

## **QUARTERLY REPORT HIGHLIGHTS**

### **Silver Recycling**

#### **LU7 acquired Jet Electrochemical Silver Extraction (JESE) Technology developed by Macquarie University**

- Integrates with Microwave Joule Heating Technology (MJHT) which separates clean glass and silicon wafer from EVA
- JESE uses electrochemical low-voltage jet to selectively extract silver and preserves silicon wafers which minimises contamination issues
- Silver Extraction is the priority target for LU7s critical metals recycling strategy
- Average solar panel contains around 20 grams of silver - worth in excess of AU\$50 at today's prices
- Equivalent of A\$154 billion of silver value in waste

#### **LU7 and Macquarie University successfully completed a series of comprehensive laboratory-scale trials to validate and refine the technology**

- Near-complete recovery of silver - greater than 95% being achieved
- 95.95% silver purity within just five minutes of deposition process which is comparable to Britannia-grade silver - high-quality alloy above sterling grade
- JESE technology leads to a significantly higher rate recovery and a lower impurity profile than conventional bath extraction
- 83% Reduction in acid consumption, with no secondary heavy-metal effluents, simplifying wastewater management and reducing environmental liability
- Research demonstrated that electrode tip designs and nozzle geometry significantly influence efficiency
- Precision-engineered sharp cone tips deliver superior performance, with more uniform silver removal, minimising residues and maximising material recovery yields

### **LU7 lay foundations for commercialising JESE Technology**

- Appointment of Mechatronics and Robotics Engineering expert, Mohammadreza Hojati to leverage his experience in deep robotics and precision-control to help with silver extraction technology
- LU7 commenced assessing a site in the Port of Brownsville, Texas, USA for a PV Recycling Project
- The proposed site is in addition to Australia as a potential PV Recycling Project location

### **Lithium Refining**

#### **LU7 launch second lithium refinery strategy in Brownsville, Texas**

- The second refinery would complement the flagship Bécancour project in Québec
- Brownsville PV Recycling site under evaluation is large enough to accommodate two lithium carbonate refinery trains alongside recycling operations
- U.S. Government investment and policy support aligned with the strategy of self-reliance in critical minerals and processing
- "Copy & Paste" design from Bécancour

### **Corporate**

#### **LU7 completed solar cell recycling technology acquisitions**

- Completion of the acquisition of New Age Minerals Pty Ltd which gives Lithium Universe exclusive rights to patented Microwave Joule Heating Technology (MJHT)
- LU7 acquired global rights to Macquarie University's Jet Electrochemical Silver Extraction (JESE) Technology from Macquarie University

#### **Application for AEA Ignite Grant**

- Application for approximately \$386,000 for AEA Ignite Grant under the Department of Education's Australia's Economic Accelerator program

#### **Successful \$2.5M Placement**

- Issue price of the Placement is \$0.016 per share – 2% premium to 15-day VWAP



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The September quarter was very busy for the Lithium Universe Team, as we worked to leverage all of our in-house mineral processing expertise and continue to turn innovative technologies into commercial projects, which aim to create new supplies of valuable materials, like silver and lithium, and take advantage of the U.S. - Australian critical minerals policy momentum.

The highlight has been the emerging opportunity to establish an entirely new source of high-grade silver, which is becoming a real possibility as we validate and refine our solar panel recycling solution. With demand rising and prices increasing, this technology is becoming increasingly necessary. Especially considering the amount of silver contained in end-of-life solar panels, which is equivalent to Australia's largest silver mine. We have been working with Binesh, David, and the Macquarie University team for a few months now, and I am encouraged by the pace of progress and how their research expertise is blending with LU7's experience in scaling and commercialising technology.

On the lithium front, we have continued with our counter-cyclical strategy, advancing discussions with offtake partners and spodumene producers. We have also looked at ways to take advantage of all the design work and technological breakthroughs we made in the DFS for Bécancour, which we released earlier this year, and the head-start that would give us on 'copy & paste' lithium refineries. This work led to the launch of a second lithium refinery strategy. I'd like to point out to investors that this new strategy is more than just a lithium one - it is a cohesive mineral processing plan for the Brownsville site, and it gives us a lot of efficiencies and competitive advantages as we go forward.

- Executive Chairman Iggy Tan

Lithium Universe Chairman Iggy Tan and Macquarie University's Binesh Puthen Veetil discuss the JESE technology in the lab

## RECYCLING SILVER

### Overview

During the September quarter, Lithium Universe was pleased to announce that it acquired the global rights to Macquarie University's Jet Electrochemical Silver Extraction (JESE) Technology. The rights were secured via an exclusive licensing agreement with Macquarie University, held through LU7's holding company, New Age Minerals Pty Ltd.

### The JESE Technology

The innovative JESE process utilises a low-voltage electrochemical jet of dilute nitric acid to selectively dissolve silver from solar cells. By applying a potential of approximately 2V-5V between the silicon wafer contact (anode) and the jet probe (cathode), silver on the wafer surface undergoes anodic oxidation, forming  $\text{Ag}^+$  ions that dissolve into the electrolyte through electrolysis-driven dissolution.

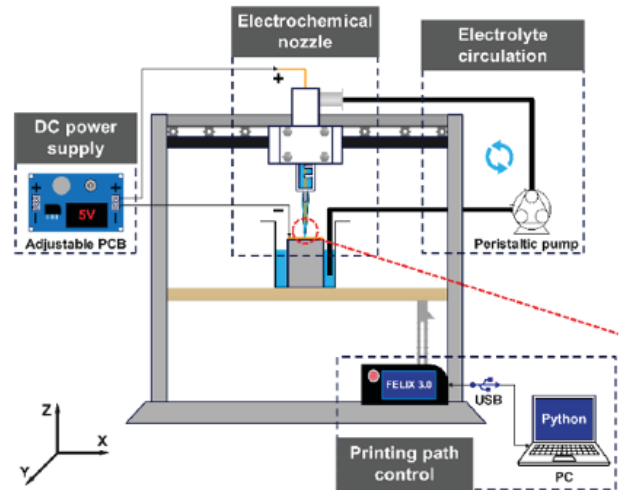


Figure 1. The JESE Technology Workflow

The jet probe precisely tracks the silver fingers and busbars on the cell surface, enabling highly targeted silver removal without leaching of other impurities or damaging the underlying silicon wafer. The silver-ion electrolyte is continuously recirculated, and high-purity silver is recovered via electrochemical deposition.

Importantly, the silicon wafer remains intact and uncontaminated making it suitable for potential high value silicon recycling.

ASX ANNOUNCEMENT  
**A FIRST LOOK  
 AT THE NEW  
 SILVER  
 EXTRACTION  
 TECHNOLOGY**



**WATCH** Executive Chairman Iggy Tan get a first look at the JESE technology in action in the labs at Macquarie University.

## JESE complements existing MJHT Technology and promises a complete Solar Panel Recycling Solution

The new JESE technology complements the existing Microwave Joule Heating Technology (MJHT), which LU7 licenced in the June Quarter.

