Lithium Universe LIMITED
Building a Lithium Future

ASX ANNOUNCEMENT AND MEDIA RELEASE

6 January 2026

LU7 ADVANCES SECOND U.S. LITHIUM REFINERY STRATEGY AFTER BROWNSVILLE SITE VISIT

Highlights

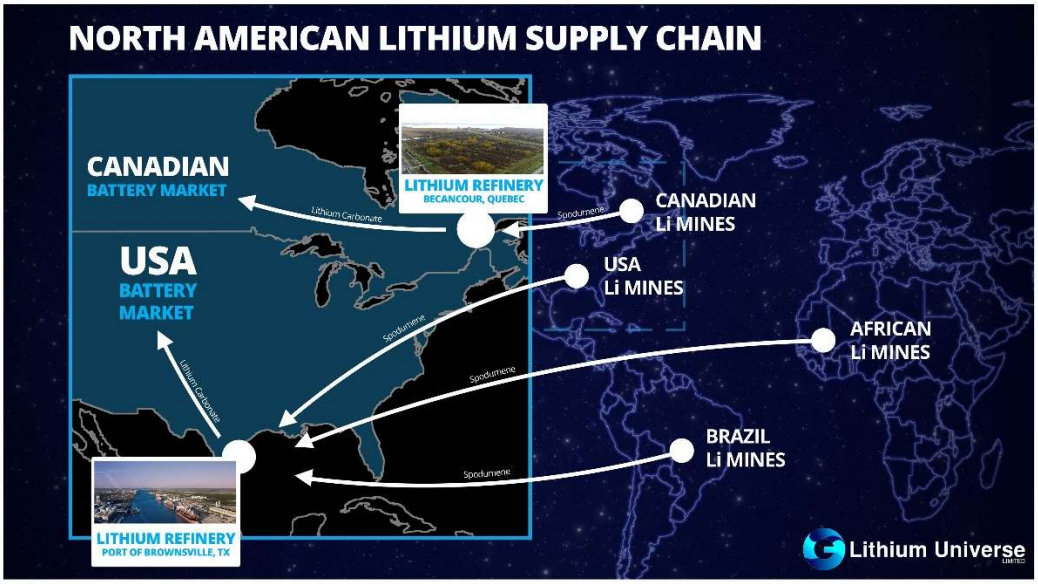
- LU7 Executive team completed Brownsville site visit
- Confirms potential suitability for second U.S. refinery
- Supports binational lithium-refining platform strategy
- Opportunity to replicate the potential Bécancour operation
- Validates logistics, utilities, and expansion capacity
- Aligns with U.S. critical-minerals policy
- Spodumene feedstock potential from Brazil, Africa and US
- Replicating the Bécancour design reduces cost, construction time, and operational risk
- Proceeding to land lease application and Scoping Study
- Space available for PV Recycling Silver Extraction Project

Lithium Universe Limited (ASX: LU7, "Lithium Universe" or "the Company") is pleased to announce that senior members of its executive team have completed a **detailed site visit** to assess the Company's proposed **second lithium refinery location in Brownsville**, **Texas**. This strategic visit marks another step forward in advancing **LU7's binational lithium-refining platform** across Canada and the United States, designed to close the North American "Lithium Conversion Gap" and provide long-term processing capacity for the rapidly expanding electric-vehicle, stationary storage, and critical minerals sectors.

The visit builds directly on the Company's earlier strategic review work and complements the progress already underway at LU7's flagship Bécancour Lithium Refinery Project in Québec. With demand for battery-grade lithium carbonate forecast to significantly outpace North American conversion capacity, LU7 continues to position itself as one of the very few companies capable of deploying multiple lithium-refining trains using a proven, repeatable "copy-and-paste" engineering model first established through the Bécancour Definitive Feasibility Study (DFS). The latest site assessment visit brings that strategy one step closer to execution. The **site has space available for the Company's PV Recycling Silver Extraction Project.**

BUILDING A BINATIONAL REFINING PLATFORM

LU7's targeted second lithium refinery aims to operate in parallel with the proposed Bécancour project, forming a continental refining network capable of delivering up to two full trains of lithium-carbonate production in each jurisdiction. The Company plans to leverage the proven engineering from its Jiangsu-derived process flow, which was optimised and validated during the Bécancour DFS.



