

26 July, 2018

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To whom it may concern,

RE: Request for feedback and comments on the Exposure Draft Treasury Laws Amendment (Research and Development Incentive) Bill 2018

This submission is made in response to the Australian Government's 2018-19 Budget measure – *'Better targeting the research and development tax incentive'* and the above draft exposure legislation. In the first instance, we request no change to the legislation. But, given the request we make the following submission. We will also follow this submission up with further and better particulars to ensure that Treasury is well aware of the lithium processing opportunity on offer.

Introduction

The specific reference questions by the government relate to the calculation of R&D intensity and the applicability of various changes in the draft legislation to "clinical trials". There is no doubt that R&D intensity is a measurable parameter, and we will provide some commentary on its applicability.

The concept of a "clinical trial" is foreign to most industries outside biotech. Having said that, and considering the lithium and energy materials sector, the latter has a strong parallel.

It is important to compare the development milestones required for the commercialization of innovative processes and, not surprisingly, there is a logical and comparable sequence. The process is about developing a hypothesis, testing, assessing the results, and modifying the processes to achieve a better or optimum outcome. The steps involved reduce risks for project development to the extent required for confident investment in the final product or process. To that extent, there is little difference between developing a process to produce a new vaccine, or a new compound required for the energy material industry.

For the development of new processing and manufacturing principles, a number of development cycles are required:

1. Laboratory testing
2. Bench scale testing, and
3. Pilot/clinical testing

The first two steps occur in both the biotech and energy material sectors. The last step takes the form of clinical trials for biotech products; but for energy materials, it takes the form of pilot testing and market evaluation. The process development steps have a well established parallel and similar risk profiles.

The questions posed by government are addressed as follows.

1. Do you foresee any implementation and ongoing compliance challenges arising from the proposed calculation of R&D intensity?

Lithium Australia NL (LIT or Company) has been planning its large-scale pilot plant activities over the past two years with the view that its aggregated annual turnover would be below \$20 million. LIT cannot provide any substantive comment in relation to the implementation and ongoing compliance challenges arising from the proposed calculation of R&D intensity.

2. Does the proposed method of calculation of R&D intensity pose any integrity risks?

Given the comments above, LIT cannot provide any substantive comment in relation to the proposed calculation of R&D intensity.

3. Could total expenditure be aggregated across a broader economic group? Would this create any implementation and ongoing compliance challenges?

LIT has a number of discrete research and development activities across a range of companies within its economic group. It would be disadvantageous to each separate legal entity to limit the total amount to \$4m across the economic group; and this would be difficult to administer.

For example, LIT has been working on its large-scale pilot plant for the past two years to produce a lithium chemical. To develop this plant will require large amounts of capital over the initial 3 year establishment and proposed two year operation.

Through its examination of the burgeoning lithium processing industry, LIT believes that there are opportunities to manufacture cathode material. LIT has acquired a separate company which has been developing manufacturing capability for cathode material. It would be unfair for a separate legal entity which has a long history of research and development to not be able to claim separately due to a change in definitions.

LIT has also established a company within its economic group which is specifically looking at recycling lithium-ion batteries. LIT predicts that recycling lithium-ion batteries will reach critical levels in approximately five years.

4. Does the definition of clinical trials for the purpose of the R&DTI appropriately cover activities that may be conducted now and into the future?

LIT cannot comment on this question as it applies to the definition of clinical trials. However, LIT does question why no other industry was considered for exemption; especially those industries which are considered to be innovative and will provide access to newly emerging industries.

Australia has a unique opportunity before it to increase its meagre 0.5% (A\$1.1 billion) share of the lithium-based battery value chain by moving beyond simply exporting concentrated ore. Instead, there is an opportunity to establish 'Lithium Valley' for energy metals in Western Australia on a scale that rivals Silicon Valley's role in developing the USA computer industry in the 20th century. It is estimated that the value chain, that can be controlled from the primary production supply end, may be as much as three times larger than the current Australian GDP.

If the Federal Government does not introduce an exemption commensurate with that for clinical trials for the energy materials sector, this unique opportunity will be put at risk.

For example, without access to the uncapped R&D rebate (as currently legislated), LIT may not be able to progress the construction of its innovative proposed pilot plant near Kalgoorlie in Western Australia and will need to look at other locations outside of Australia.