MJHT is an energy-efficient process that delaminates solar panels without mechanical grinding or high-temperature furnaces. MJHT preserves the integrity of both the glass and the silicon wafer, creating an ideal precursor for the Jet Electrochemical Silver Extraction (JESE) process. A key advantage of MJHT is its ability to recover intact glass free from EVA residue, allowing direct reuse in PV module manufacturing—particularly valuable for reprocessing production rejects from PV factories. Additionally, MJHT maintains the structural integrity of the silicon wafer, enabling seamless integration into the JESE silver extraction process.

Cleanly separating silicon wafer from glass is also essential for effective silicon module recycling. This approach allows recovery of intact cells that can be refined into metallurgical- or solar grade silicon, instead of being downgraded to low value ferro silicon. If modules are pulverized without prior delamination, ductile metals such as aluminium and silver become trapped within aggregates, making impurity removal inefficient and costly. Pulverization also mixes glass, EVA, metals, and silicon, significantly complicating high purity recovery and reducing profitability.

Together, MJHT and JESE form a comprehensive and sustainable PV recycling platform that positions LU7 at the forefront of critical metal recovery from solar panel waste.

### Breaking Down a Solar Panel

A typical solar panel is made up of solar PV cells, which are made from silicon wafers. These silicon wafers are the core component that absorbs sunlight and converts it into energy. Around these wafers, there are other critical materials, such as silver, copper, and semiconductors, that help improve efficiency. These materials are all encapsulated in a layer of ethylene vinyl acetate (EVA), which acts as an adhesive to hold everything together and protect the components. The whole assembly is sandwiched between two glass sheets: the front glass sheet protects the solar cells from the elements, while the back sheet is at the rear of the panel, providing insulation and extra durability.

### Silver In Solar Cells

1. **Conductive Paste:** Silver is mixed with other materials to create a conductive paste, which is applied to the solar cells' surface. The paste is then baked onto the cells, forming silver contacts that help conduct the electricity generated by the solar panel.

2. **Electrical Conductivity:** Silver is known for its excellent electrical conductivity, making it an ideal material for transferring electricity from the solar cell to the external circuit. The metal forms the “fingers” (thin lines) and “busbars” (thicker lines) on the surface of the solar cells, which collect and transport the generated electrical current.

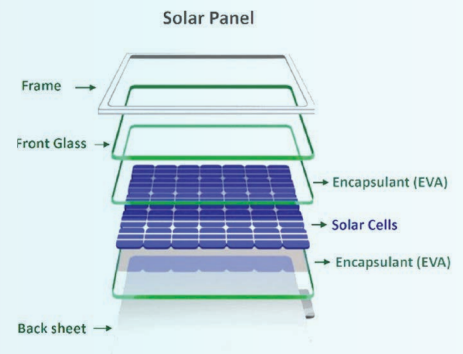


Figure 2: Solar Panel Components

## WHY THE CONVENTIONAL PROCESSES NEED DISRUPTING

Conventional methods for recycling solar panels rely on destructive processes in which panels are often shredded or ground into powder and then exposed to aggressive leaching with highly concentrated acids. Such approaches create large amounts of contamination, are energy-intensive, and produce substantial volumes of hazardous chemical waste. When focussed purely on silver recovery this method can work, but it permanently destroys the wafer, consumes large volumes of nitric acid, and requires significant energy.

In contrast, the methods developed by Macquarie University overcome these drawbacks by providing a safer, cleaner, and more sustainable solution that recovers high-value silver while preserving the wafer's integrity opening the door for further recycling of secondary high-value materials, like high-grade silicon.

### The Scale Of The Problem (and the Market)

The world's renewable energy transition is moving fast, with large-scale PV solar panels playing a central role in national energy strategies. The global solar cell market is projected to hit US\$39.81 billion by 2037, growing at a compound annual growth rate (CAGR) of around 8.2%.<sup>1</sup>

However, as these panels approach the end of their 25–30-year lifespan, the industry faces a new challenge: recovering the valuable materials they contain.

By 2035, Australia is expected to accumulate 1 million tonnes of solar panel waste worth over A\$1 billion, while the global CIGS (Copper, Indium, Gallium, Selenide) solar cell market is projected to grow to US\$12.23 billion by 2032. A report published by the International Energy Agency Photovoltaic Power Systems Programme<sup>2</sup> projected that global waste PV modules will amount to 60–78 million tonnes cumulatively by 2050. The market value of the materials that could be recovered from these end-of-life solar panels could approach \$80 billion, according to Rystad Energy.<sup>3</sup>



**WATCH** Lead Researcher Dr David Payne discusses some of the benefits of the processing that the Macquarie University team is developing compared to the conventional techniques.

The solar panel recycling industry is also getting more attention because of geopolitical and environmental concerns. Recovering materials from used solar panels not only reduces the environmental impact of landfill but it also offsets the need for costly and environmentally damaging virgin material extraction of valuable metals like silver, silicon, gallium, and indium. The process also has the potential to secure a completely new domestic supply of critical metals, reducing reliance on volatile foreign sources.

Despite this only 15% of used solar panels are currently recycled, presenting a significant opportunity for Lithium Universe.<sup>4</sup>

### NEW Technology To Solve A NEW Problem

The current low rate of recycling for PV solar panels globally is driven by several challenges. The recycling process is complex, and to recover many of the minerals, it requires high temperatures and toxic chemicals, making the whole process costly and energy intensive. As a result, economic incentives and investment in recycling solar panel infrastructure is limited.

However, if recycling technologies can effectively recover the critical materials then the financial viability of recycling end-of-life solar panels could change completely.

1. Sircel Pty Ltd. 2025. <https://sircel.com/services/solar-panel-recycling/>

2. TASK12, End of Life Management of Photovoltaic Panels Trends in PV Module Recycling Technologies, International Energy Agency

3. Rystad Energy - Reduce, reuse: Solar PV recycling market to be worth \$2.7 billion by 2030

4. National Renewable Energy Laboratory. (2021). To Toss, Repair, or Recycle? How Human Behavior Affects the Fate of Aging Solar Panels

# “Australia is about to be hit by a Tsunami of Solar Waste”

(International Energy Agency)

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## REFINING THE TECHNOLOGY

Over the quarter the Macquarie University engineering team, led by Dr. Binesh Puthen Veettil and Dr. David Payne, conducted an extensive test work program to validate and refine the Solar Panel Recycling Technology.

The test work primarily focussed on the accurate measurement of silver recovery efficiency, uniformity, and wafer preservation.

