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Galaxy set on a starring role in e-vehicles

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Galaxy Resources is determined to play a major role in the burgeoning electric vehicle market, including China's booming demand for e-bikes.

The Perth-based miner is poised to become one of China's largest producers of battery-grade lithium carbonate when its \$74 million downstream processing plant, about an hour north of Shanghai in Jiangsu province, moves into production later this year.

Galaxy has already loaded its first shipment of spodumene from its Mt Cattlin mine in Ravensthorpe in Western Australia for conversion to lithium carbonate at the new processing facility.

The company is counting on growing demand for lithium-ion batteries as it nears the completion of the 17,000 tonne per annum plant. Rechargeable batteries for electric and hybrid cars and portable gadgets like mobile phones are expected to drive demand for the world's lightest and least dense metal, which is commonly used in ceramics and glass.

Global demand for lithium totalled 102,500 tonnes in 2009 and is forecast to grow threefold over the next 10 years as demand from the electronics and electric vehicle industries continues to grow.

"Obviously at the moment lithium batteries are used in mobile phones, laptops and iPads and so on, so they are relatively small batteries but a lot of them," Galaxy's Hong Kong-based executive director, Charles Whitfield, told ResourcesDaily.

"What we're seeing now is lithium batteries being used in larger applications, like electric bikes. In China, there are a tonne of electric bikes and people in the west just aren't aware of it. There are 30 million electric bikes sold each year in China. There's an immediate market opportunity there for lithium batteries. And an electric bike uses something like 20 times as much lithium in its battery than a laptop does."

The 15 million tonne per annum Mt Cattlin mine, the second largest hard rock spodumene mine in the world, will produce about 137,000 tonnes a year of spodumene concentrate at a grade of about 6 per cent. It will also produce about 56,000 pounds a year of contained tantalum, the latter of which will be sold to Global Advanced Metals, operator of the Greenbushes and Wodgina mines in WA, under a five-year agreement.

The spodumene will be shipped to Zhangjiagang port in Jiangsu for conversion to lithium carbonate at Galaxy's nearby processing plant.

Galaxy signalled its confidence in the industry by establishing the downstream facilities rather than ship the spodumene to offshore producers. The company's wholly-owned plant is scheduled to begin commissioning at the end of the current quarter.

Galaxy, which counts investment company Creat Group, Mr Li Shu Fu, the founder and chairman of Chinese car company Geely, and Chinese conglomerate Fengli as strategic shareholders, has struck offtake agreements for its lithium carbonate with Japan's Mitsubishi Corp as well as 13 major cathode producers in China.

"It [the Jiangsu plant] has gone quite smoothly, it is on schedule," Mr Whitfield said. "It has been rigorously specified in terms of all the different components of the plant there. What we are trying to do is produce very



Mt Caitlin is the world's second largest hard rock spodumene mine.



Galaxy's first shipment being loaded.



Minerals with an ever-larger application.

high-grade product, higher grade than most of the producers in China.”

Galaxy modified the plant’s design last year to enable it to produce two brands of high-grade lithium carbonate that will be tailored for lithium batteries used in the production of electric vehicles.

According to Galaxy, these new brands – EV Grade, which is 99.9 per cent lithium carbonate, and EV Plus Grade (99.99 per cent) – will represent a key niche product offering for the electric vehicle market.

The plant’s previous design enabled Galaxy to produce commercial quantities of the standard battery grade, which is 99.5 per cent lithium carbonate.

Galaxy is also looking at capitalising on China’s growing electric bike market by investigating the development of lithium-ion batteries for e-bikes.

The company has selected a site in Jiangsu, 7.5 kilometres from its lithium carbonate plant, while a pre-feasibility study has considered initial production of 350,000 batteries a year in the project’s first phase, potentially ramping up to two or three times that amount. The company has also entered into a non-binding memorandum of understanding with a Korean consortium KUBT to supply turn-key equipment.

China’s rising affluence and its rapidly growing cities have propelled the production of electric bikes in the world’s most populous country from 58,000 in 1998 to 27 million last year.

“What we’re looking to do is ultimately have a battery plant which is highly automated, that basically uses Korean and Japanese technology so it is a much more consistent and higher quality battery,” Mr Whitfield said.

“We think that once those batteries are available in the market, it is going to accelerate the process of lithium battery adoption and that will serve the strategy of the company as a whole.”

Meanwhile, Mr Whitfield said a planned dual listing on the Hong Kong Stock Exchange remains on Galaxy’s agenda after it was postponed last month.

The Australian Financial Review

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