LIT wants to be a part of making Australia a world lithium hub but believes the Federal Government

has to recognise the innovative and research-intensive status of the industry, as it does with clinical trials, and retain an R&D environment competitive with other jurisdictions and this developing industry.

5. Does the proposed finding process represent an appropriate means of identifying clinical trials expenditure for the purposes of the \$4 million refund cap?

LIT cannot comment on this question as it applies to the definition of clinical trials (but please note the comments in the introductory section). However, LIT would consider that the proposed finding process would work for the lithium and energy metals sector should an exemption be implemented. Further, LIT believes Innovation and Science Australia would still be best placed to determine eligibility for the lithium and energy materials sector.

6. Do the draft feedstock and clawback provisions give rise to any unintended consequences that need to be addressed?

LIT cannot comment on this question but further and better particulars will be provided with the next submission.

General feedback

There have been very recent policy developments by state and federal governments; both positive and negative which are sending conflicting signals to Australian companies that are trying to be innovative as mandated by the Prime Minister, the Honourable Mr Malcolm Turnbull. The negative signal is the change in R&D policy as announced in the May 2018 federal budget which will significantly reduce funding available which is critical to establish a new industry in Australia, particularly Western Australia which is the source of all battery metals. Does Australia continue to be the quarry for the world; or is it time to share in the benefits of value-adding to our sovereign resources?

The Perth branch of Regional Development Australia recently released a blueprint for the industry entitled: "Lithium Valley – Establishing the Case for Energy Metals and Battery Manufacturing in Western Australia". This is supported by a state government task force and the newly established Lithium and Energy Materials Consortium. There is a framework for the development of an entirely new industry for the Australian economy, and the opportunity to create a position of world dominance, much like China has done in rare earths and other commodities. This cannot be achieved without significant R&D which must be nurtured by sound government policy and assistance where appropriate.

At stake for Australia are the very significant benefits that could flow from grasping this lithium and energy materials processing opportunity.

LIT wishes to make clear that the \$4 million cap on Research and Development (R&D) rebates will have a negative impact on ground breaking critical energy material projects in Australia.

To reiterate; without access to the uncapped R&D rebate (as currently legislated), Lithium Australia may not be able to progress the construction of its innovative proposed pilot plant near Kalgoorlie in Western Australia and will need to look at other locations outside of Australia.

Furthermore, Lithium Australia's advanced battery material research programs are likely to be curtailed by the suggested changes. These programs include development of advanced cathode powders for improved lithium-ion battery performance, enhancing mobility as we progress into the battery age, and recycling of lithium-ion batteries for sustainability and reduced environmental impact.

About Lithium Australia

LIT is an ASX-listed company which has a suite of technologies that enable the sustainable production of lithium chemicals and lithium-ion batteries. The Company aspires to 'close the loop' on the energy-metals cycle. With strategic assets and disruptive technologies, it aims to improve the lithium-ion battery supply chain with technologies that include its SiLeach® lithium extraction process, superior cathode material production courtesy of VSPC Ltd (formerly Very Small Particle Company Ltd which is a wholly-owned

subsidiary of Lithium Australia), and enhanced recycling techniques for battery materials.

By uniting resources and the best available technology, Lithium Australia seeks to establish a vertically integrated lithium processing business. Lithium Australia will add significant value to the raw materials available in Australia, that are currently exported as partially processed products. Significant R&D is required by Lithium Australia, and others, to perfect the technologies required to capture the value in downstream processing.

LIT owns a cathode-powder pilot plant in Brisbane complete with one of the most advanced battery testing facilities in the Southern Hemisphere. Advanced cathode powders, the precursors to lithium-ion batteries are currently being produced. Further to this, cathodes and batteries are produced on a laboratory scale for testing and development purposes. Approximately \$30M has been spent to advance this world leading project to its current level, that will see commercial evaluation of cathode materials, by the battery producers, before the year end.

Impact on Lithium Australia

As already mentioned LIT is also well advanced in its significant plan to establish a large-scale lithium processing pilot plant near Kalgoorlie in Western Australia, with the start of construction slated for calendar 2019. This plant has a design output of 2,500 tonnes per annum lithium carbonate equivalent and would demonstrate the capacity of new technology to fuel a new Australian Lithium Valley. The pilot plant will process lithium silicates, generated as waste products during the mining of other commodities from sources that would otherwise be uneconomic when considered for lithium alone. The pilot plant development will provide the opportunity for Lithium Australia to assess the economic and technical feasibility of larger full-scale developments and to conduct further research and development.