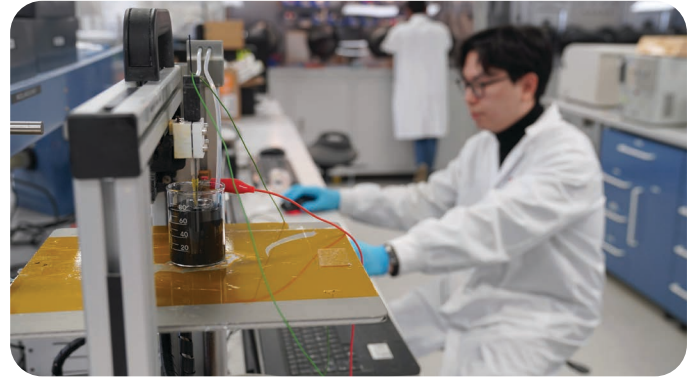
### Validation Process

The JESE process utilises a precision-controlled jet of dilute nitric acid, delivered under low applied voltage, directly onto the silver contacts of the solar panel wafer. Trials were conducted across a range of parameters including applied voltage, duration, cathode geometry, and electrolyte flow rates. These variables were optimised to maximise silver removal while minimising aluminium co-dissolution. Comparative tests using conventional hydrometallurgical acid leaching were also undertaken to benchmark JESE against the current industry standard.

### High Recovery Rates for Silver

The test work confirmed that JESE is highly effective in recovering silver from solar cell contacts. After only seven minutes of treatment, 90.2% of the silver was successfully dissolved and separated. Extending the duration to thirty minutes resulted in near-complete recovery of over 95%. These recovery rates were achieved using dilute nitric acid and an applied voltage of only 5V, demonstrating the remarkable efficiency of the process.

Recovery tests also confirmed that dissolved silver ions could be redeposited as metallic silver through reverse-mode electrochemical jet deposition. This recovery step achieved more than 90% efficiency. In comparison, conventional bulk electrolysis achieved only ~36% recovery under similar conditions, reinforcing the superior performance of the jet-based system.



**Figure 3.** The Macquarie University Team conducting testwork on the JESE Technology

Crucially, silicon wafers subjected to JESE treatment remained intact and uncontaminated. Unlike conventional hydrometallurgical recycling, which destroys wafers through prolonged immersion in concentrated acids, JESE preserved wafer integrity. This opens the door to downstream processing of wafers into solar-grade silicon or conversion into nanosilicon for lithium-ion battery applications.

### High Purity Silver

In a five-minute deposition trial, the JESE process yielded silver at a purity level of 95.95% (Ag %w/w). Typical hydrometallurgical or pyro routes often require multi-stage purification to approach this level. This result demonstrates the technology's ability to selectively recover silver with minimal contamination from associated metals from the silicon wafer. This positions the recovered material in line with Britannia-grade silver, which is historically recognised as a high-quality alloy above sterling grade (92.5%) and below investment-grade bullion (99.9%). Further refinement can easily elevate purity to 99.9% or higher using conventional electrorefining techniques.

Importantly, this high level of purity was achieved under mild operating conditions, highlighting the process efficiency compared with conventional bath recovery/deposition approaches.

# SILVER EXTRACTION

## JESE TECHNOLOGY 95.95% silver

JESE produced a low impurity profile of only 4.05%, with aluminium (1.93%) and oxygen (1.13%) as the main contaminants; heavy metals such as lead and bismuth remained very low

## VS

## CONVENTIONAL 78.63% silver

Conventional bath extraction yielded only 78.63% silver content with far higher aluminium (11.40%) and oxygen (8.41%) impurities



### Low Impurity Profile

The analysis of recovered silver showed that the total impurity content was just 4.05%, markedly lower than the 21.37% impurity level measured in conventional E-bath recovery/deposition trials conducted over the same five-minute timeframe.

The primary impurities observed in the JESE output were:

- Aluminium (1.93%) – the largest single impurity, likely originating from solar cell busbar material.
- Oxygen (1.13%) – associated with minor surface oxidation during recovery.
- Other trace elements including titanium (0.15%), bismuth (0.28%), lead (0.21%), copper (0.14%), and very small amounts of manganese, zinc, silicon, and chlorine (all  $\leq 0.08\%$ ).

The data confirms that heavy metal impurities such as lead, and bismuth remain exceptionally low and the process effectively suppresses aluminium and copper co-dissolution/deposition compared to conventional techniques, simplifying downstream refining and lowering processing costs.

### 83% Reduction in Acid Consumption

The Jet Electrochemical Silver Extraction (JESE) recycling technology was scientifically verified to achieve an 83% reduction in acid consumption, while completely eliminating the need for costly additives and sacrificial metals. This finding fundamentally reshapes the chemistry and cost base of metal recovery from end-of-life silicon solar cells.

Whereas conventional hydrometallurgical routes consume highly concentrated nitric acid solutions (up to 70 wt%  $\text{HNO}_3$ ) and require up to 48 hours of treatment, the new JESE process operates efficiently using only a dilute 12 wt%  $\text{HNO}_3$  solution at 5 V. Within seven minutes, over 90 percent of surface-metallised silver is selectively dissolved, reaching near-complete recovery ( $> 95\%$ ) with extended operation times of thirty minutes.

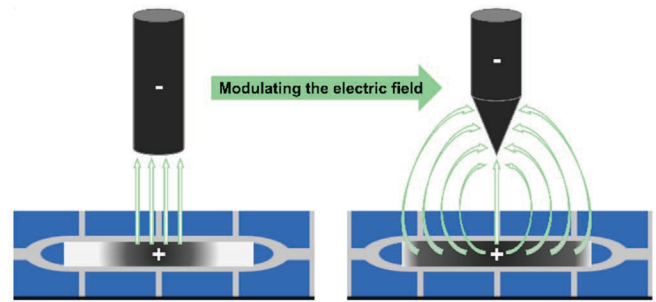
The chemical efficiency achieved under such mild conditions confirms the JESE system as a next-generation electrochemical platform that minimises reagent use, energy input, and secondary waste.

## Refined Electrode Design Leads to Higher Recovery

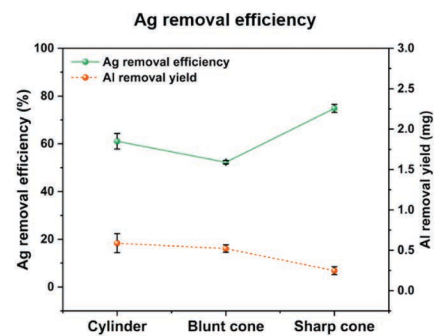
The team examined a range of silver extraction nozzle designs to determine how recovery efficiency could be improved. Among the designs tested were cylindrical, blunt-cone, and sharp-cone geometries.

The researchers focused on the electrode tool that delivers electric current during the recovery process, believing that its geometry could dramatically influence performance. Their findings indicate that nozzle design plays a critical role in how effectively silver can be removed from discarded solar cells, opening the door to transformative improvements in solar panel recycling.

