RNS Number : 6717N
CleanTech Lithium PLC
24 July 2026

24 July 2026

CleanTech Lithium PLC ("CTL", CleanTech Lithium" or the "Company")
High Purity Lithium Carbonate Produced and Optimisation Work Underway

CleanTech Lithium PLC (AIM: CTL, Frankfurt:T2N), an exploration and development company advancing sustainable lithium projects in Chile, announces the results of the processing of eluate produced by the Company's DLE pilot plant in Chile into approximately 330kg of high purity lithium carbonate. This downstream processing was undertaken by USA based, vertically integrated lithium production and technology company, Empower EIT (Empower).

Further key test work is underway to optimise and verify the process used in the completed Pre-Feasibility Study (PFS) for the Laguna Verde project. Leading lithium brine services company, Zelandez, has been engaged by the Company to conduct a comprehensive spent brine reinjection options analysis to support the sustainable development of the project.

Highlights:

- Empower processed approximately 55,000 litres of eluate at its advanced lithium processing facility in Dallas, USA.
- The eluate was produced from Laguna Verde brine at CleanTech Lithium´s DLE pilot plant located in Copiapó, Chile.
- 330kg of lithium carbonate has been produced by Empower with laboratory results showing a lithium carbonate purity ranging across five campaigns from 99.68% to 99.91% in the final campaign.
- An additional approximately 250kg of lithium carbonate is stored in recycle fluids from pre-treatment and carbonation.
- The nanofiltration stage utilised the latest DuPont™ FilmTec™ LiNE-XD Element high productivity nanofiltration membranes for lithium brine purification to achieve superior purification and efficiency.
- Other key process and project studies are currently underway:
    - a PFS process validation trial in Chile,
    - definitive feasibility study (DFS) level adsorbent test-work in France, and
    - a spent brine reinjection option study.

Ignacio Mehech, Chief Executive Officer, of CleanTech Lithium PLC, said: *"The results from this pilot project represent a significant milestone with the collaboration with Empower - producing a large test volume of high purity lithium carbonate from our Laguna Verde project. We are also in the process of undertaking a range of important test-work and studies that will build upon our completed PFS as we move forward towards undertaking a DFS for the lithium project."*

Further Details:

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

As reported to the market on April 16, 2026, CleanTech Lithium has partnered with Empower for the downstream processing of eluate produced at the Company´s DLE pilot plant located in Copiapó, Chile. Empower provides a fully USA-based end-to-end lithium processing solution at its new 1600m^2 facility based in Dallas, Texas, where processing commenced on 55,000 litres of eluate between March and May 2026. The primary objective was to demonstrate the process, depicted in Fig. 1, can consistently produce lithium carbonate product.

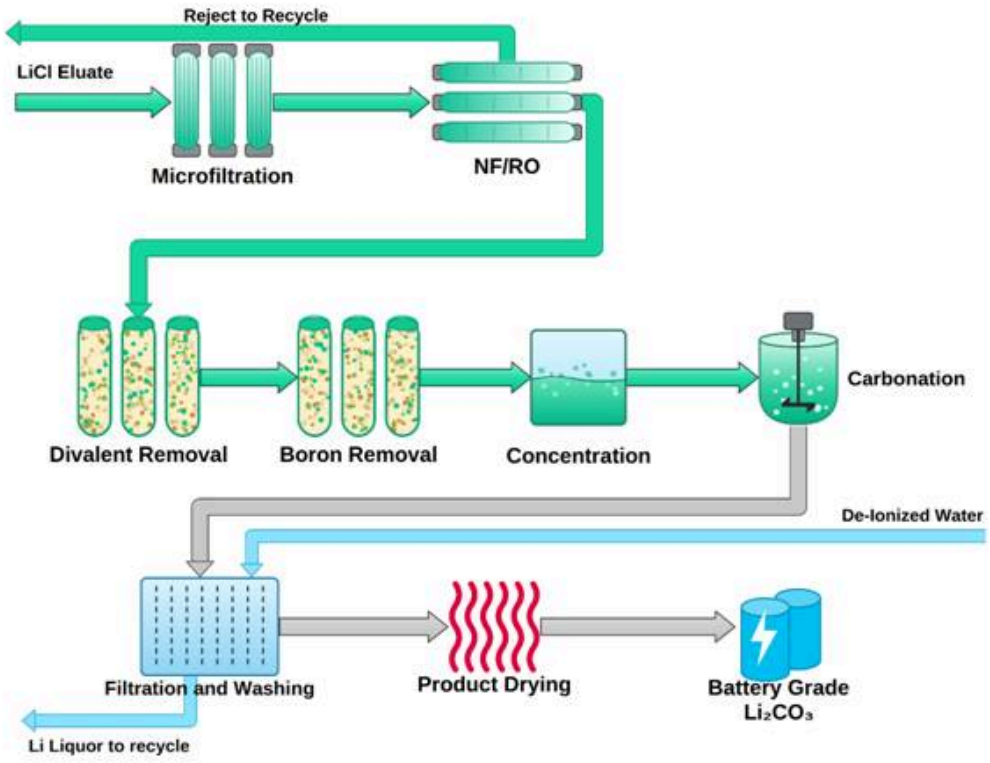


Fig. 1: Downstream process for eluate conversion (by Empower)

