# Ekosolve Limited

ACN 657 738 120 2 Bagley Street, Brighton VIC 3186 Australia Mobile Australia +61-433747380 Direct Lithium Extraction Technology

SINGLE PROCESS - SOLVENT EXTRACTION FOR THE FUTURE

www.ekosolve.com.au

phil@ekosolve.com.au

October 2024

# **TERM SHEET**

USD \$15M placement 15.8% equity) (mkt cap post issue \$95m USD) in Ekosolve Limited shares to fund 3,000 tonne LCE plant in Texas USA (we retain 70% of income) with geothermal brine producer-power generator producing three megalitres/day of brines >500ppm Lithium. Revenue at the current price (October 21, 2024) of \$10,300 per tonne is \$30,900,000. The balance of the funds will be used to develop projects in Argentina (Patagonia Lithium at Jama) and pitch for other projects in Chile and USA.

Geoframe-Energy LLC have offer us a 20% interest in the phase one plant for US\$20m which carries to 10% in phase 2 and phase 3 where they will build a 45,000 tonne  $Li_2CO_3$  plant and a further 42,000 tonne  $Li_2CO_3$  Ekosolve plant. They will also build a demonstration hydrothermal power plant with 1.2Mw and then a 31Mw power station.

Ekosolve is raising capital to construct the 3,000 tonne  $Li_2CO_3$  demonstration production facility. Funds will be allocated to complete the plant, secure offtake agreements, and accelerate market entry. Initial milestones include scaling production and advancing discussions with key industry players and preparation for the plant at Jama Argentina.

# Summary

Ekosolve has developed a state-of-the-art, single-phase Direct Lithium Extraction Technology with the University of Melbourne. The result of our pilot plant studies is set out below:

Salar	Li content, mg/L	Li Extraction Efficiency	Salar	Li content, mg/L	Li Extraction Efficiency
Incahuasi	140	93.1%	Pozuelos	401	93.1%
Pocitos A	86	94.9%	Formentera	267	92.1%
Pocitos B	95	95.8%	Calgary Petrobrine	57	91.0%
Rincon	195	92.0%	Stress Test	37	91.8%

With greater than 90% extraction efficiency and capture/regeneration of more than 99.7% of the solvents, Ekosolve is the market leader in solvent exchange DLE technology. Given sodium reduction in the manufacturing process, our new lithium carbonate process creates a higher purity LCE. Our next project 2025 concurrent with Geoframe-Energy LLC is 1,000 tonne demonstration plant at Patagonia Lithium Ltd in Argentina.

# **Capital Table**

There are currently 87.5 million shares on issue in Ekosolve Limited ABN 25657738120. The two founders, Dr Carlos Sorentino and Phillip Thomas, each own 43.75m shares (50%). The

company's market capitalisation is US\$87.5m or US\$1.00 per share. 7.5m shares will be issued to make a new total of 95.0m shares on issue, and the owners will sell 7.5m shares. Of the US\$15m raised, US\$8m will go towards building the lithium extraction Geothermal project, US\$3m will go to establishing an office in Texas, and \$4m will go to the owners to repay equity invested. Some of these funds will be lent to the company as required. The construction period for the Austin Texas Geoframe Project is expected to be 12-15 months. The production well will be drilled in April/May 2025.

### **Project Financials**

The headline results expected are as follows:	
Revenue – sale of 3,000t LCE - \$10,500 per tonne FOB	\$30,900,000
Cost of goods sold - \$2,500 per tonne	-\$7,500,000
Operating Profit	\$23,400,000
Ekosolve share 70% earnings	\$ 16,380,000
Investor share *49.9%	\$8,190,000
	C.I. CI. III

\*A special two year accelerated distribution of 49.9% of the profit will be distributed to the investors

### **Disposal of Plant**

The geothermal brine producer has the right to acquire the plant at cost plus 15% to become part of their larger proposed 45,000-tonne plant or continue to receive the 30% share of Income by providing brine and pumping it to the processing plant and storage facility. It will be separate from the larger plant to be built and may stay in operation under the joint venture for more than 3 years.

Most of the components and supplies will be sourced in the USA.



# Patagonia Lithium Limited (ASX:PL3)

Patagonia have indicated they want to use the Ekosolve DLE system based on extracting 92.1% lithium from test brines.

The plant is expected to be 10,000 tonnes annual capacity. The company is currently lodging a permit for a 1,000 tonne per year demonstration plant which will process approximately 2,500 megalitres a year (6.94 ML per day) at 400ppm lithium concentration.

The waste brines will be disposed of in a lagoon close on the 1,752 ha concession. Location Map for the 3,000 tonne plant

ACREAGE POSITION RESERVOIR QUALITY Restri

# GREEN DIRECT LITHIUM EXTRACTION OPPORTUNITY



e Project:

Figure 1. Map of the location at Mt Vernon, Texas, 3D expression of pumping wells, seismic log of wells nearby, area covers 75,000 acres.

### Economics for a 10,000-tonne plant

Construction Cost	\$80,000,000
Ekosolve Engineering Fee	\$8,000,000
Lithium Carbonate Sales FOB	105,000,000
5% Ekosolve Royalty on production \$10.5k/tonne LCE	\$5,250,000
First-year Income	13,250,000

• Note if Lithium Carbonate price rises to US\$20,000 income will double etc.

### **USA Market for Lithium Carbonate**

While the main buyers are in China, several buyers in the USA will be canvassed once the project has been funded and construction started. We have discussed supply with a phosphate manufacturer looking to develop the LFP electrolyte and Cathode sector. There are more than 240 Gigafactories producing lithium batteries, with 17 new projects in USA. In 2022, the United States imported \$191M in Lithium carbonate from Chile (\$128M), Argentina (\$54.6M), and the Netherlands (\$5.99M). In 2023, the United States imported 3,400 metric tons of lithium for consumption. Fastmarkets forecasts a significant growth in demand for lithium in the US of 487% to almost 412,000 tonnes of lithium carbonate equivalent by 2030.

European buyers are also emerging in the gigafactories, storage batteries and EV's sectors.

### American Salars Lithium Inc

Nick Horsley, CEO of American Salars Lithium Inc. (CSE: USLI), is focused on building an Ekosolve plant in Incahuasi Salar and Pocitos. He has acquired the Pocitos One project and is negotiating to

expand the lithium area footprint. The Incahuasi Salar plant will be 10,000 tonnes and the Pocitos Salar plant 20,000 tonnes.

### Staffing

An Ekosolve subsidiary will be established in the USA. We will have a General Manager and a support team to oversee the purchase of materials, installation, and commissioning. We intend to engage a third-party contractor (Fluor, Tetratec etc) to assist in the construction. Ekosolve has built its specification and engineering software ready to size the columns and flow rates for any size plant.

### **Support Documents**

A presentation deck and an Information Memorandum accompany this term sheet. Under the technical tab on the Ekosolve website, there is a presentation video by Phil Thomas and Professor Dr Kathryn Mumford.

For further details, please contact:

Phil Thomas CEO Ekosolve Limited +61433747380 phil@ekosolve.com.au