The site visit served to confirm that the proposed U.S. location **is potentially capable of hosting a full replication** of the proposed Bécancour design envelope, with only minor regional adaptations required. Unlike Québec, where cold-temperature engineering considerations such as freeze protection and thermal enclosure requirements shaped parts of the design, the U.S. site would require modifications primarily focused on hurricane resilience, stormwater management, and extreme-weather preparedness.

VIDEO REPORT OF THE SITE ASSESSMENT

For a video interview and report of the site assessment by CFO, John Sobolewski

PURPOSE OF THE SITE ASSESSMENT

The objective of the visit was to evaluate the suitability of the proposed site for LU7's second lithium refinery, examining factors such as land configuration, infrastructure readiness, logistics corridors, utilities availability, labour supply, permitting pathways, and long-term expansion capacity. Members of the Company's executive team met with port officials, regional development representatives, utilities providers, logistics companies, universities, and other local stakeholders to confirm the project's fit with the region's industrial framework. The

assessment confirmed that the proposed location offers the right combination of land area, layout flexibility, multimodal transport access, and integration potential with LU7's broader critical minerals strategy.

Photos: LU7 Executive Management at Brownsville site Visit

LOGISTICS AND IMPORT/EXPORT ROUTES

A central focus of the visit was validating the inbound and outbound logistics framework that would support a high-throughput lithium-refining operation. The team **reviewed deep-water port infrastructure, road-freight corridors, intermodal connections, and regional industrial services**. These logistics links are essential to supporting spodumene concentrate imports from North America, Brazil, and Africa, and for distributing battery-grade lithium carbonate to U.S. and Mexican gigafactories. The assessment confirmed the prospective viability of multiple supply-chain pathways, reducing dependence on any single transport route and strengthening the resilience of the Company's overall refining platform. The deep-water port's ability to handle bulk material shipments, oversized industrial cargo, and high-frequency vessel scheduling was a key advantage that reinforced LU7's site selection considerations.

REGIONAL AND ECONOMIC BENEFITS

The Brownsville site under evaluation is recognised for its pro-industry policy settings, competitive labour costs, and strong alignment with U.S. federal critical-minerals initiatives. Recent U.S. Government actions, including the Inflation Reduction Act (IRA), the Department of Energy's Loan Programs Office, and targeted incentives for domestic battery-supply-chain infrastructure, provide a favourable environment for lithium-processing investments.

During the site assessment, LU7's delegation held discussions with local and state stakeholders regarding potential support mechanisms, workforce-training partnerships, and long-term collaboration opportunities. The workforce profile demonstrated a strong pipeline of technically oriented vocational graduates, process-industry skill sets, and regional institutions capable of supplying operators, technicians, metallurgists, safety personnel, and engineering talent.

INFRASTRUCTURE AND UTILITIES

The management team reviewed availability of electricity supply, natural gas, process water, waste-management channels, and potential grid-connection points. High-capacity utilities access is fundamental to lithium-refining operations, particularly in the areas of calcination, sulphation, and high-purity chemical processing. The site visit confirmed that the region's existing industrial networks are well-equipped to support the needs of a commercial-scale refinery without requiring significant upstream infrastructure expansions.

PROCESS BROWNSVILLE LAYOUT AND EXPANSION CAPACITY

The proposed site provides suitable space for the placement of all major refinery components, including:

- concentrate reception and storage areas;
- calcining and roasting lines;
- acid-sulphation circuits;
- leach tanks and impurity-removal units;
- purification and crystallisation units;
- drying, packaging, and product-load-out facilities;
- reagent storage and mixing halls; and
- maintenance workshops, control rooms, and laboratories.

The land configuration also potentially allows for long-term expansion to an additional train, enabling LU7 to **scale capacity in line with market demand**. This scalability was a major consideration during the visit, given the Company's strategy to build modular, repeatable refinery units.

