

Lithium Power International Ltd Level 7, 151 Macquarie Street Sydney NSW 2000 Australia

ithiumpowerinternational.com

ACN 607 260 328 ASX CODE: **LPI** 

ASX RELEASE

31 January 2019

# Activity Report for the Quarter ended December 2018

Lithium Power International Limited (ASX: LPI) (LPI or the Company) is pleased to submit its quarterly Activity Report for the period ended 31 December 2018.

# HIGHLIGHTS

- Engineering Consultants WorleyParsons completed the Definitive Feasibility Study (DFS) for the Maricunga Lithium Brine Project, which was released on 22 January 2019.
- The DFS presents a possible 100% equity, pre-tax NPV of US\$1.286b and an IRR of 23.8%.
- It forecasts a total CAPEX of US\$563m, which includes direct development costs estimated at US\$456m inclusive of 20% VAT (recoverable once in production), indirect costs of US\$45m and contingency costs of US\$63m.
- Project operating costs are estimated at US\$3,772 per tonne of Lithium Carbonate Equivalent (LCE), without offset income from sales of the potassium chloride (KCI) by-product.
- The DFS predicts a very robust project for what is Chile's highest grade and most advanced lithium project outside of the Salar de Atacama. Production would be a high-value battery-grade lithium carbonate, unlike many of the lithium hard rock projects under development.
- The maiden Ore Reserve estimate, prepared in accordance with JORC and NI 43-101 international standards, was released on 21 January 2019. It was a total of 742,000 tonnes of LCE<sup>1</sup>, which exceeds the 20-year project mine life production needs.
- The Maricunga project's EIA successfully passed the initial 45-day assessment period, and the Chilean Government is now carrying out an exhaustive assessment expected to be concluded in 2019.
- Approval was received to take the required 14.6 MW of power from a sub-station at the nearby La Coipa gold mine, including the use of power lines leading to the Maricunga Salar.

>>>

1 After 58% lithium process recovery efficiency, the total recovered Reserve is 430,000 tonnes LCE (118,000 tonnes Proved - 313,000 Probable).



# **HIGHLIGHTS** continued

- The Company finalised details of the project's water supply, with an important groundwater source located in the east of the Maricunga Salar basin.
- Discussions with major Chilean and international financial institutions to secure project development finance have commenced and are expected to be finalized during 2019. Approaches from international companies have also been received regarding off-take agreements and future participation.
- The Company continues to work closely with the Chilean Government and other corporate bodies to finalize all remaining licenses, agreements and operational relationships.
- In Western Australia, an extensive soil sampling program over the Tabba Tabba property identified a 4.3 km long area of elevated lithium and tantalum, with Li<sub>2</sub>O values up to 689 ppm. A full development program for the asset is progressing and is expected to be announced by the end of first quarter 2019. An initial exploration drilling program is likely to commence early in Q219, following Western Australia's wet season.
- A large conductive target has been defined in an electromagnetic survey (TEM) at the Centenario project in Argentina. An internal assessment for the next stages of exploration is currently being conducted.
- Mr Cristobal Garcia-Huidobro was appointed Chief Executive Officer (CEO) and Managing Director of the Company on 16 October 2018. This is a natural extension of his role as CEO of the Chilean Joint Venture Company, Minera Salar Blanco S.A.
- Mr Richard Crookes was appointed Executive Director Corporate Finance on 25 October 2018. He has a key focus to ensure that the Maricunga project is appropriately funded and that key strategic partnerships, including possible off-take agreements, are secured as the project moves into the development phase.

# **MARICUNGA PROJECT - CHILE**

## CHILE JOINT VENTURE COMPANY - MINERA SALAR BLANCO S.A.

The Maricunga Joint Venture project (the Project) is operated under the Joint Venture Company, Minera Salar Blanco S.A. (MSB). LPI currently owns 51% of MSB.

## FINALISATION OF THE DEFINITIVE FEASIBILITY STUDY

The Definitive Feasibility Study (DFS) Ore Reserve estimates of 742,000 tonnes of LCE (203,000 t Proved – 539,000 t Probable) supports the 20,000 t/a LCE production projected for Maricunga throughout its 20-year mine life. Mineral Resources have been updated to a total of 2,070,000 tonnes of LCE, which are now classified as Measured or Indicated. Both Reserve and Resource estimates were prepared in accordance with JORC and NI 43-101 international reporting standards.

Engineering consultants WorleyParsons completed the Definitive Feasibility Study (DFS) for the Maricunga Project following the end of the quarter, with engineering and cost estimates of a total US\$563m. The total direct project costs of the capital investment represent US\$456m, inclusive of 20% VAT (recoverable once in production); indirect project costs represent US\$44.8m (10% on direct costs) with a conservative provision for contingencies of US\$62.6m (14% on direct costs). A summary of capital costs is shown in Table 1.

Project operating costs are estimated at US\$3,722 per tonne of lithium carbonate, before any offset credits for the potassium chloride by-product, which was not considered in the DFS. A summary of operating costs is reflected in Table 2.



