RNS Number : 6567A
CleanTech Lithium PLC
16 April 2026

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**CleanTech Lithium PLC ("CTL", CleanTech Lithium" or the "Company")**
**Trials to Further Validate PFS Process Design**

CleanTech Lithium PLC (AIM: CTL, Frankfurt: T2N), an exploration and development company advancing sustainable lithium projects in Chile, announces an update on two trials being undertaken in North America and in Santiago, Chile, to produce battery grade lithium carbonate from the Laguna Verde project. The trials are focused on replicating and validating the process design that has been defined in the Laguna Verde Pre-Feasibility Study ("PFS").

**Highlights:**

- In North America, stage two of the downstream processing of eluate* (see footnote for definition) produced by our DLE pilot plant located in Chile, into battery grade lithium carbonate has commenced.
- The first stage of this work was undertaken by Conductive Energy and reported to the market in January 2025.
- Conductive Energy was acquired by Empower EIT over the course of 2025, with Empower establishing an advanced lithium processing facility in Dallas, USA.
- This second stage of eluate conversion will process >60$m^3$ of concentrated eluate at the new facility.
- The nanofiltration stage of the process will utilise an advanced membrane developed by DuPont Water Solutions to maximise impurity removal and lithium recovery.
- Approximately 300kg of battery grade lithium carbonate are expected to be produced in Q2 2026 and made available to potential strategic partners for product qualification.
- Concurrently, a smaller scale pilot programme is underway utilising the pilot plant of Lanshen Technology ("Lanshen"), located in Santiago, Chile.
- This pilot plant replicates the process flowsheet developed with Lanshen for the Laguna Verde PFS and aims to demonstrate the robustness of the process design and provide a high degree of validation of the process parameters used in the PFS.
- A volume of 24$m^3$ of feed brine from Laguna Verde is being processed into >5kg of battery grade lithium carbonate.

**Ignacio Mehech, Chief Executive Officer, CleanTech Lithium said**: "We are undertaking important pilot scale process trials in North America and Chile to produce battery grade lithium carbonate from Laguna Verde brine. This work will provide strong technical support for the process flow sheet used in our PFS which we think is an important consideration for engaging with potential strategic investors."

**Further Details:**

<u>Eluate conversion in North America commences</u>

In 2H 2024, a total of 88m$^3$ of concentrated eluate produced at the Company´s DLE pilot plant located in Copiapó, Chile, was shipped to the facilities of Conductive Energy in Chicago, USA, for conversion into lithium carbonate. A total of 27.5m$^3$ of eluate was processed in this first stage trial which produced approximately 50kg of lithium carbonate. The details were reported to the market on January 14, 2025 (link). Conductive Energy entered an extended acquisition process in 2025 which culminated in it being acquired by Empower EIT, a company which aims to be a leader in lithium processing in North America. With the establishment of Empower´s new 1600m$^2$ facility based in Dallas, Texas, stage two processing has commenced on the remaining approximately 60m$^3$ of concentrated eluate. A nanofiltration stage has been added to remove divalent ions from the eluate which should further reduce impurities in the battery grade lithium carbonate product.



Fig. 1: Empower Lithium Processing Facility in Dallas, Texas

The conversion process is depicted in Fig. 2. For the nanofiltration (NF) stage, Empower and CleanTech will build on previous collaboration with DuPont Water Solutions, a business unit of DuPont, which has developed a new NF membrane to remove impurities and maximize lithium recovery. The stage two trial aims to produce approximately 300kg of battery grade lithium carbonate. Lithium carbonate product will be sent to a laboratory in North America to be verified as battery-grade (>99.5%) and meeting Chinese Standard GBT 23853-2022 Type 1 for minor impurities. Samples will be available for product qualification by potential strategic partners. An initial volume of battery grade lithium is expected to be produced in the coming weeks, and the processing of the total volume of 60m$^3$ of eluate is targeted to be completed by the end of next month.