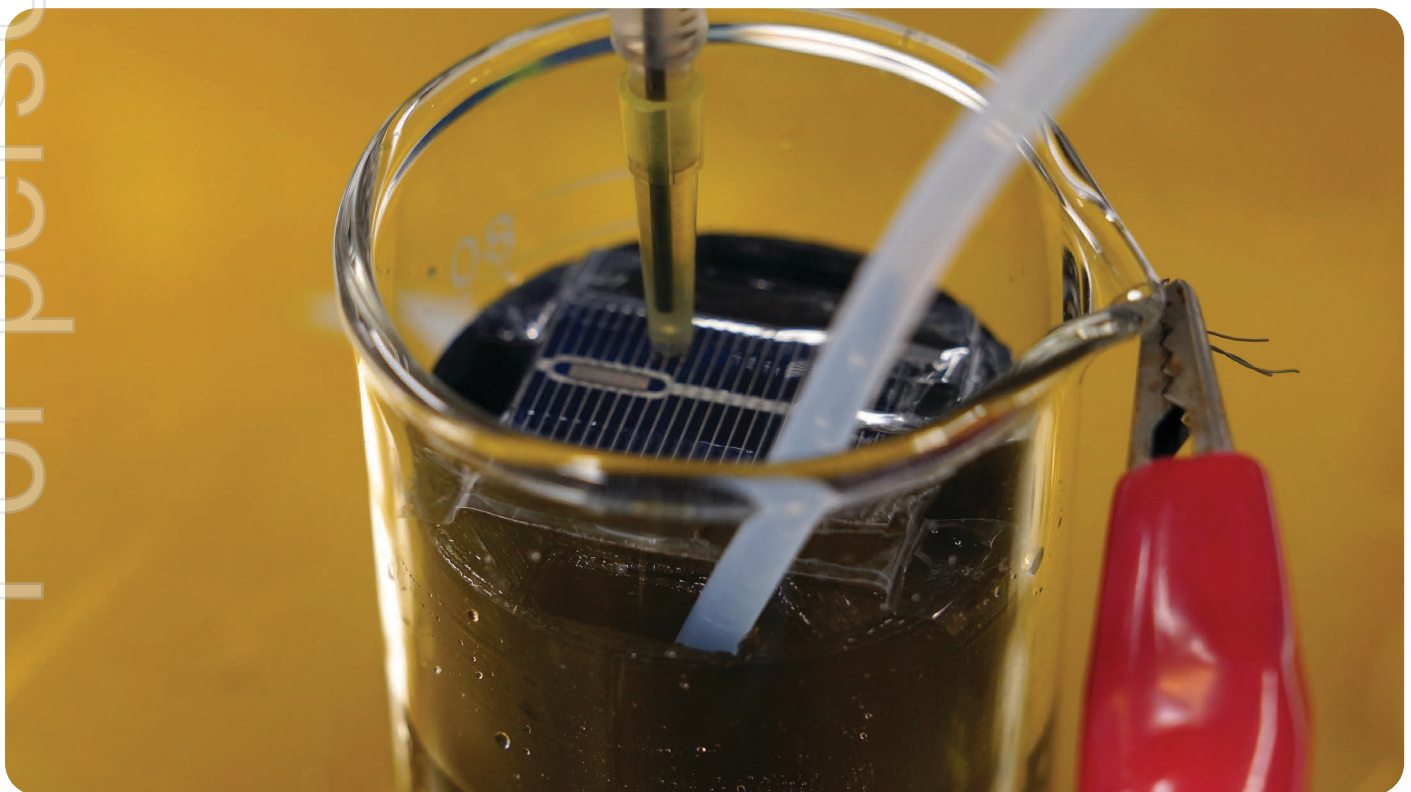
The finding may sound simple, but its impact is enormous. By machining electrodes into sharp cone shapes, the research team has harnessed the natural laws of physics to boost recycling performance, reduce waste, and recover silver more uniformly than ever before.



**Figure 4.** A sharp cone electrode creates a wider uniform electric field compared to conventional cylinder



**Figure 5.** Highest silver extraction (green) using sharp cone electrode



**Figure 6.** JESE Technology in action

**“The silver contained inside solar modules in landfill equates, in its totality, to Australia’s biggest silver mine.”**

(Smart Energy Council)



## The Silver Opportunity

The average solar panel is often reported to contain around 20 grams (0.7 oz) of silver, with some sources indicating a range of 3.2 to 8 grams per square meter. With rising prices the value of silver in each panel is in excess of A\$50 per panel in the current market.



Figure 7. Silver 10-Year Price Trend

Due to the substantial amount of silver in each panel, the recycling and extracting silver from solar panels presents a lucrative business opportunity for LU7. With the growing volume of solar panel waste as a readily available cheap feedstock for recycling and the demand for silver projected to keep growing, especially in industries like electronics and renewable energy, recovering silver from end-of-life panels can become a valuable and sustainable revenue stream.

The Company believes that the Macquarie University technology provides a more efficient recycling technology, positioning it to capitalise on this growing market while addressing environmental challenges.

## Secondary Opportunities

As part of a second phase, the Company will be investigating the extraction of other valuable metals such as silicon, gallium, and indium. These materials are not only essential to the clean energy transition but are also critical inputs in the semiconductor industry, where they are used in advanced electronics, power devices, and high-efficiency photovoltaic cells.

China is the dominant global supplier of both gallium and indium, producing around 80% of gallium and over 60% of indium. Gallium is primarily a by-product of aluminum production, while indium is extracted during zinc mining. Other notable gallium producers include Germany, Kazakhstan, and Ukraine, though their contributions are smaller. For indium, Canada and Peru are significant producers, with Japan and South Korea focusing on refining and processing. These metals are crucial for high-tech applications like semiconductors, solar panels, and electronics. However, their supply chains are concentrated in a few countries, especially China, making them vulnerable to supply disruptions.

## COMMERCIALISING THE TECHNOLOGY

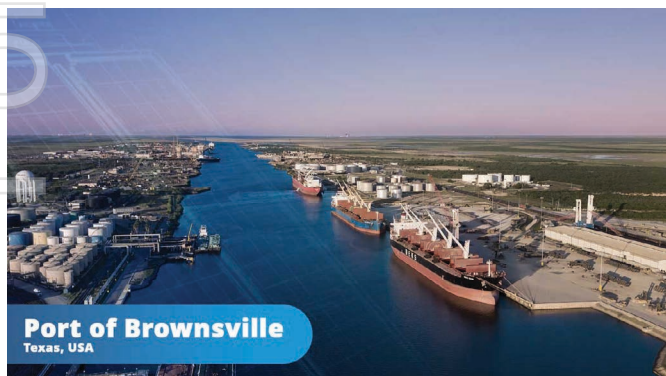
While the Macquarie University team was focussed on the refining the technology through its lab-scale testwork, the Lithium Universe team was laying some of the groundwork for the commercialisation of the technology.

### Assessing Texas Site for PV Recycling Facility

In addition to its Australian initiative, the Company began assessing multiple locations for a potential Solar Panel Recycling Facility. This process highlighted a site in the Port of Brownsville Business Park, Brownsville, Texas, as a potential PV recycling facility.

