



11 September 2020

## Lithium Australia strengthens intellectual property protection around battery recycling processes

### HIGHLIGHTS

- **Lithium Australia has filed two provisional Patent Cooperation Treaty ('PCT') applications relating to the recycling of battery materials, in particular lithium-ion batteries ('LIBs'):**
  - **the first application involves the recovery of electrode materials and electrolyte from spent LIBs, and**
  - **the second the selective separation of mixed metal sulphates.**
- **These processes are ideal for the efficient recycling of end-of-life electric vehicle batteries in that they generate high-value chemicals for return to the circular battery economy.**

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### Intellectual property programme ongoing

Lithium Australia NL (ASX: LIT, 'the Company') is pleased to announce the filing of two PCT applications relating to LIB recycling processes.

#### Extraction of cathode materials

The Company confirms the filing of a PCT application – entitled 'Process for recovering values from batteries' with the reference Australian Provisional Patent Application 2020902848 – that relates to processes for the recovery of electrode materials from LIBs (for example, electrode material comprising a cathode material and/or an anode material, such as a mixed metal dust), as well as recovery of the electrolyte.

#### Extraction of critical battery metals

The Company confirms the filing of a provisional patent application – entitled 'Process for recovering metal values from process liquors' with the reference Australian Provisional Patent Application 2020902849 – that relates to processes for the selective recovery of mixed metal sulphates (for example, a mixed cobalt-nickel sulphate) from a metal sulphate process liquor.

#### Comment from Lithium Australia MD Adrian Griffin

"Lithium Australia, through its recycling subsidiary Envirostream Australia Pty Ltd, is a leader in the field of battery recycling technologies. With our recent successful capital raising, we're in a strong position to accelerate commercialisation of the technologies discussed here. Indeed, the first of those has already been implemented on a commercial scale at our Melbourne processing plant.

"These technical advances are timely, in that they coincide with the introduction of a national battery stewardship scheme designed to divert batteries from landfill, thereby increasing the quantities of spent batteries available for recycling."



Authorised for release by the Board.

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**About Lithium Australia NL**

Lithium Australia aims to ensure an ethical and sustainable supply of critical materials to the battery industry by creating a circular battery economy. In particular, the recycling of spent lithium-ion batteries to create new battery cathode materials 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 these, Lithium Australia plans to produce advanced components for the battery industry globally, including for stationary energy storage systems marketed in Australia. By uniting resources and innovation, the Company seeks to vertically integrate lithium extraction, processing and recycling while enhancing energy security.

**About Envirostream Australia Pty Ltd**

Envirostream is a national leader in battery recycling. It operates the only commercial facility in Australia capable of shredding all types of spent batteries to efficiently recover a range of recyclable materials – in particular mixed-metal dust, which comprises the critical 'active' materials in spent lithium-ion batteries. Mixed-metal dust contains cobalt, nickel, lithium and manganese, making it a sustainable feed source for the manufacture of new batteries. The Envirostream process is designed for low atmospheric emissions and very low soluble losses, and only minimal amounts of material are consigned to landfill. Together with its high mass yields, this positions Envirostream as the planet's most environmentally credentialled battery recycler.

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