E3 Lithium Outlines Demonstration Program Objectives to Advance Lithium Production in Alberta

31.10.2024 | Business Wire

E3 Lithium Ltd. (TSXV: ETL) (FSE: OW3) (OTCQX: EEMMF), "E3 Lithium" or the "Company," a leader in Canadian lithium, outlines the main objectives of its Demonstration Facility Project (the "Demo Project"), aimed at producing battery-grade lithium carbonate from E3 Lithium's brine and lithium minerals resource[1], located in Alberta. The Demo Project is supported by Emissions Reduction Alberta ("ERA"), providing $5M CAD to support this important advancement for Alberta's lithium industry. The facility and equipment will be completed over the winter and in operation in mid-2025.

Overview of the Demonstration Program

The Demo Project will encompass the full suite of process operations, from brine production, pretreatment and lithium carbonate production. The overarching goal is to replicate the functionality of the E3 Lithium commercial system at a smaller scale, to test the cohesiveness of each unit when operated simultaneously. The project will be divided into six main systems, each designed to operate as close to a commercial system as possible.

1. Brine Production: likely to occur in two stages, the brine will be sourced from the aquifer to feed the production equipment to generate lithium carbonate. A second stage will increase brine production volume to emulate a commercial production well, testing the reservoir properties at this scale.

2. Pre-DLE Brine Treatment: separate the entrained gas in the brine, this step will remove these gases using conventional petroleum industry two-phase separation equipment, producing a brine that can be fed directly into the DLE system.

3. Scaled-up DLE system: A larger scale, fully automated, DLE system will be deployed to mimic, as closely as possible, the same process operations that will be deployed in the commercial facility. This includes the numbers of vessels per module, how brine enters and exits the vessels and the sequence of rinse and desorption steps. The sorbent will be sourced from a third-party vendor for the DLE system in line with our Pre-Feasibility Study ("PFS").

4. Post- DLE Treatment: This step further concentrates and refines the lithium chloride from the DLE system, optimized to produce battery-grade lithium as the final step.

5. Carbonation equipment: Sodium carbonate, sourced from a commercial supplier, will be added to the lithium chloride in a reactor to produce battery-grade lithium carbonate. As outlined in E3 Lithium's PFS, the byproduct of this step is sodium chloride (table salt), which can be added back into the brine for disposal.

6. Water recovery: process water streams from the post-DLE treatment will be collected, where appropriate, to be used as strip fluid for desorbing the lithium from the sorbent in the DLE step.

As outlined, E3 Lithium is Commissioning the Carbonation Equipment in the laboratory in Calgary. The goal is to operate the equipment at demonstration scale in the lab to build the necessary skill set and confirm the operational parameters to enable the Company to produce consistent battery-grade lithium carbonate. The remainder of the equipment is being sourced from manufacturers as per the E3 Lithium commercial design specifications and requirements.

The Demo Project will be built and subsequently operated in defined phases:

1. The engineering and design of the equipment are well underway, with the focus on a design that closely resembles a commercial operating unit.
2. Equipment manufacturing is set to begin in the new year, with an expected four to five months to delivery on site.
3. Commissioning will occur on-site with brine that has already been produced, accelerating the commissioning process.
4. Once the system is operating to the designed specifications, the live brine stream will be connected, enabling end-to-end operations to produce battery-grade lithium carbonate.

The lithium carbonate can be further converted to lithium hydroxide with one of our partner equipment vendors to define the process operations for that final step.

The success of our Demo Project, operated from our field location in Alberta, will achieve two essential objectives:

Confirm the process to achieving battery-grade lithium carbonate under commercial conditions.

Provide consistent product to our potential customers over an extended period produced by E3 Lithium

Similar to the Field Pilot Project, further details on the specific operating objectives will be outlined for the Demo Project closer to its operational start.

"The success of the demonstration project will provide critical data and validation to our processes, while enabling our commercial initiatives," said Chris Doornbos, President and CEO of E3 Lithium. "Completing these milestones and reducing technical risks for the Clearwater Project-and the lithium industry in Alberta as a whole-will strengthen our path to commercial operations and reinforces E3 Lithium's long-term growth strategy."

ON BEHALF OF THE BOARD OF DIRECTORS
Chris Doornbos, President & CEO
E3 Lithium Ltd.

