

ASX ANNOUNCEMENT

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Lithium Australia to market LFP, the safe lithium-ion battery

Lithium Australia NL (ASX: LIT) is forming a business partnership with leading Chinese battery producer DLG Battery Co. Ltd ('DLG') to launch a new range of lithium-ion batteries ('LIBs') in the Australian market, with a focus on industry-scale energy storage systems ('ESS').

The new marketing division, Soluna Australia Pty Ltd ('Soluna Australia'), will provide technical support, customer service and, importantly, a range of lithium-iron-phosphate (often referred to as lithium-ferro-phosphate or 'LFP') battery options for greater safety and superior performance in ESS applications.

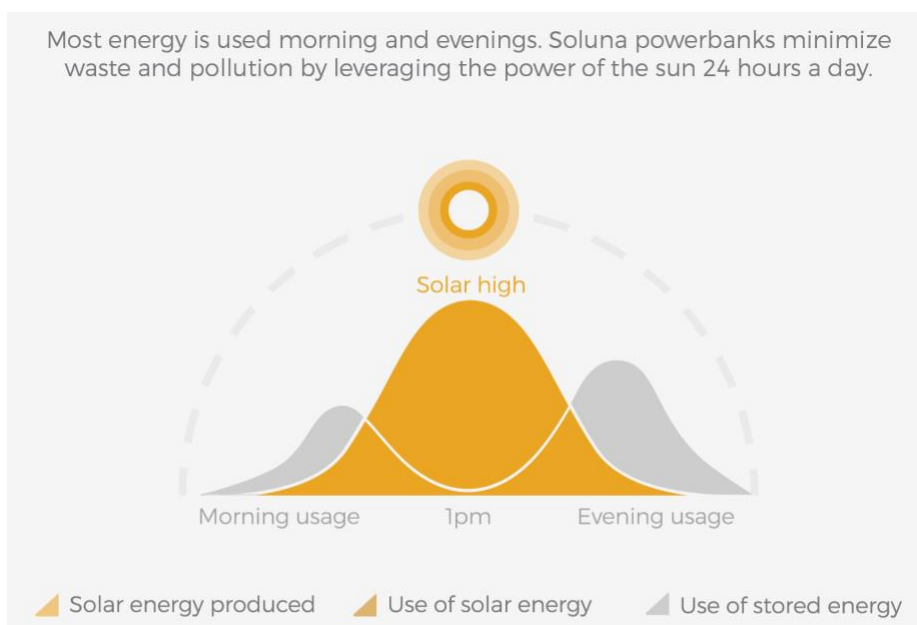
Lithium Australia/DLG Alliance

Lithium Australia has cemented its [partnership with DLG](#) by incorporating a joint marketing division, which will trade as Soluna Australia. Extensive market enquiries have identified strong demand for flexible and tailored LIB and LFP solutions in the ESS sector, which will be the prime focus of Soluna Australia, a company in which Lithium Australia holds 50% equity.

Product range

From a new Australian-based facility, Soluna Australia will supply and service a range of energy-storage products – from residential energy-storage through to industrial energy-storage units. Custom products, in particular for applications such as large-scale storage (including microgrids), will be provided to bespoke specifications.

Most energy is used morning and evenings. Soluna powerbanks minimize waste and pollution by leveraging the power of the sun 24 hours a day.



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Establishing an Australian warehousing and technical facility will provide greater certainty for ESS users currently relying on offshore suppliers.

Battery chemistry

Most of the product range will be available with nickel-cobalt-manganese ('NCM') and LFP options. Lithium Australia, which is a great advocate of LFP for reasons of safety and performance, plans to supply DLG with LFP cathode powders manufactured using Lithium Australia's the cathode powder production technology of its wholly-owned subsidiary VSPC Ltd ('VSPC').

Although VSPC technology can be used to generate most LIB cathode powders, VSPC has maintained a strong emphasis on LFP due to its superior attributes (including safety), which make it the most appropriate choice for ESS applications.

LFP is the commercial LIB chemistry of longest standing. Lithium Australia, through VSPC Ltd, is currently manufacturing LFP cathode powders on a pilot scale, with those powders used by DLG to produce commercial 18650 cells for testing purposes.

Attributes of LFP batteries

LFP, a remarkably versatile battery chemistry, has the following attributes.

- Superior operational life (typically twice the number of duty cycles of other LIB chemistries).
- Excellent safety aspects.
- High charge and discharge rates without thermal runaway (low fire risk).
- Wide operating temperature range (ideal for Australian ESS applications).
- Low supply chain risk (no nickel or cobalt).
- Low-cost, using readily available materials (no nickel or cobalt).

LFP batteries – superior safety

Recent concerns arising from electric vehicle ('EV') fires, as reported in the *Australian Financial Review* on 25 July 2019 ('Lithium miners burnt by car fires' by Paul Garvey), have highlighted public concerns about EV safety, based on the use of LIBs containing nickel and cobalt. Although LFP batteries have a lower energy density than competing nickel/cobalt-based LIBs, their superior safety record makes LFP a preferable option for many applications.

In the ESS market, batteries are commonly located within buildings. LFP provides the greatest safety, combined with longer service life than competing battery technologies.

Market potential

Australia leads the world in the installation of rooftop solar and domestic energy storage units. It has also led the world in the installation of utility-scale ESS and the development of microgrids relying on battery storage for load levelling.

Further, remote hybrid-power applications can allow consumers the advantage of substituting much of their diesel generating capacity with renewables, provided an efficient battery pack forms part of the installation. Soluna Australia is assessing the

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potential for installing a number of hybrid power management systems for evaluation in the local energy market.

Comment from Lithium Australia MD Adrian Griffin

“Our partnership with DLG, a leading Chinese battery producer, provides an opportunity to establish our new division, Soluna Australia, as a leading Australian-based provider of LIBs and technical solutions to the fast-growing ESS market that sits in our own backyard. In addition, Lithium Australia is well on the way to meeting the requirements that will enable VSPC to commercialise its cathode materials and provide Australia with access to purpose-built LFP battery storage, the safest and most effective option for energy storage systems.”

Adrian Griffin

Managing Director

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About Lithium Australia NL

Lithium Australia aspires to 'close the loop' on the energy-metal cycle in an ethical and sustainable manner. To that end, it has amassed a portfolio of projects and alliances and developed innovative extraction processes to convert *all* lithium silicates (including mine waste) to lithium chemicals. From these chemicals, Lithium Australia plans to produce advanced components for the LIB industry. The final step for Lithium Australia involves the recycling of spent batteries and e-waste. By uniting resources and the best available technology, Lithium Australia aims to establish a vertically integrated lithium processing business.

About DLG Battery Co. Ltd.

Established in Shanghai, China in 2001, DLG is a leading manufacturer of LIBs, with extension to the downstream battery pack business, and has become a well-known supplier of green energy solutions across China. The DLG business encompasses many areas, including LIBs, battery control systems, consumer batteries and a range of other battery-related research, design, manufacturing, sales and service activities:

www.dlgbattery.cn and <https://soluna.co/>.

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