LITHIUMPOWER

Area	Description	US\$m
	Direct Costs	
1000	Brine Extraction Wells	39.4
2000	Evaporation Ponds	115.3
3000	Potassium Chloride Plant (Cost not included)	
4000	Carnalite Plant (Cost not included)	
5000	Removal of Salts	66.4
6000	Lithium Carbonate Plant	71.6
8000	General Services	103.3
9000	Infrastructure	60
	Total Direct Cost	456
	Total Indirect Cost (10% of direct costs)	44.8
	Total Direct & Indirect Costs	500.9

TOTAL

Contingencies (14% of direct costs)

Table 1: Summary of capital cost items (all inclusive)

Description	Battery Grade	Technical Grade	Total
Operating Costs	US\$/Tonne Li <sub>2</sub> CO <sub>3</sub>	US\$/Tonne Li <sub>2</sub> CO <sub>3</sub>	US\$ '000 pa
Direct Costs			
Chemical Reactives and Reagents	1,040	1,040	20,799
Salt Removal	486	486	9,727
Energy	1,028	1,028	20,552
– Electrical	370	370	7,398
– Thermal	658	658	13,154
Manpower	458	458	9,160
Catering & Camp Services	105	105	2,100
Maintenance	295	295	5,899
Transport	237	237	4,740
DIRECT COSTS SUBTOTAL	3,649	3,649	72,977
Indirect Costs			
General & Administration – LOCAL	123	123	2,702
INDIRECT COSTS SUBTOTAL	123	123	2,702
TOTAL PRODUCTION COSTS	3,772	3,772	75,679
Table 2: Summary of operating costs per toppe (excluding KCl)			

 Table 2: Summary of operating costs per tonne (excluding KCl)

• LITHIUMPOWER

62.6

563.4

The Project has a defined 2-year ramp-up stage and a long term planned production of 18,000 t/a of battery grade and 2,000 t/a of industrial grade LCE. This would place it as one of the lowest-cost lithium carbonate producers globally, making it highly competitive. There also remains the potential for expansion of production, given the Exploration Target and likely extension of the brine mineralization to significant depths below the existing resource. Currently it is defined to 200 m depth.

The strong economics outlined in the DFS confirms the attractiveness of the project, with a leveraged NPV on a pre-tax basis (8% discount) of US\$1.302b, providing an IRR of 29.8% and a payback of 3.5 years. On a pure equity basis, the NPV is US\$1.286b with an IRR of 23.8% as seen in Table 3.

	Levered (50%)		Pure Equity	
NPV Discount Rate	Pre-Tax	After-Tax	Pre-Tax	After-Tax
	US\$m	US\$m	US\$m	US\$m
NPV 8%	1,302	940	1,286	908
IRR	29.8%	26.7%	23.8%	21.0%
Project Payback (years)	3.5	3.5	4.1	4.2

Table 3: Financial Model Summary (NPV, IRR, Payback)

### **PROJECT EIA**

The Project's Environmental Impact Assessment (EIA) study was submitted to the Chilean Government assessment authorities earlier in this quarter and has now successfully passed the 45-day initial evaluation period. Further detailed responses and queries are expected to be received from government departments early in 2019.

The EIA also includes the construction and operation of a KCI plant, while the DFS only provides engineering for a Lithium Carbonate Plant. KCI production will be considered in the future once potassium salts have been accumulated.

#### **PROJECT INFRASTRUCTURE**

Following approval from the National Coordinator of the government's electricity agency, MSB is advancing agreements for project infrastructure. Approval has been received to connect to the nearest sub-station at the La Coipa mine. This will allow the Project to draw its required electricity supply of 14.6 MW. Project engineering envisages construction of a short spur power line to the planned processing plant from the transmission lines that currently reach onto the Maricunga Salar.

The Company has finalized details of the Project's water supply with an important groundwater source just east of the Maricunga Salar. This will provide process water for the planned camp and processing plant. The extraction of water from this source was evaluated as part of the groundwater modelling conducted to evaluate extraction of brine to support the Project EIA. The location of the planned project infrastructure is presented in Figure 2.

LITHIUMPOWER



Figure 2: Location of Planned Project Infrastructure

CHARGING THE FUTURE

- LITHIUMPOWER



### **COMMUNITY RELATIONS**

The Company has a strong relationship with local communities within the area of the Project. The EIA has proposed that these communities will benefit from revenues derived during the operating phase. Although the Project area is sparsely populated, there will be increased vehicular movement and recognition of that impact was essential.

## **MSB CAPITAL CALL**

In December 2018, a capital call was made to all MSB shareholders. LPI contributed US\$2.3m as its 51% share of the call. The funds are to provide working capital for the administration of the Project as its moves through the EIA assessment process, and for further project planning.

## **PROJECT FUNDING**

The Company has sought to increase confidence in the Project by completing a Definitive Feasibility Study and developing Mineral Reserves. It has also optimized engineering design, improved the accuracy of the Project's capital and operating costs, delivered supporting project infrastructure studies, submitted the Project's EIA and worked closely with local communities.

Given the quality of the Project, the mining jurisdiction and the global demand for lithium, the Company is confident that required development funding will be obtained.