Texas presents a highly strategic opportunity, combining rapid solar market growth, supportive regulatory frameworks, robust infrastructure, streamlined permitting, and strong investor appetite—factors that together create an ideal environment for LU7 to establish scalable, long-term recycling operations.

The site identified for Lithium Universe’s PV recycling project is situated within the Port of Brownsville’s industrial precinct, the property benefits from immediate access to existing heavy-industry infrastructure, utilities, and transportation corridors. Its proximity to petrochemical plants, storage terminals, and pipeline networks highlights the area’s long-standing role as a hub for energy and processing industries, ensuring availability of essential services such as high-capacity electricity, process water, and natural gas.



The site lies adjacent to Chemical Road and State Highway 48, providing efficient truck access for inbound end-of-life PV panels and outbound recovered products such as silver, silicon, and other critical metals. Just across the channel, deep-water port facilities allow direct maritime transport, enabling receipt of panel waste and shipment of recovered materials to both U.S. and international markets. Rail access within the industrial park further enhances logistical flexibility, ensuring the facility can cost-effectively serve solar markets across North America.

From an operational perspective, the flat topography of the site under evaluation, and clear industrial zoning simplify site development, minimizing costly earthworks or permitting delays. The large, rectangular shape of the property allows for efficient plant layout, with space to accommodate delamination, metal recovery, warehousing, and future expansion modules. Furthermore, the location within a designated industrial corridor ensures compatibility with neighbouring uses, limiting community resistance and environmental permitting obstacles.

### LU7 Recruits Mechatronics And Robotics Expert To Research Team

During the Quarter, Mr Mohammadreza Hojati was welcomed to the Macquarie University research team to help progress the technology using mechatronics, robotics, and automation—key disciplines for maintaining the program’s rapid development trajectory. He has a high level of expertise in creating energy-efficient BLDC motors and intelligent control systems for autonomous agricultural robots, combining high-precision motion control, low-current optimisation, and multi-sensor feedback. These capabilities directly enhance the precision, efficiency, and scalability of Lithium Universe’s Jet Electrochemical Silver Extraction (JESE) platform.

## REFINING LITHIUM



**WATCH** Executive Chairman Iggy Tan discuss the new strategy

### Overview

Lithium Universe has continued to advance plans to build Lithium Refining Infrastructure across North America and help to close the “Lithium Conversion Gap”—the critical shortage of refining capacity in North America. This shortage represents one of the biggest bottlenecks in the global clean energy supply chain, where local EV and battery gigafactory capacity is rising rapidly, but conversion of spodumene to battery-grade lithium carbonate remains overwhelmingly dependent on China. LU7 also maintains its counter-cyclical strategy focused on developing projects during market downturns to strategically position itself as the market recovers.

During the Quarter the team continued discussions with potential spodumene suppliers and offtake partners as well as looking at the potential to leverage all the work done to achieve a positive DFS at Bécancour in Québec and build a “Copy & Paste” refinery.

### A Second Lithium Refinery in Texas

Lithium Universe announced a second lithium refinery strategy for Brownsville, Texas. The new refinery strategy positions LU7 to establish a twin-plant refining platform across Canada and the United States.

LU7 emphasises that Bécancour remains its first priority, with the DFS already completed and offtake discussions advancing. However the Texas project is structured as a parallel growth pathway:

- Québec as the Trans-Atlantic hub, powered by Hydro-Québec’s renewable energy, serving Canada and Europe.
- Texas as the U.S. hub, integrated with Gulf Coast logistics and closer to domestic gigafactories.
- Together, the two projects form a binational refining platform, de-risking supply, diversifying geography, and maximising exposure to incentives across both Canada and the U.S.

### Brownsville - A Dual Opportunity Site

The Port of Brownsville Business Park has been under evaluation by LU7 for its PV recycling project. Detailed site assessments confirm the land parcel is sufficiently large enough to accommodate two full lithium carbonate refinery trains in addition to the recycling operations. This dual opportunity allows LU7 to establish a multi-commodity clean energy hub, producing both recycled metals and fresh lithium carbonate on the same footprint.

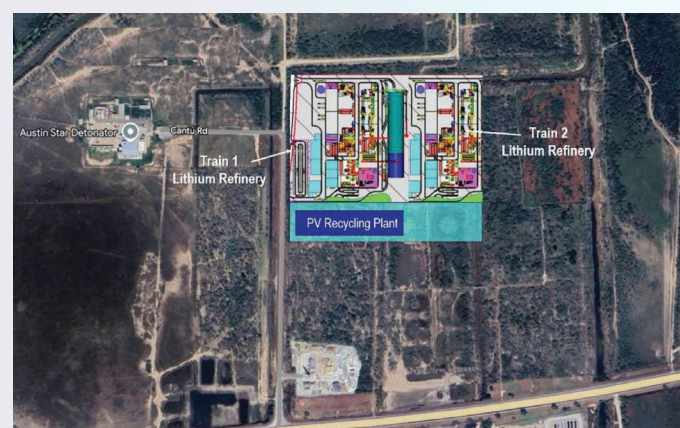


Figure 8. Location of LU7 Proposed Second Lithium Refinery Site with Two Trains and PV Recycling Project Under Evaluation

## The Bécancour Lithium Carbonate Refinery

Early in 2025 Lithium Universe Limited announced the results of its Definitive Feasibility Study (DFS) for the Bécancour Lithium Carbonate Refinery in Québec, Canada. The DFS confirmed the viability of a strong lithium conversion project, even within a below-average pricing environment.



**WATCH** the video explainer to understand the key numbers contained in the DFS.

The Bécancour Refinery is a reliable, low-risk lithium conversion refinery with an annual capacity of up to 18,270 tonnes, utilizing proven expertise from the Jiangsu processing model. The facility will produce environmentally friendly, battery-grade lithium carbonate.

### Replicating Jiangsu Success

In 2012, the 17,000 tpa Jiangsu Lithium Carbonate Plant, engineered by Hatch Ltd. under Iggy Tan and Dr. Jingyuan Liu, became the world's largest lithium refinery, exceeding design capacity. The Company's strategy to mitigate technology risks involves using the same flow sheet, equipment, and suppliers that were successfully implemented at the Jiangsu Lithium Carbonate Plant.

By replicating this proven approach, the Company minimises operational uncertainties and ensures reliable performance, leveraging established processes and trusted suppliers to deliver consistent results in new projects.



**Figure 9.** 3D Model of the Lithium Universe Bécancour Lithium Refinery

### Next Steps

With the DFS complete, the LU7 team has spent the quarter in discussions with multiple offtake partners and spodumene concentrate producers. In discussions, spodumene concentrate producers have all acknowledged the benefit of supplying their spodumene product to a local lithium converter as opposed to shipping to Chinese operations for conversion.

The spodumene transport costs to China could be as high as US\$100 per dmt which represents US\$800-900 per tonne of additional cost to the finished lithium carbonate product. If the final lithium carbonate must be shipped back to North America, that adds another approximately US\$200 per tonne of final product. Additionally, Canada has an import tariff of 25% on all Chinese lithium chemicals. All of these factors give local conversion an overriding price advantage.

