



25 July 2018

Committee Secretary  
Department of the Senate  
PO Box 6100  
Parliament House  
Canberra ACT 2600

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Dear Chairman,

***Senate Select Committee on Electric Vehicles***

Thank you for the opportunity to provide a submission to the Senate Select Committee on Electric Vehicles. This submission comments relate to Parts B, D and E in the Terms of Reference, namely the early stages of the battery value chain.

The Association of Mining and Exploration Companies is the national peak industry body representing mineral exploration and mining companies, some of which have interests in battery minerals and the potential for greater value adding.

Australia has a number of advantages in battery minerals that should be considered:

- Australia currently mines over 60% of the world's lithium by value;
- Australia has all of the other minerals necessary to progress further down the lithium ion battery value chain;
- Lithium spodumene, which is mined in Australia, is over 10% cheaper to process to lithium hydroxide than brine, which is more common internationally;
- The economics of developing further lithium hydroxide processing facilities in Western Australia is sufficient for four companies, including two of the world's largest lithium companies (Tianqi and Albemarle), to have invested;
- Currently, independent research suggests 89% of the battery precursor material processing occurs in China, thus Australia may stand to benefit from any international interest in geopolitical diversification;
- The processing and manufacturing of battery precursors, components and final products is dependent on quality, precision and robotics rather than cheap labour and assembly line processing.

To explain the opportunity in a greater detail, a group of AMEC's members commissioned an independent report by the consultants, Future Smart Strategies. Published in January 2018, this it states the potential growth for the lithium value chain from \$165Billion in 2017 to \$2Trillion in 2025.

**Association of Mining and Exploration Companies**

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Following this report, AMEC published *A path forward*, which proposes what the State and Federal Government need to do to facilitate seize this opportunity. This report distils what is needed from Government to: show leadership, attract investment, and remove barriers to development

Both these reports, which are attached, suggest that there is approximately two years before the global lithium value chain solidifies. There are two determinants of that timeframe. Firstly, the South American brine producers who are rapidly bringing on supply. And the multi-national companies who hold the closely guarded technology patents and are racing to secure all of the components necessary to develop batteries.

Following the publication of these reports, the draft *Treasury Laws Amendment (Research and Development Incentive) Bill 2018* was released for public comment. On behalf of its members, AMEC has supplied a submission, which is also attached for the Committee's consideration.

In its current form the incentive is an important mechanism by which the Government can promote business investment in innovation and R&D activities. The amendments proposed will reduce the attractiveness of domestically value adding to battery minerals such as lithium and rare earths in Australia. In particular, we draw to your attention Recommendation 6 as most relevant to this Committee as it calls for the exemption of lithium and battery minerals industry from the proposed cap of \$4million.

Australia, currently, has an opportunity to step further down the battery mineral value chain. How far will be determined by the collaboration of Government and Industry.

I look forward to presenting before the Senate Select Committee on 17 August 2018. If any further clarification is sought on the contents of this submission please ask the Committee Secretary to contact me directly.

Yours sincerely

**Warren Pearce**  
Chief Executive Officer