Possible site utilisation incorporating Lithium Refinery and PV Recycling Silver Extraction Project

REPLICATION OF ENGINEERING STRATEGY

The assessment reinforced LU7's core strategy of replicating the proposed Bécancour refinery design in a near-identical form. By adopting the same process flow, equipment lists, supplier base, and commissioning protocols, LU7 can significantly reduce engineering time, cost, and risk for its second site. Key advantages include:

- lower engineering CAPEX due to reuse of existing designs;

- reduced construction timelines due to pre-qualified vendors;
- predictable plant performance based on validated Jiangsu-derived flowsheets; and
- improved financing readiness through use of proven project templates.

This approach allows LU7 to maintain strong capital discipline while accelerating deployment of long-lead components and locking in competitive pricing from suppliers.

U.S. CRITICAL-MINERALS POLICY ALIGNMENT

The visit also confirmed the strong alignment between LU7's second refinery strategy and ongoing U.S. policy direction, which is heavily focused on reshoring and securing domestic lithium-conversion capability. The United States faces a persistent shortfall in refining capacity relative to its rapidly expanding EV and storage sectors.

A good example of this policy in action was the recent **US Government strategic investment in Lithium Americas** Thacker Pass Lithium project. The Department of Energy's $435 million funding package, including a 5% equity stake in Lithium Americas and a separate 5% stake in the Thacker Pass project, aims to establish a domestic source of lithium carbonate and support the U.S. supply chain for critical minerals vital to electric vehicle battery production.

The proposed Brownsville site offers proximity to major consumption hubs and industrial clusters, making it well suited to supply the U.S. battery ecosystem. The availability of IRA-aligned incentives further enhances the project's long-term economics.

CONCLUSION AND NEXT STEPS

The site visit has provided potential validation of the Company's strategy to establish a second lithium refinery in the United States. The proposed location potentially offers the industrial capability, logistics strength, and expansion potential necessary to support LU7's long-term multi-train refining program. Combined with the Bécancour design platform, the project reinforces LU7's ambition to become a leading supplier of battery-grade lithium carbonate across North America and a major contributor to global clean-energy supply chains.

The Company will now advance into the formal lease application phase for the site and initiate a Scoping Study for an 18,270 tpa battery-grade lithium carbonate refinery at Brownsville.

Executive Chairman Iggy Tan said:

"*Our strategic site visit marks another major step in building a true binational lithium-refining platform. The proposed Brownsville U.S. site has demonstrated all the critical characteristics we look for, land availability, logistics strength, industrial readiness, and expansion capacity. The visit allowed us to confirm that a full copy-and-paste of our Bécancour design is not only potentially feasible but also commercially compelling. As the U.S. accelerates its commitment to domestic critical-minerals supply chains, we see exceptional strategic value in establishing our second refinery here. This project will complement, not compete with, our priority Québec development, and together the two sites will position LU7 at the forefront of North America's lithium-conversion landscape.*"

Authorised by the Chairman of Lithium Universe Limited

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Engage with Lithium Universe directly by asking questions, watching video summaries and seeing what other shareholders have to say about this, as well as past announcements, at our Investor Hub https://investorhub.lithiumuniverse.com/

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Forward-looking Statements

This announcement contains forward-looking statements which are identified by words such as 'anticipates', 'forecasts', 'may', 'will', 'could', 'believes', 'estimates', 'targets', 'expects', 'plan' or 'intends' and other similar words that involve risks and uncertainties. Indications of, and guidelines or outlook on, future earnings, distributions or financial position or performance and targets, estimates and assumptions in respect of production, prices, operating costs, results, capital expenditures, reserves and resources are also forward-looking statements. These statements are based on an assessment of present economic and operating conditions, and on a number of assumptions and estimates regarding future events and actions that, while considered reasonable as of the date of this announcement and are expected to take place, are inherently subject to significant technical, business, economic, competitive, political and social uncertainties and contingencies. Such forward-looking statements are not guarantees of future performance and involve known and unknown risks, uncertainties, assumptions and other important factors, many of which are beyond the control of our Company, the Directors, and management. We cannot and do not give any assurance that the results, performance or achievements expressed or implied by the forward-looking statements contained in this announcement will occur and readers are cautioned not to place undue reliance on these forward-looking statements. These forward-looking statements are subject to various risk factors that could cause actual events or results to differ materially from the events or results estimated, expressed, or anticipated in these statements.