In these discussions, Lithium Universe is targeting a non-binding MoU for the full supply of 140,000 tonnes per annum for SC6 grade spodumene material. The target tonnes will proportionally increase if the grade is less than 6% LiO<sub>2</sub>.

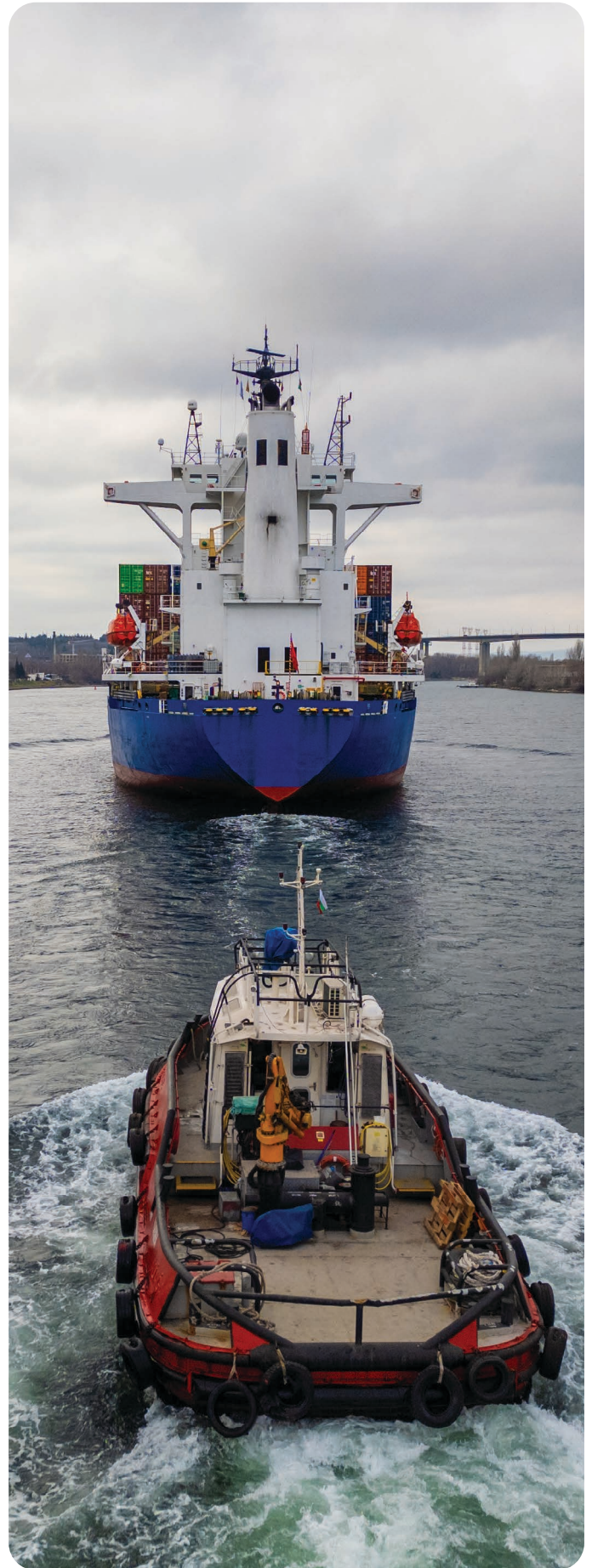
LU7 intends to purchase spodumene ore at benchmark prices from the market, and LU7 will retain full ownership of the resulting lithium carbonate, with the right to sell it either to the open market at benchmark prices or directly to an OEM offtaker.

## China Technology Ban

In July 2025, China's Ministry of Commerce and Ministry of Science and Technology formally updated its "Catalogue of Technologies Prohibited or Restricted from Export," adding a sweeping ban on lithium conversion technologies. These include critical processes for producing lithium carbonate and hydroxide from spodumene, such as carbonation-pyrolysis purification, automatic control for continuous production, and sodium removal by freeze crystallization. Unauthorized export of these technologies may now trigger administrative penalties and criminal prosecution. This policy shift significantly impacts global lithium supply chains.

Lithium Universe is uniquely positioned amid this development. Its planned lithium carbonate refinery will deploy the same proven process technology that the founders of Galaxy Resources first introduced to China over 20 years ago—technology that has become the industry benchmark. With China now restricting access to these critical processes, LU7 stands out as one of the few companies in North America with this capability already in hand.

This technological independence is crucial for both the US and Canada's onshoring ambitions. LU7's refinery strategy not only supports domestic battery material supply chains but also directly aligns with Western efforts to reduce reliance on Chinese lithium converters. In a world moving toward resource nationalism and secure supply chains, LU7 offers a rare, geopolitically aligned lithium solution.



## CORPORATE

### Final Acquisition of MJHT Technology

After announcing the acquisition in June, Lithium Universe successfully completed the acquisition of 100% of the issued capital New Age Minerals Pty Ltd (NAM) in July 2025. NAM is party to an exclusive licensing agreement with Macquarie University in respect to the patented photovoltaic (PV) solar panel recycling technology known as Microwave Joule Heating Technology (MJHT).

### Acquisition of JESE Technology

Subsequent to completing the acquisition of the MJHT Technology, Lithium Universe Limited acquired the global rights to Macquarie University's complementary Jet Electrochemical Silver Extraction (JESE) Technology. The rights will be secured via an exclusive licensing agreement with Macquarie University, held through LU7's holding company, New Age Minerals Pty Ltd.

### AEA Ignite Grant Application

Lithium Universe together with Macquarie University, applied for the Australia's Economic Accelerator (AEA) Ignite Grant by the Department of Education. If successful, the grant will support the development of an integrated recycling prototype for end-of-life solar panels, combining Macquarie's patented MJHT with the breakthrough JESE process.

It will provide vital resources to accelerate the project from laboratory validation (TRL 4) to a scalable pilot prototype (TRL 6), positioning Australia at the forefront of global solar panel recycling efforts. The 12-month project is divided into two phases:

- Phase 1 (Q1–Q2) will focus on R&D, prototyping MJHT, and validating JESE; and
- Phase 2 (Q3–Q4) will concentrate on integrating MJHT and JESE into a pilot system.

This project aligns with multiple Australian Government priorities, including the advancement of renewables and low-emission technologies, the development of critical and strategic minerals processing, and the achievement of national net-zero commitments.

The total grant application amounts to \$385,728, supported by additional contributions from project partners. Macquarie University will provide \$39,700 in cash and \$187,306 in-kind, while Lithium Universe will contribute \$100,000 in cash and \$171,600 in-kind. If the application is successful, the combined value of grant funding and partner contributions will total \$884,334 for 12 months commencing January 2026. The outcome of the application is expected by the end of December 2025, and there is no certainty of approval.

### Successful \$2.5M Placement

Subsequent to the end of the quarter, Lithium Universe received binding commitments from sophisticated and professional investors pursuant to a placement to raise \$2.50 million at an issue price of \$0.016 per Share, which represents a 2% premium to the 15-day VWAP.

