

## ASX ANNOUNCEMENT



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## Australia patent applications for lithium phosphate production

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### HIGHLIGHTS

- **The International Bureau of the World Intellectual Property Organisation ('WIPO') has published two Lithium Australia patent applications for the recovery of lithium phosphate from lithium-bearing silicates and solutions.**
- **Publication is another step towards obtaining a patent grant, which provides legal protection in international jurisdictions.**
- **Production of lithium phosphate is a unit process common to Lithium Australia's SiLeach<sup>®</sup> and LieNA<sup>®</sup> technologies which potentially reduce the number of processing steps to produce battery cathode powders**

Lithium Australia NL (ASX: LIT) (or 'the Company') is focused on delivering sustainable, efficient processing and production options for the lithium-ion battery ('LIB') industry, in order to reduce the environmental footprint of said industry. Intellectual property ('IP') – a valuable asset derived from the Company's research and development activities – is managed by way of formal patent processes to retain 'know-how' as trade secrets, with the support of specialist legal practitioners.

### Comment from Lithium Australia managing director Adrian Griffin

"The Company has succeeded in developing technologies that improve the sustainability of, and reduce the environmental impacts associated with, the manufacture, use and disposal of lithium-ion batteries. Importantly, these technologies can facilitate vertical integration within the battery supply chain, potentially reducing the number of process steps involved and lowering costs for consumers. The ability to integrate metal recovery from lithium-ion batteries and regenerate cathode materials represents a major advance for the battery industry as a whole."

### Lithium processing technology

Lithium Australia has developed innovative processes for the recovery of lithium chemicals from lithium-bearing silicates and micas. In particular, these efforts have resulted in unit process enhancements that optimise the recovery of lithium from low-tenor solutions, while managing water-balance challenges, to produce lithium phosphate of a high quality. The unit processes involved are the subject of the above-mentioned patent applications.

Lithium phosphate produced by way of the Company's proprietary processes meets the specification necessary for its use as feedstock in the production of lithium-ferro-phosphate ('LFP'), a cathode precursor material in the manufacture of batteries for energy-storage system and transport applications.

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## The patent applications

Patent application PCT/AU2019/050540 details Lithium Australia's process for recovering lithium phosphate and lithium sulphate from a lithium-bearing solution such as brine or pregnant process liquor. Patent protection was sought due to an innovation developed during test-work prior to completion of the SiLeach<sup>®</sup> pilot programme in August/September 2018. This unit process also has direct application to LieNA<sup>®</sup>.

Patent application PCT/AU2019/050541, which incorporates developments from PCT/AU2019/050540 above, is an enhancement of Lithium Australia's SiLeach<sup>®</sup> technology, a process for recovering lithium phosphate and lithium sulphate from lithium-bearing silicates following the application of a fluoride-accelerated acid leach.

## Patent protection

Patents granted by the International Bureau of WIPO provide IP protection in jurisdictions governed by WIPO. Publication of the Company's patent applications is a significant fourth step in the seven-step process for the granting of patents within these jurisdictions, which can take several years to achieve.

Authorised for release by the Board.

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## About Lithium Australia NL

Lithium Australia aims to ensure an ethical, sustainable and efficient supply of energy metals to the battery industry (enhancing energy security in the process) by creating a circular battery economy. The recycling of old lithium-ion batteries to new is intrinsic to this plan. While rationalising its portfolio of lithium projects/alliances, the Company continues with R&D on its proprietary extraction processes for the conversion of *all* lithium silicates (including mine waste), and of unused fines from spodumene processing, to lithium chemicals. From those chemicals, Lithium Australia plans to produce advanced components for the battery industry globally, and for stationary energy-storage systems within Australia. By uniting resources and innovation, the Company seeks to vertically integrate lithium extraction, processing and recycling.

## Media contacts

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