The nano-filtration unit containing DuPont™ LiNE-XD 4040 membranes contributed to an excellent reduction in calcium and magnesium present in the eluate. Boron was then removed by Ion-Exchange (IX). Under optimised continuous operating conditions, the Empower conversion platform achieved approximately 97% boron removal. Residual boron was subsequently concentrated in the thermal evaporation stage requiring additional downstream polishing. Final polishing successfully reduced boron concentrations prior to carbonation. Boron is the primary contaminant requiring removal in the post DLE downstream processing. The Company will evaluate the potential for the removed boron to be a by-product that enhances project economics.

The process was run in a continuous fashion up until the carbonation stage, which used batch processing. Five carbonation batches were produced which in addition to producing solid lithium carbonate also produced a volume of carbonation liquor or lithium rich permeate, as shown in Fig 1., which is retained for reprocessing and lithium recovery. Carbonation and polishing produced high purity lithium carbonate of >99.7% purity. Independent laboratory results undertaken at Benchmark Laboratory, Houston, USA, were received for batches 1 through 5 as presented in Table 1. The results confirm the production of a high purity product.

	Batch 1	Batch 2	Batch 3	Batch 4	Batch 5
Li2CO3	**99.76%**	**99.68%**	**99.85%**	**99.86%**	**99.91%**
Ca	0.01%	0.01%	0.01%	0.02%	0.02%
Mg	0.01%	0.01%	0.01%	0.02%	0.02%
Na	0.10%	0.26%	0.09%	0.00%	0.00%
K	0.02%	0.03%	0.02%	0.00%	0.00%
B	0.05%	0.01%	0.01%	0.00%	0.00%
Ni	0.00%	0.00%	0.00%	0.03%	0.03%

Cl	0.00%	0.00%	0.01%	0.00%	0.00%
Si	0.05%	0.01%	0.00%	0.03%	0.02%
S	0.00%	0.00%	0.01%	0.05%	0.00%
P	0.00%	0.00%	0.00%	0.00%	0.00%

Table 1: Lithium Carbonate Purity



Fig. 2: Lithium Carbonate in drying kiln and product in bulk storage (Empower)

Other Key Test Work and Studies Underway

The Company is undertaking a pilot programme with Xian Lanshen New Material Company (Lanshen) to optimise and verify the process utilised in the PFS for the Laguna Verde project. A volume of 20m^3 of feed brine from Laguna Verde is being processed at Lanshen´s pilot plant facility in Santiago, Chile. Reports have been received on the first stage to verify DLE process parameters, and the second stage of evaluating advanced membrane and purification process steps. The final stage is carbonation to lithium carbonate to meet rigorous Chinese battery grade standards, including production of a 5kg sample of lithium carbonate. When the final stage is completed and the lithium carbonate sample tested by an external laboratory, the results will be reported to the market.



Fig. 3: LiCl Adsorption-Adsorbent Washing-Desorption Module (Lanshen)



Fig. 4: Low Pressure and Medium Pressure R/O Unit (Lanshen)

An adsorbent trial will commence in the coming weeks, once material transfer is completed, in collaboration with French consulting firm Hephaistos Insights to conduct Direct Lithium Extraction (DLE) benchmarking and eluate analysis using brine from Laguna Verde. The programme will assess a range of adsorbent options against the project's specific brine chemistry, with a particular focus on elution efficiency. The bench-scale testing, which will be executed by specialist subcontractor Seprosys SAS, will include the Company's current reference adsorbent alongside alternatives from North American and European suppliers. This workstream is designed to confirm the optimal adsorbent selection for Laguna Verde ahead of the DFS.