# **ARGENTINA** CENTENARIO – SALTA PROVINCE, ARGENTINA

The Centenario project is a 70:30 Joint Venture between LPI and Centenario Lithium. Consideration is currently being given to undertaking a drilling program to target a large conductive zone identified in the TEM electrical geophysical survey undertaken by the Joint Venture. The geophysical target is believed to represent a significant body of brine, covering an area of approximately 12 km by 4 km, based on the compilation of all available geological data. This is an exciting brine project that the company is considering as part of its strategic diversification planning processes.

# WESTERN AUSTRALIA TABBA TABBA AND STRELLEY PROJECTS – PILBARA, WA

The 100% LPI-owned Tabba Tabba and Strelley properties lie along greenstone belts identified in regional magnetic surveys, which host a historic, tantalum deposit immediately south-west of the Tabba Tabba property. LPI completed detailed soil sampling over the three Greenstone belts that lie within its Tabba Tabba tenement. The assays from that program demonstrated that the eastern greenstone belt contains significantly elevated concentrations of lithium, caesium, tantalum, nickel and gold.

A 4.3 km zone of elevated  $Li_2O$  ( $Li_2O$  up to 0689 ppm) was defined along the eastern greenstone belt (Figure 2). This is coincident with elevated concentrations of caesium, tantalum, tin and beryllium. Field mapping has shown that the zone contains numerous outcrops of coarse to fine grained pegmatite dykes. Drilling is planned for this target area once additional mapping and rock chip sampling has been completed in 1Q19.

A full development program is expected to be announced by the end of first quarter 2019. The initial stage of exploration drilling is likely to commence in Q219, following Western Australia's wet season. No work was conducted on the Strelley tenement during the quarter.



Figure 3: Soil sample lines over the Tabba Tabba project defining an area of elevated lithium over 4.3 km

#### CHARGING THE FUTURE

• LITHIUMPOWER



# GREENBUSHES - SOUTH WEST, WA

The 100% LPI-owned Greenbushes tenements contain large strike lengths of the same rock suite that hosts the adjacent Greenbushes Lithium mine, the world's largest lithium producer. The Company is taking a systemic exploration approach to identify prospective areas that can be explored in more detail.

Documentation is being prepared to gain Ministerial approval for LPI to explore in the forestry areas of the Greenbushes licences. This process involves numerous stages under the Mining Act, and the Department of Biodiversity, Conservation and Attractions (DBCA).

## PILGANGOORA - PILBARA, WA

The 100% LPI-owned Pilgangoora tenement is adjacent to the Pilbara Minerals and Altura Mining lithium pegmatite deposits, which are currently both being developed as hard-rock mines. Combined, they form one of the largest global lithium pegmatite resources. LPI is exploring for lithium pegmatites in a continuation of a similar sequence of rocks immediately west of these tenements. Additional soil sampling was undertaken on the Pilgangoora property during December. LPI is currently awaiting results from the soil sampling to assess whether there are targets that justify drilling.

# **CORPORATE UPDATE**

#### Appendix 5B

The Appendix 5B quarterly cashflow report for the quarter ended 31 December 2018, is submitted separately.

The Company had a cash balance of AU\$17.15m at 31 December 2018, following the payment of US\$2.3m for the MSB capital call.

This amount is currently held in the Company's bank accounts in Australia, Chile and Argentina in Australian dollars, US dollars or Argentine pesos. The Australian dollar equivalents were converted at the closing foreign exchange spot rate.

Total funds within the Maricunga Joint Venture at the end of the quarter totaled US\$2.9m. This follows the December 2018 capital call made by MSB to all shareholders totaling US\$4.55m.

#### **Capital Structure**

The Capital Structure at the end of the Quarter is as follows:

- 262.5m Ordinary Shares on issue,
- 34.6m Listed Options on issue at 55cps; and
- 46.3m Unlisted Options on issue averaging 25cps.

#### **Audited Interim Report**

The audit of the interim report will commence early in February 2019 and will be released within the timeframe prescribed by ASX Listing Rules.



#### **Annual General Meeting (AGM)**

The AGM was held on 28 November 2018, with a pleasing attendance by Shareholders.

Eleven Resolutions were put to the meeting, as per the below. All Resolutions were unanimously passed by a show of hands, which complemented the strong voting patterns of the valid proxy votes received prior to the AGM.

- **Resolution 1.** To Adopt the Remuneration Report
- **Resolution 2.** Approval of 10% Placement Facility
- Resolution 3. Ratification of issue of 3,000,000 Options to Canaccord Listing Rule 7.1 capacity
- **Resolution 4.** Ratification of issue of 1,800,000 Shares to MSB Staff Listing Rule 7.1 capacity
- **Resolution 5.** Re-election of Richard Crookes as Director
- Resolution 6. Re-election of Martin Borda as Director
- **Resolution 7.** Re-election of Andrew Phillips as Director
- **Resolution 8.** Re-election of David Hannon as Director
- **Resolution 9.** Approval of issue of Director Options to Martin Borda
- Resolution 10. Approval of issue of Director Options to Cristobal Garcia-Huidobro
- **Resolution 11.** Approval of issue of Director Options to Richard Crookes