The funds from the Placement will be used to progress Lithium Universe's Lithium Refinery and Solar Recycling Technology.

## QUARTERLY REPORT

SEPTEMBER 2025

### Lithium Universe Limited

ASX: LU7

ABN: 22 148 878 782

### Financial Information

(as at 30 September 2025)

Share Price	\$0.012
Shares (ASX: LU7)	1,447M
Options (Listed ASX: LU7O)	518M
Options (Unlisted)	120M
Performance Rights	217M
Market Cap	\$17.4M
Cash	\$0.3M (prior to placement)

### Contact

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AUSTRALIA

e: [info@lithiumuniverse.com](mailto:info@lithiumuniverse.com)  
[www.lithiumuniverse.com](http://www.lithiumuniverse.com)

### Directors

Iggy Tan  
Pat Scallan  
Dr. Jingyuan Liu

*Executive Chairman*  
*Non-Executive Director*  
*Non-Executive Director*

Engage with Lithium Universe directly by asking questions, watch video summaries and see what other shareholders have to say, as well as past announcements.

<https://investorhub.lithiumuniverse.com/>



### Cautionary Statements

#### Information Required by Listing Rules

The Bécancour Lithium Refinery Definitive Feasibility Study (DFS) does not rely upon estimated ore reserves / and or mineral resources. The spodumene concentrate feedstock for the proposed refinery has been assumed to have been purchased directly from spodumene miners currently producing spodumene concentrates or marketing agents or traders currently purchasing spodumene concentrate and selling to the downstream processors. Accordingly, the JORC Code is not relevant to this study nor are Listing Rules 5.16 and 5.17 to the extent to which they relate to matters concerning JORC.

#### Forward Looking Statements

This release contains "forward-looking information" that is based on the Company's expectations, estimates and projections as of the date on which the statements were made. This forward-looking information includes, among other things, statements with respect to studies, the Company's business strategy, plan, development, objectives, performance, outlook, growth, cash flow, projections, targets and expectations. Generally, this forward looking information can be identified by the use of forward-looking terminology such as 'outlook', 'anticipate', 'project', 'target', 'likely', 'believe', 'estimate', 'expect', 'intend', 'may', 'would', 'could', 'should', 'scheduled', 'will', 'plan', 'forecast', 'evolve' and similar expressions. Persons reading this news release are cautioned that such statements are only predictions, and that the Company's actual future results or performance may be materially different. Forward-looking information is subject to known and unknown risks, uncertainties and other factors that may cause the Company's actual results, level of activity, performance or achievements to be materially different from those expressed or implied by such forward-looking information. Forward-looking information is developed based on assumptions about such risks, uncertainties and other factors set out herein, including but not limited to general business, economic, competitive, political and social uncertainties; the actual results of current development activities; conclusions of economic evaluations; changes in project parameters as plans continue to be refined; future prices of metals; failure of plant, equipment or processes to operate as anticipated; accident, labour disputes and other risks of the chemical industry; and delays in obtaining governmental approvals or financing or in the completion of development or construction activities. This list is not exhaustive of the factors that may affect our forward-looking information. These and other factors should be considered carefully, and readers should not place undue reliance on such forward-looking information. Neither the Company, nor any other person, gives any representation, warranty, assurance or guarantee that the occurrence of the events expressed or implied in any forward-looking statement will actually occur. Except as required by law, and only to the extent so required, none of the Company, its subsidiaries or its or their directors, officers, employees, advisors or agents or any other person shall in any way be liable to any person or body for any loss, claim, demand, damages, costs or expenses of whatever nature arising in any way out of, or in connection with, the information contained in this document. The Company disclaims any intent or obligations to or revise any forward-looking statements whether as a result of new information, estimates, or options, future events or results or otherwise, unless required to do so by law.

The DFS is based on the material assumptions outlined including that it has been completed in accordance with AACE Principles to a Class 5 level with a nominal level of accuracy of  $\pm 35\%$ , that the financial forecasts rely upon the purchase of third party spodumene concentrate as the feedstock for the plant. The DFS referred to in this announcement has been undertaken to assess the potential technical feasibility and economic viability of constructing and operating facilities capable of producing battery grade lithium carbonate for use in lithium-ion batteries from those units of operations and provide baseline financial metrics to consider future investment decisions.

The Definitive Feasibility Study (DFS) is based on the material assumptions outlined below. These include assumptions about the availability of funding. While Lithium Universe considers all of the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the DFS will be achieved. To achieve the range of outcomes indicated in the DFS, funding of in the order of US\$500 million will likely be required. Investors should note that there is no certainty that Lithium Universe will be able to raise that amount of funding when needed. It is also likely that such funding may only be available on terms that may be dilutive to or otherwise affect the value of Lithium Universe's existing shares. It is also possible that Lithium Universe could pursue other 'value realisation' strategies such as a sale, partial sale or joint venture of the project. If it does, this could materially reduce the Company's proportionate ownership of the project. Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the DFS.

## ASX Additional Information

The Company provides the following information pursuant to ASX listing Rule requirements:

### ASX Listing Rule 5.3.1

Exploration and Evaluation Expenditure spend during the quarter was \$3,641. Full details of the exploration activity that had been conducted by the Company during the quarter has been set out within this report.

### ASX Listing Rule 5.3.2

The Company confirms that there was no mine production and development activities for the quarter.

### ASX Listing Rule 5.3.5

Payments to related parties of the entity and their associates outlined in the Company's Appendix 5B for the quarter related to directors' fees (and inclusive of superannuation entitlements) of \$99,235.

### ASX Listing Rule 5.4.4

The Company provides the following comparison of its actual expenditure on the individual items in the "use of funds" statement in its IPO Prospectus since the date of its admission to the ASX against the estimate expenditure on those items in the "use of funds" statement in the IPO Prospectus and an explanation of any material variances.

The material variances are due to the Company only recently being admitted to the Official List of the ASX on 14 August 2023. Additionally, the Company has incurred expenditures in respect to its "Lithium Processing Hub" strategy.

Use of Funds	Estimate of the first 2 years after ASX admission <sup>1</sup> (\$)	Actual Use since admission to the ASX (\$)	Balance Remaining (\$) <sup>3,4</sup>
Exploration and Development	4,842,092	2,319,943	2,522,149
Lead Manager Fees	270,000	275,683	(5,683)
Transaction costs	311,482	330,317	(18,835)
Working capital <sup>2</sup>	1,490,000	3,987,631	(2,497,631)
<b>Total</b>	<b>6,913,574</b>	<b>6,913,574</b>	<b>-</b>

Notes to ASX Listing Rule 5.4.4 table

<sup>1</sup> Lithium Universe Limited's (ASX:LU7) Use of Funds – ASX Prospectus 21 June 2023 Item 2.3 'Proposed use of funds'

<sup>2</sup> Includes expenditures incurred in respect to the Company's "Lithium Processing Hub" strategy.