ABOUT LITHIUM UNIVERSE LIMITED

Lithium Universe Limited (ASX: LU7) ("Lithium Universe" or "the Company") is a forward-thinking company on a mission to close the "Lithium Conversion Gap" in North America and revolutionize the photovoltaic (PV) solar panel recycling sector.

SILVER EXTRACTION - PV SOLAR PANEL RECYCLING STRATEGY

As the global demand for solar energy expands, solar panel waste is projected to reach 60–78 million tonnes by 2050, making efficient recycling solutions critical. Silver is essential for solar panels, electronics, and electric vehicles due to its unmatched electrical conductivity. Industrial demand has surged, especially from photovoltaics and AI technologies, creating a global supply deficit. With production lagging, silver prices have soared to record highs above US $50 per ounce, reinforcing the economic importance of efficient recycling.

Lithium Universe has responded by acquiring Macquarie University's Microwave Joule Heating Technology (MJHT) and Jet Electrochemical Silver Extraction (JESE) method, a breakthrough in recovering valuable metals from end-of-life PV panels. The first stage, developed by Macquarie University, is Microwave Joule Heating Technology (MJHT), a process that uses microwave energy to selectively heat silicon cells softening the ethylene vinyl acetate (EVA) encapsulant that binds a solar panel's layers. This enables room-temperature delamination of glass, silicon, and metal layers without crushing, furnaces, or toxic chemicals. The result is a clean separation of materials, drastically reducing energy use, emissions, and chemical waste while preserving the integrity of high-value silicon and silver components. Following delamination, Lithium Universe applies its Jet Electrochemical Silver Extraction (JESE) process, a micro-jet electrochemical system that directs a fine stream of dilute nitric electrolyte onto the silver pads of solar cells. This method achieves over 95% silver recovery at 96% purity, while using 83% less acid and no chemical additives. The process operates at just 5 volts, recycles its electrolyte, and produces zero heavy-metal waste, establishing a true closed-loop recycling system. Together, MJHT and JESE form a sustainable, scalable recycling platform that converts discarded solar panels into a renewable source of silver, silicon, and other critical materials, a vital step toward circularity in the global clean-energy supply chain.

LITHIUM DIVISION

Lithium Strategy: Closing the Lithium Conversion Gap

Lithium Universe is at the forefront of efforts to meet the growing demand for lithium in North America. As electric vehicle (EV) battery manufacturers prepare to deploy an estimated 1,000 GW of battery capacity by 2028, the need for lithium is expected to rise dramatically. However, with only a fraction of the required lithium conversion capacity in North America, LU7 is determined to play a pivotal role in reducing dependence on foreign supply chains. The company is building a green, battery-grade lithium carbonate refinery in Bécancour, Québec, leveraging the proven technology developed at the Jiangsu Lithium Carbonate Plant. This refinery will produce up to 18,270 tonnes per year of lithium carbonate, focusing initially on the production of lithium carbonate for lithium iron phosphate (LFP) batteries. The refinery's smaller, off-the-shelf plant model ensures efficient operations and timely implementation, positioning LU7 as a key player in the emerging North American lithium market. With a strong leadership team, including industry pioneers like Chairman Iggy Tan, LU7 is well-positioned to deliver this transformative project. The company's strategy is counter-cyclical, designed to build through the market downturn and benefit from the inevitable recovery, ensuring sustained exposure to the growing lithium demand.

Second Refinery Strategy

Lithium Universe Limited has launched a second lithium refinery strategy in Brownsville, Texas, complementing its flagship Bécancour project in Québec. The initiative creates a binational refining platform to address North America's lithium conversion shortage and strengthen supply chain resilience. Strategically located near the Port of Brownsville, the site offers deep-water access, low labour costs, and streamlined permitting within one of the U.S.'s most business-friendly regions. Leveraging a "copy and paste" design from the proven Bécancour refinery, the Texas project can be rapidly deployed to serve nearby gigafactories, aligning with U.S. policy incentives under the Inflation Reduction Act.