About E3 Lithium

E3 Lithium is a development company with a total of 16.2 million tonnes of lithium carbonate equivalent (LCE) Measured and Indicated [1] as well as 0.9 million tonnes LCE Inferred mineral resources[2] in Alberta and 2.5 million tonnes LCE Inferred mineral resources[3] in Saskatchewan. The Clearwater Pre-Feasibility Study outlined a 1.13 Mt LCE proven and probable mineral reserve with a pre-tax NPV8% of USD 5.2 Billion with a 29.2% IRR and an after-tax NPV8% of USD 3.7 Billion with a 24.6% IRR[1]. E3 Lithium's goal is to produce high purity, battery-grade lithium products to power the growing electrical revolution. With a significant lithium resource and innovative technology solutions, E3 Lithium has the potential to deliver lithium to market from one of the best jurisdictions in the world.

1: The Clearwater Project NI 43-101 Pre-Feasibility Study, effective June 20, 2024, is available on the E3 Lithium's website (https://e3lithium.ca/our-assets/technical-reports/) and SEDAR+ (www.sedarplus.ca).

2: The mineral resource NI 43-101 Technical Report for the North Rocky Property, effective October 27, 2017, identified 0.9 Mt LCE (inferred) and is available on the E3 Lithium's website (e3lithium.ca/technical-reports) and SEDAR+ (www.sedarplus.ca).

3: The mineral resource NI 43-101 Technical Report for the Estevan Lithium District, effective May 23, 2024, identified 2.5 Mt LCE (inferred) and is available on the E3 Lithium's website (e3lithium.ca/technical-reports) and SEDAR+ (www.sedarplus.ca).

Forward-Looking and Cautionary Statements

This news release includes certain forward-looking statements as well as management's objectives, strategies, beliefs and intentions or forward-looking information within the meaning of applicable securities laws. Forward-looking statements are frequently identified by such words as "believe", "may", "will", "plan", "expect", "anticipate", "estimate", "intend", "project", "potential", "possible" and similar words referring to future events and results. Forward-looking statements are based on the current opinions, expectations, estimates and assumptions of management in light of its experience, perception of historical trends, and results of the PFS, but such statements are not guarantees of future performance. In particular, this news release contains forward-looking information relating to: the estimated mineral resources and mineral resources at the Clearwater Project; expectations regarding the PFS, including statements regarding the results of the PFS and interpretations thereof; expectations concerning the Clearwater Project, including extraction, production, pretreatment, purification, volume reduction and conversion process and features and the expected outcomes thereof; the expected economic performance of the Clearwater Project, including capital costs, operating costs, water usage, land use and carbon emissions; statements regarding the Company's strategy for minimizing environmental impact and liquid waste and maximizing water reuse, with no planned tailings or waste piles; the potential for a secondary revenue stream should the Company be able to sell the calcium carbonate generated during the production of lithium hydroxide; plans and objectives of management for the Company's operations and the Clearwater Project; and the inherent hazards associated with mineral exploration and mining operations. In preparing the forward-looking information in this news release, the Company has applied several material assumptions, including, but not limited to, that any additional financing needed will be available on reasonable terms; the exchange rates for the U.S. and Canadian currencies will be consistent with the Company's expectations; that the current exploration, development, environmental and other objectives concerning the Clearwater Project can be achieved and that its other corporate activities will proceed as expected; that the current price and demand for lithium will be sustained or will improve; that general business and economic conditions will not change in a materially adverse manner and that all necessary governmental approvals for the planned activities on the Clearwater Project will be obtained in a timely manner and on acceptable terms; the continuity of the price of lithium.

All forward-looking information (including future-orientated financial information) is inherently uncertain and subject to a variety of assumptions, risks and uncertainties, including the speculative nature of mineral exploration and development, fluctuating commodity prices, the effectiveness and feasibility of emerging lithium extraction technologies which have not yet been tested or proven on a commercial scale or on the Company's brine, risks related to the availability of financing on commercially reasonable terms and the expected use of proceeds; operations and contractual obligations; changes in estimated mineral reserves or mineral resources; future prices of lithium and other metals; availability of third party contractors; availability of equipment; failure of equipment to operate as anticipated; accidents, effects of weather and other natural phenomena and other risks associated with the mineral exploration industry; the Company's lack of operating revenues; currency fluctuations; risks related to dependence on key personnel; estimates used in financial statements proving to be incorrect; competitive risks and the availability of financing, as described in more detail in our recent securities filings available under the Company's profile on SEDAR+ at www.sedarplus.ca. Actual events or results may differ materially from those projected in the forward-looking statements and we caution against placing undue reliance thereon. We assume no obligation to revise or update these forward-looking statements except as required by applicable law.

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