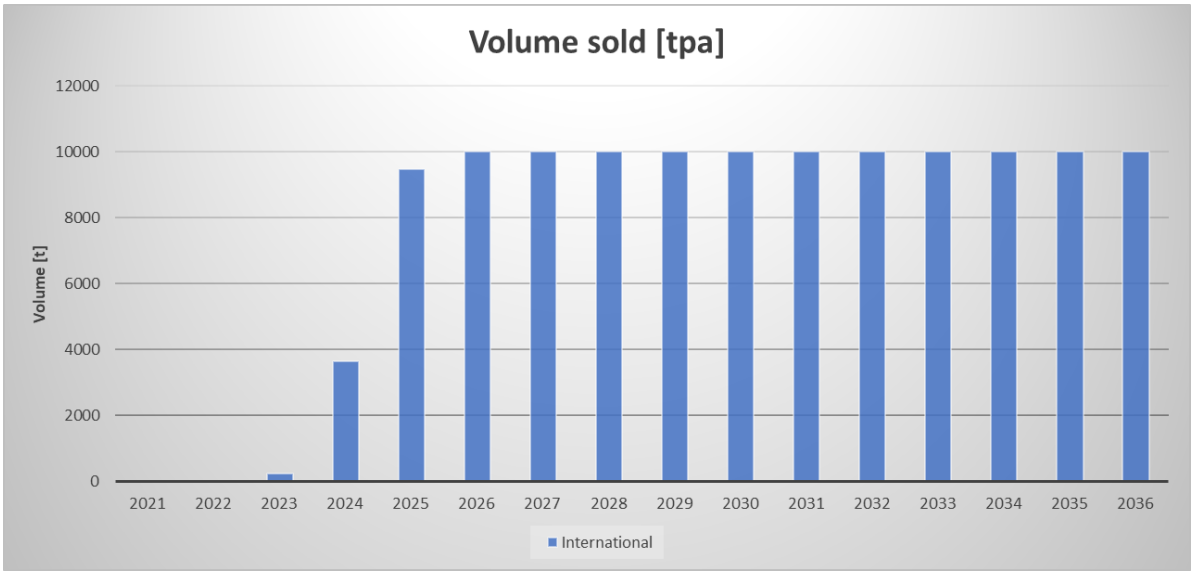

Figure-1 – LFP production

1.10 PROJECT FINANCIALS

The outcomes of financial modelling for a 10,000 tpa LFP cathode material project in India, Vietnam and Australia are presented in Table 1-1 below.

Base case assumptions include the following.

- A discounted cash flow rate of 8%.
- Corporate tax rates of:
    - India – 17.2%
    - Vietnam – 20.0%
    - Australia – 30.0%.
- A lithium carbonate price of USD 10, 500 per metric tonne.
- A production life of 13 years (expected to be longer).
- An operating cost contingency of 10%.
- A capital cost contingency of 25% for process equipment.
- Pre-production costs that include USD 3.48 million in 2021/22 for the definitive feasibility study.

Financial modelling has been undertaken in USD, as this is the currency of LFP product sales. For the Australian case, a long-term AUD:USD exchange rate of 0.70 was assumed.

The strongest financial outcome is for the Indian case, due to:

- an NPV of USD 253.4 million;
- an IRR of 33%;
- a pay-back period of 5 years, and
- plant investment of USD 113.4 million (two stages: USD 66.5 million and USD 46.9 million).

Table-1 – Financial outcomes for Vietnam, India, Australia

	Vietnam 10,000 tpa LFP	**India** 10,000 tpa LFP	**Australia** 10,000 tpa LFP
Plant Investment – Total **Stage 1** **Stage 2**	USD 104.2 m USD 61.1 m USD 43.1 m	USD 113.4 m USD 66.5 m USD 46.9 m	USD 133.5 m USD 78.3 m USD 55.2 m
Pre-production and feasibility study expenses	USD 3.48 m	USD 3.48 m	USD 3.48 m
LFP production	10,000 tpa	10,000 tpa	10,000 tpa
NPV	USD 249.2 m (2036)	USD 253.4 m (2036)	USD 178.0 m (2036)
IRR	35%	33%	25%
Payback period	5 years	5 years	6 years
LFP sales price – ex works	USD 14/kg	USD 14/kg	USD 14/kg

1.11 NEXT STEPS

Next steps for the project are as follows.

1. Complete business case review for the Indian option (30 April 2021) and then seek Lithium Australia board approval to advance the project in India.
2. Select and secure a specific site in India.
3. Select an engineering contractor for the definitive feasibility study, with a planned commencement date of 1 July 2021.
4. Engage with potential investors and secure funding for the definitive feasibility study.
5. Develop relationships with reagent suppliers in India and elsewhere for key raw materials.

1.12 RECOMMENDATIONS

Key recommendations for the project are as follows.

1. Validate the operating costs and taxation assumptions for the Indian case.
2. Investigate opportunities to integrate renewable energy into the VSPC project.
3. Continue testing and product qualification of LFP from the VSPC-RC process with customers.
4. Advance the development of LMFP cathode materials as additional product options for integration into the Indian project.
5. Integrate lithium phosphate from processing of spent Li-ion batteries into the VSPC supply chain.
6. Establish strategic relationships with proposed Li-ion cell-making projects and raw-materials suppliers in Australia for future cathode material production in Australia as a separate project.
7. Investigate opportunities for the manufacture of cathode materials in Europe and North America.

1.13 OPPORTUNITIES

1. Expansion of international production capacity beyond 10,000 tpa

The LFP market is forecast to grow to in excess of 675,000 tpa by 2030, and demand is expected from new cell-making plants in the Indo-Pacific, northern Asia, Europe and North America. Assuming at least 25% of the growth will be outside China, the international market will be of sufficient size to accommodate VSPC production well in excess of 10,000 tpa.

2. Diversification of VSPC products

VSPC uses its expertise and R&D capabilities to develop new products, including the following.

- Higher-voltage cathode materials to increase energy density in battery systems.
- Cathode materials for specialist applications such as fast charge/discharge, which has application in transportation and military applications.
- LTO, which is a nanostructured material used in the anode for fast-charge applications.

1.14 RISKS

Perceived risks for the project are as follows.

1. Supply and price of lithium carbonate.
2. Timing for project approvals in India and Vietnam.
3. Project delays related to COVID-19 international travel restrictions and reliance on in-country representatives.
4. Timely procurement of cathode-material process equipment, in light of forecast growth in the Li-ion supply chain.

5. The basic financial model developed for the purpose of the PFS is based on a set of assumptions as determined by the current market environment which could all be subject to change and could impact both capital and operating requirements and possible returns. For example, working capital requirements, supply chain terms, exchange rate and commodity prices could change. It is expected and intended that proposed scenarios will be further developed as the project moves forward.