<sup>3</sup> The difference between the Company's bank balance at 30 June 2024 and the closing balance per the table above is represented by expenditures that were incurred prior to the Company's compliance listing (June 2023).

<sup>4</sup> The Company's funds raised from its IPO were depleted during the June 2024 quarter.

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### ASX Listing Rule 5.3.3

In accordance with Listing Rule 5.3.3, LU7 provides the following information concerning its exploration licences. No applications were made during the quarter by the Company to acquire further licences.

The following table lists the Company's exploration licences held at the end of the quarter, and their location:

Project	Exploration Licence	Location	Status	Ownership

#### *Tenements acquired during the quarter and their location*

Nil.

#### *Tenements disposed during the quarter and their location*

Nil

#### *The beneficial percentage interests held in farm-in or farm-out agreements at the end of the quarter*

Nil.

#### *The beneficial percentage interests in farm-in or farm-out agreements acquired or disposed of during the quarter*

Nil.

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## Appendix 5B

### Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Name of entity

**LITHIUM UNIVERSE LIMITED**

ABN

Quarter ended ("current quarter")

**22 148 878 782**

**30 September 2025**

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (9 months) \$A'000
<b>1. Cash flows from operating activities</b>		
1.1 Receipts from customers		
1.2 Payments for		
(a) exploration & evaluation		
(b) development		
(c) production		
(d) staff costs (including directors)	(202)	(799)
(e) administration and corporate costs	(795)	(1,273)
1.3 Dividends received (see note 3)		
1.4 Interest received	-	8
1.5 Interest and other costs of finance paid		
1.6 Income taxes paid		
1.7 Government grants and tax incentives		
1.8 Other (provide details if material)		
<b>1.9 Net cash from / (used in) operating activities</b>	<b>(997)</b>	<b>(2,064)</b>
<b>2. Cash flows from investing activities</b>		
2.1 Payments to acquire or for:		
(a) entities		
(b) tenements (including transaction costs)		
(c) property, plant and equipment	-	(4)
(d) exploration & evaluation	(4)	(7)
(e) investments		

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<b>Consolidated statement of cash flows</b>		<b>Current quarter \$A'000</b>	<b>Year to date (9 months) \$A'000</b>
	(f) other non-current assets (engineering study and development)	(123)	(133)
2.2	Proceeds from the disposal of:		
	(a) entities		
	(b) tenements		
	(c) property, plant and equipment		
	(d) investments		
	(e) other non-current assets		
2.3	Cash flows from loans to other entities		
2.4	Dividends received (see note 3)		
2.5	Other		
<b>2.6</b>	<b>Net cash from / (used in) investing activities</b>	<b>(127)</b>	<b>(144)</b>

<b>3.</b>	<b>Cash flows from financing activities</b>		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	1,058	1,716
3.2	Proceeds from issue of convertible debt securities		
3.3	Proceeds from exercise of options		
3.4	Transaction costs related to issues of equity securities or convertible debt securities	(146)	(161)
3.5	Proceeds from borrowings		
3.6	Repayment of borrowings		
3.7	Transaction costs related to loans and borrowings		
3.8	Dividends paid		
3.9	Other		
<b>3.10</b>	<b>Net cash from / (used in) financing activities</b>	<b>912</b>	<b>1,555</b>

<b>4.</b>	<b>Net increase / (decrease) in cash and cash equivalents for the period</b>		
4.1	Cash and cash equivalents at beginning of period	465	906
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(997)	(2,064)

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<b>Consolidated statement of cash flows</b>		<b>Current quarter \$A'000</b>	<b>Year to date (9 months) \$A'000</b>
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(127)	(144)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	912	1,555
4.5	Effect of movement in exchange rates on cash held	-	-
<b>4.6</b>	<b>Cash and cash equivalents at end of period</b>	<b>253</b>	<b>253</b>

<b>5.</b>	<b>Reconciliation of cash and cash equivalents</b> at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	<b>Current quarter \$A'000</b>	<b>Previous quarter \$A'000</b>
5.1	Bank balances	253	465
5.2	Call deposits	-	-
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
<b>5.5</b>	<b>Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>253 *</b>	<b>465</b>

<b>6.</b>	<b>Payments to related parties of the entity and their associates</b>	<b>Current quarter \$A'000</b>
6.1	Aggregate amount of payments to related parties and their associates included in item 1	99
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-

*Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments.*

More information concerning the breakdown of the above payments to directors and their related parties can be found within the accompanying Quarterly Activities Report.

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7.	<b>Financing facilities</b>	<b>Total facility amount at quarter end \$A'000</b>	<b>Amount drawn at quarter end \$A'000</b>
	<i>Note: the term "facility" includes all forms of financing arrangements available to the entity. Add notes as necessary for an understanding of the sources of finance available to the entity.</i>		
7.1	Loan facilities	-	-
7.2	Credit standby arrangements	-	-
7.3	Other (please specify)	-	-
7.4	<b>Total financing facilities</b>	-	-
7.5	<b>Unused financing facilities available at quarter end</b>		-
7.6	Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.		

8.	<b>Estimated cash available for future operating activities</b>	<b>\$A'000</b>
8.1	Net cash from / (used in) operating activities (item 1.9)	(997)
8.2	(Payments for exploration & evaluation classified as investing activities) (item 2.1(d))	(4)
8.3	Total relevant outgoings (item 8.1 + item 8.2)	(1,001)
8.4	Cash and cash equivalents at quarter end (item 4.6)	253
8.5	Unused finance facilities available at quarter end (item 7.5)	-
8.6	Total available funding (item 8.4 + item 8.5)	253 *
8.7	<b>Estimated quarters of funding available (item 8.6 divided by item 8.3)</b>	0.25 *
	<i>Note: if the entity has reported positive relevant outgoings (ie a net cash inflow) in item 8.3, answer item 8.7 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.7.</i>	
8.8	If item 8.7 is less than 2 quarters, please provide answers to the following questions:	
8.8.1	Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?	
	Answer: Yes.	

8.8.2 Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?

Answer:

\* Yes. The Company announced on 21 October 2025 the following capital raising initiatives were being undertaken:

\$2.50 million share placement to sophisticated investors, which is to be completed in two stages. The first stage (Tranche 1) will be completed on or around 31 October 2025 and will raise \$2.46 million (before costs). The second stage (Tranche 2) will be completed on or around 8 December 2025 (subject to shareholder approval) and will raise \$0.04 million (before costs). Neither tranche is included in current quarter.

8.8.3 Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?

Answer: Yes, refer to the Company's response provided under item 8.8.2 above.

Note: where item 8.7 is less than 2 quarters, all of questions 8.8.1, 8.8.2 and 8.8.3 above must be answered.

## Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Date: **30 October 2025**

Authorised by: **The Board of Lithium Universe Limited**

(Name of body or officer authorising release – see note 4)

## Notes

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 6: Exploration for and Evaluation of Mineral Resources* and *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – eg Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.