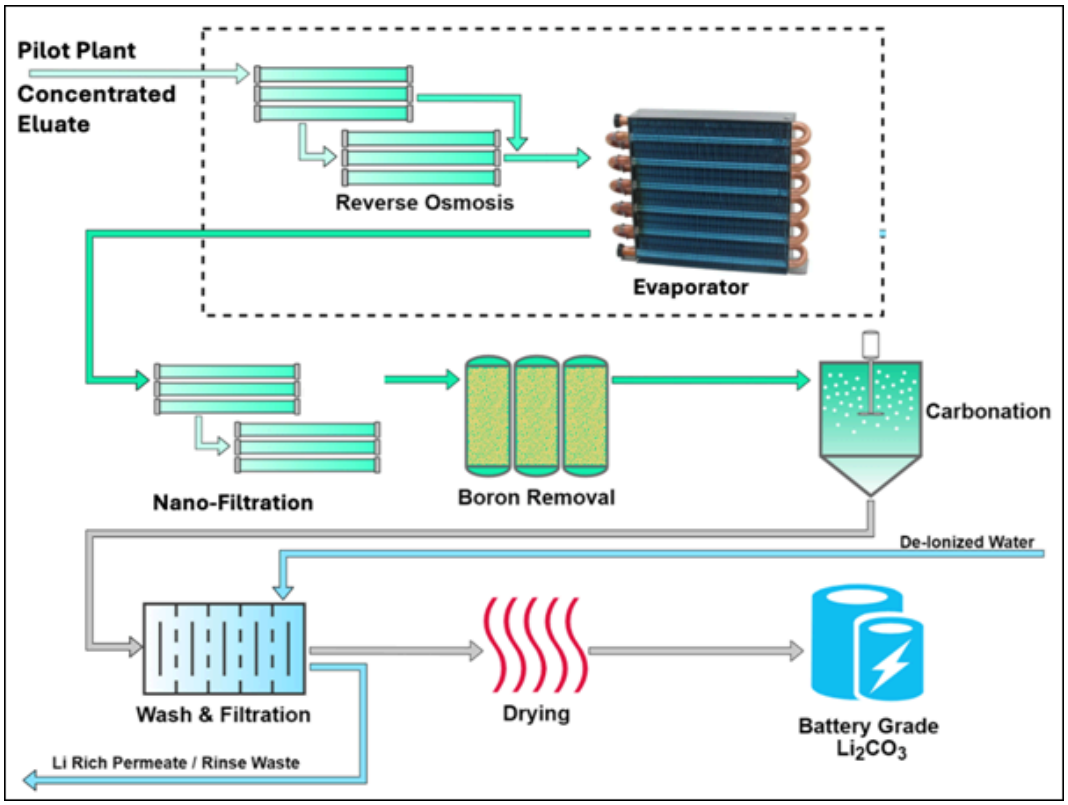


Fig. 2: Downstream process for eluate conversion

Plant Programme with Lanshen to Validate and Optimise PFS Process

CleanTech selected Lanshen´s technology for the DLE stage of the process design used in the Laguna Verde PFS with the downstream conversion process design also developed with Lanshen. The Company will continue to evaluate the optimal options for DLE and downstream process stages with all parties. For the purposes of validating the PFS process design, the Company has engaged Lanshen to complete a trial at Lanshen´s pilot plant in Santiago, Chile to produce battery grade lithium carbonate from Laguna Verde feed brine. This trial will test both the specific DLE adsorbent and the flow-sheet used for the downstream conversion process in the PFS. It will also evaluate key materials, reagents and equipment, and verify the PFS assumptions for the capacity of DLE modules and water consumption rates. The Company believes this pilot programme will provide a powerful validation of the PFS process design.

A volume of 24$m^3$ of feed brine from Laguna Verde is being processed into >5kg of battery grade lithium carbonate with the test-work expected to be completed and the results reported to the market in the current quarter.



Fig. 3: Lanshen pilot plant facilities in Santiago, Chile

*Eluate*

*Purified, lithium-rich solution produced as the output of the Direct Lithium Extraction ("DLE") process. The eluate being processed by Empower was produced by processing Laguna Verde brine through CleanTech Lithium's DLE pilot plant, which selectively removes lithium while rejecting over 99% of key impurities including calcium, magnesium and sodium. The resulting lithium chloride eluate was further concentrated using reverse osmosis to be further processed downstream to produce battery-grade lithium carbonate.*

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**Notes**

CleanTech Lithium (AIM:CTL, Frankfurt:T2N) is an exploration and development company advancing lithium projects in Chile for the clean energy transition. CleanTech Lithium has two key lithium projects in Chile, Laguna Verde and Viento Andino, and exploration stage project in Arenas Blancas (Salar de Atacama), located in the lithium triangle, a leading centre for battery grade lithium production. CleanTech Lithium and the Mining Ministry in Chile have agreed the contractual terms for the Special Lithium Operating Contract ("CEOL") for Laguna Verde, subject to final ratification.

CleanTech Lithium is committed to utilising Direct Lithium Extraction ("DLE") with reinjection of spent brine. Direct Lithium Extraction is a transformative technology which removes lithium from brine with higher recoveries, short development lead times and no extensive evaporation pond construction. For more information, please visit: www.ctlithium.com

****ENDS****

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