

3 September 2025

## Calix signs MOU, material testing and engineering study agreement with global aluminium major

**Sydney, Australia | 3 September 2025** – Australian environmental technology company, Calix Limited (ASX: CXL) (“Calix”) is pleased to announce today that it has signed a Memorandum of Understanding (“MOU”) to jointly develop its electric calcination technology for Zero Emissions ALumina (“ZEAL”) and signed an agreement to undertake a pilot-scale material testing program and pre-Front-End Engineering Design (“pre-FEED”) study with a leading aluminium company (“the Alumina Company”).

### Highlights:

- Calix and the Alumina Company (which remains commercial-in-confidence) have signed a MOU to jointly engage in the development of electric calcination for near-zero emissions alumina.
- Calix and the Alumina Company have also signed an agreement to undertake a pilot scale testing program and pre-FEED study.
- The material testing program and pre-FEED study are expected to deliver over AU\$1.0M in revenue.
- The testing program will be conducted at the Calix Technology Centre in Bacchus Marsh, Victoria and aims to demonstrate the feasibility of Calix’s ZEAL technology to produce smelter grade alumina from feedstock used at a refinery of the Alumina Company.
- The agreements follow Calix’s successful initial testing of the ZEAL technology and separate engagement with the Heavy Industry Low-carbon Transition Cooperative Research Centre (“HILT-CRC”) AlumiNEXT project.<sup>1</sup>
- Calix will retain all Intellectual Property (“IP”) relating to the core Calix technology and retains the right to deploy its ZEAL technology as an industry-wide solution for alumina calcination.
- Calix’s ZEAL technology aims to replace the use of fossil fuels in alumina refining with electric calcination to potentially reduce emissions, costs and improve product quality.
- The production of aluminium, a critical metal for many technologies, is amongst the most energy-intensive of industrial processes, contributing ~2% of global CO<sub>2</sub> emissions.<sup>2</sup>

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<sup>1</sup> [HILT-CRC AlumiNEXT™ Program Details](#)

<sup>2</sup> <https://www.missionpossiblepartnership.org/action-sectors/aluminium/>

### **Calix's ZEAL technology**

Calix's ZEAL technology aims to use Calix's core platform technology to produce smelter grade alumina, with the potential to enable zero scope 1 emissions in the energy-intensive calcination of bauxite to alumina.

ZEAL also aims to reduce costs for alumina producers. Electric calcination of alumina has the potential to be more energy efficient, as electric heating replaces fuel combustion and creates high purity steam for potential reuse within the process. ZEAL's precise and indirect heating approach may also reduce particle breakage and control the temperature to maximise yields, providing further benefits to both product quality and process efficiency.

### **Material testing, pre-FEED and technology development**

Paid pilot-scale testing at Calix's Technology Centre in Bacchus Marsh, Victoria aims to demonstrate the potential of the ZEAL technology to produce smelter grade alumina from feedstock used at a refinery of the Alumina Company. The pre-FEED study aims to further develop the process and plant basis of design for the ZEAL technology's potential application in a commercial alumina refinery.

The MOU establishes the intention to jointly develop designs to apply the ZEAL technology in integrated and scalable electric alumina calcination systems. The combined materials testing, pre-FEED study and collaborative technology development program is designed to develop and demonstrate the viability, efficiency and scalability of the ZEAL technology for commercial alumina calcination.

### **Calix CEO and Managing Director, Phil Hodgson said:**

*"We are delighted to begin materials testing and technology development with a major global alumina company for near zero emissions smelter grade alumina.*

*"This announcement marks a few important milestones for Calix. It will deliver our first revenues in alumina. For our Sustainable Processing line of business, it builds on commercial traction in the lithium market with a new engagement with a leading global player in a second application of the same core technology.*

*"It also further validates our commercialisation strategy – developing partnerships with global industry leaders and creating self-funded projects that generate immediate revenues on a pathway to commercial demonstration in extremely large addressable markets.*

*"We look forward to the journey ahead with this major new global partner as we aim to demonstrate the lowest-cost pathway to near-zero emissions alumina."*

### **Decarbonising aluminium**

Aluminium is a strong and lightweight metal that plays a critical role in many sectors including aviation, defence and energy. Aluminium is typically produced by first refining the ore bauxite to alumina, or aluminium oxide, before smelting alumina to make aluminium metal. The global

alumina market size surpassed US\$45 billion in 2022 and is projected to be worth approximately US\$72 billion by 2030<sup>3</sup>, while the broader aluminium market is projected to grow from US\$250 billion in 2024 to US\$400 billion by 2032.<sup>4</sup>

Aluminium production is highly energy intensive. The calcination step in the refining of bauxite to alumina typically uses fossil fuel heating to reach the required process temperatures of ~1000°C – this is the process step ZEAL aims to replace. Large amounts of electricity are then required in smelting alumina to make aluminium metal. The production of aluminium results in 1.1 billion tonnes of annual carbon dioxide emissions, approximately 2% of total global industrial emissions.<sup>5</sup>

**–ENDS–**

This announcement has been authorised for release to the ASX by the Calix Board of Directors.

### **About Calix**

Calix Limited (ASX: CXL) is a technology company creating businesses that solve global challenges in industrial decarbonisation and sustainability.

Calix's patented core platform technology is being developed for indirect heating of raw materials to enable efficient, precise, flexible and renewably powered metals and minerals processing and capture of unavoidable industrial emissions.

Calix is applying its core technology to the cement, steel, magnesia, alumina, critical minerals and direct air capture industries.

Leveraging its core platform technology and a global network of partners, Calix is urgently developing multiple businesses that deliver positive global impact. Because there's only one Earth.

Mars is for quitters.

### **For more information:**

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<sup>3</sup> Precedence Research. [Alumina Market Size To Be Worth Around USD 72 Billion By 2030](#). Jun 2023

<sup>4</sup> [Fortune Business Insights. Aluminium Market](#).

<sup>5</sup> <https://www.missionpossiblepartnership.org/action-sectors/aluminium/>