LIT has spent approximately USD6m on the developing its lithium extraction technology and plans direct capital expenditure over the life of the pilot plant project in the order of USD50m. A similar operating expenditure will be incurred during two years' testing.

The business plan for the five-year development of the pilot plant near Kalgoorlie includes funding from a variety of non-bank sources and includes approximately \$50 million in refundable rebates from the Australian Government's Research and Development Tax Incentive Scheme under its current rules. Under the new capped arrangements, the project will attract only \$12 million over the plant's three-year development and commissioning period. These changes put the project's viability at significant risk.

Given the project will use new technologies to produce lithium from otherwise uneconomic sources, normal funding sources are limited and difficult to find. LIT's non-bank sources are those willing to invest in innovative technology and these investors have made commitments based on the expectation of R&D rebates based on the current legislation. If the proposed amendments come into effect, then LIT will have to consider how it progresses the pilot plant project and where it can access additional funding. LIT owns an advanced lithium project in Germany, ideally suited to supporting the pilot plant project. If the pilot plant was built in Germany it would receive R&D assistance in excess of four times that available in Australia (after the proposed changes).

It would be a disappointing outcome for Australia to see this ground-breaking pilot plant built in Germany. Australia has all the required raw materials, it is developing the various refineries in the Kwinana and Bunbury area of south-west Western Australia; and in the event the technologies are proven to be commercial and developed, WA and Australia will gain access to a market that can now be accurately measured to be worth \$213 billion and expanding rapidly.

Geopolitical importance of product

There is growing global demand for the critical minerals used in the technologies that save energy and produce low cost or renewable energy. Governments and companies in the US and Europe are increasingly focused on ensuring reliable supplies of such minerals.

In December 2017, the United States Geological Survey published its first critical minerals assessment since 1973. The report flagged the lack of domestic and secure sources of a range of minerals that are

expected to be used increasingly in critical technology. Later that month US President Donald Trump signed the '*Presidential Executive Order on a Federal Strategy to Ensure Secure and Reliable Supplies of Critical Minerals*'.

The order states: "*It shall be the policy of the Federal Government to reduce the Nation's vulnerability to disruptions in the supply of critical minerals, which constitutes a strategic vulnerability for the security and prosperity of the United States.*"

In February this year the US Department released a draft list of 35 minerals deemed 'critical' to US national security. A following report by the Centre on Sustainable Investment at Columbia University noted that of the six minerals "most critical for the transition to the green economy", the US only has domestic supplies of two – Tellurium and Indium.

According to the Centre of Sustainable Investment – the remaining critical minerals are: Lithium, Cobalt, Neodymium and Dysprosium. Australia has deposits of all four of these minerals.

Also in February, President Trump met with Australian Prime Minister Malcolm Turnbull where the countries agreed to form a partnership on critical minerals. The Prime Minister's press release following the meeting announced a new partnership between the two countries:

"We launched the Australia-United States Strategic Partnership on Energy in the Indo-Pacific, and intend to work together on strategic minerals exploration, extraction, processing, and research and development of rare earths and high-performance metals."

Lithium Australia's Request

Lithium Australia asks the Federal Government to amend the *Exposure Draft Treasury Laws Amendment (Research and Development Incentive) Bill 2018* to either remove the proposed \$4 million cap on R&D rebates or scope out projects that support the development of critical minerals and those associated with energy production and efficiency from the cap.

Under the draft exposure legislation, clinical trials have been scoped out of the \$4 million cap. Like clinical trials, the critical minerals sector has been identified by the Prime Minister and the Government as of national and international importance. Lithium Australia is firmly of the view that the proposed rebate cap will have a negative impact on the development of innovative critical minerals projects in Australia. The proposed cap will force projects, such as our pilot plant, to develop very slowly and result in missed opportunities for the country. At worst, the projects will migrate to more understanding jurisdictions that would welcome the opportunity to access a \$213 billion industry which is in its infancy. The lithium industry is no longer a "bubble".

Thank you for reading our submission. Should you wish to discuss this submission further I can be contacted on (08) 6145 0288 or adrian.griffin@lithium-au.com.

Yours sincerely



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