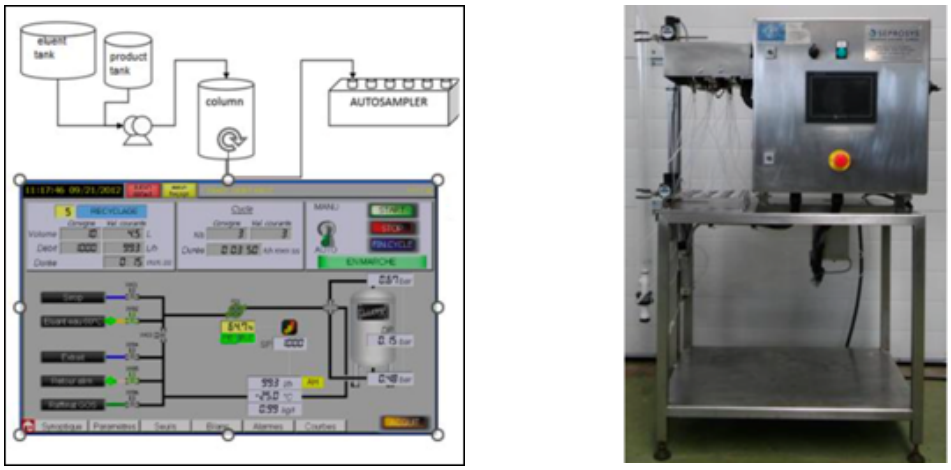


Fig. 5: Chromatography Set-up for Automatic Column Effluent Analysis (Hephaistos)

CTL has engaged Zelandez to conduct a comprehensive spent brine reinjection options analysis for the Laguna Verde project. Zelandez will deploy a multidisciplinary team of hydrogeologists, reservoir engineers, and DLE experts to evaluate aquifer reinjection concepts, culminating in a technical analysis that integrates vital basin-dynamics, environmental permitting screens, and CAPEX/OPEX modelling delivering a recommended DFS workplan to advance the project toward sustainable development.

Competent Persons Statement

The following professional acts as qualified person, as defined in the AIM Note for Mining, Oil and Gas Companies (June 2009) and JORC Code (2012):

Marcelo Bravo: Chemical Engineer (Universidad Católica del Norte), has a Master's Degree in Engineering Sciences major in Mineral Processing, Universidad de Antofagasta. He currently works as a Senior Process Consulting Engineer at the Ad-Infinitum company. Mr Bravo has relevant experience in researching and developing potassium, lithium carbonate, and solar evapo-concentration design processes in Chile, Argentina, and Bolivia. Mr Bravo, who has reviewed and approved the information contained in this announcement, is registered with No. 412 in the public registry of Competent Persons in Mining Resources and Reserves per the Law of Persons Competent and its Regulations in force in Chile. Mr Bravo has sufficient experience relevant to the metallurgical tests and the type of subsequent processing of the extracted brines under consideration and to the activity being carried out to qualify as a competent person, as defined in the JORC Code. Mr Bravo consents to the inclusion in the press release of the matters based on his information in the form and context in which it appears.

For further information contact:

CleanTech Lithium PLC

Ignacio Mehech/Gordon Stein/Nick Baxter

Office: +44 (0) 1534 668 321

Mobile: +44 (0) 7494 630 360

Email: info@ctlithium.com

Beaumont Cornish Limited (Nominated Adviser) +44 (0) 20 7628 3396

Roland Cornish/Asia Szusciak

Fox-Davies Capital, a trading name of CAL Investments Limited (Capital Markets Adviser and Sole Bookrunner) +44 (0) 20 3884 8450

daniel@fox-davies.com

Daniel Fox-Davies

Canaccord Genuity (Broker) +44 (0) 20 7523 4680

James Asensio

Beaumont Cornish Limited ("Beaumont Cornish") is the Company's Nominated Adviser and is authorised and regulated by the FCA. Beaumont Cornish's responsibilities as the Company's Nominated Adviser, including a responsibility to advise and guide the Company on its responsibilities under the AIM Rules for Companies and AIM Rules for Nominated Advisers, are owed solely to the London Stock Exchange. Beaumont Cornish is not acting for and will not be responsible to any other persons for providing protections afforded to customers of Beaumont Cornish nor for advising them in relation to the proposed arrangements described in this announcement or any matter referred to in it.

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

This information is provided by RNS, the news service of the London Stock Exchange. RNS is approved by the Financial Conduct Authority to act as a Primary Information Provider in the United Kingdom. Terms and conditions relating to the use and distribution of this information may apply. For further information, please contact rns@lseg.com or visit www.rns.com.

RNS may use your IP address to confirm compliance with the terms and conditions, to analyse how you engage with the information contained in this communication, and to share such analysis on an anonymised basis with others as part of our commercial services. For further information about how RNS and the London Stock Exchange use the personal data you provide us, please see our Privacy Policy.

END

UPDDDGDRDGDDGLX