

# Lithium Chile Delivers Positive Preliminary Economic Assessment for the Arizaro Project in Argentina

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CALGARY, August 8, 2023 - [Lithium Chile Inc.](#) (TSXV:LITH) (OTC:LTMCF) ("Lithium Chile" or the "Company") is pleased to report the results of its Preliminary Economic Assessment ("PEA") for the production of lithium carbonate from its Salar de Arizaro lithium brine project in the Salta Province of Argentina ("Arizaro"). The PEA provides an independent economic assessment of the potential of Arizaro, based upon the lithium resources outlined in the July 2023 Resource Estimate.

## ARIZARO PEA HIGHLIGHTS:

- Pre-tax Net Present Value ("NPV") US\$1.8 billion
- LOM Average LiCO price of \$21.396 per tonne
- After-tax NPV \$1.1 billion
- Pre-tax Internal Rate of Return ("IRR") of 29.3%
- After-tax IRR of 24.1%
- PEA mine and processing plant produces 25,000 LCE LOM over 19.1 years.
- Pre-tax initial capital payback period 3.5 years; after-tax payback 3.6 years
- Average LOM annual pre-tax cash flow over operating period: \$329 million; annual after-tax cash flow: \$229 million.
- Initial Capital Costs ("Capex") estimated at \$823 million.
- Operating cost ("Opex") estimated at \$5,197/t LCE.

The PEA was completed by Ausenco Chile Limitada ("Ausenco") in accordance with National Instrument 43-101 Standards of disclosure for Mineral Projects (NI 43-101). The assessment includes and demonstrates that the Arizaro project has the potential of a 25,000 tonnes per annum ("tpa") commercial-scale operation to produce battery-grade lithium carbonate ("LCE" or "Li<sub>2</sub>CO<sub>3</sub>").

Under the leadership of President and CEO, Steve Cochrane and President of South America, Jose de Castro Alem, Lithium Chile has achieved key milestones which has culminated in the successful completion of the PEA. Mr. Cochrane remarked, "The filing of this technical report is another important milestone. These results support our view that the Arizaro Project has the potential to be a world class producer of Lithium Carbonate. We are excited about continued advancement of this project - a continuing journey of near-term enhancement opportunities that have already been identified."

Lithium Chile's President, South America, Jose de Castro says: "We are very proud of our entire Argentinian team, whose previous unique experience in starting up other Lithium projects has worked in creating real value for all stakeholders in the Arizaro project, including communities in which we work, as well as all shareholders of Lithium Chile. We have achieved in less than 2 years this important step and we are confident in advancing quickly to eventual production".

## ECONOMIC ANALYSIS AND SUMMARY:

## Initial Capital Costs

The cost estimates include the initial investment and sustaining capital for a lithium concentration plant with an annual capacity of 25,000 tonne LCE.

### Summary of Initial Capital Cost:

Description	US\$ millions
<b>Direct Costs:</b>	
Brine Extraction Wells	\$45
DLE Plant	\$108
Reverse Osmosis	\$70
Mechanical Evaporation	\$33
Chemical Plant	\$31
Purification	\$24
Dry Product Handling	\$28
General Utilities	\$75
Infrastructure	\$39
Direct Costs Total	\$452
Project Indirect	\$152
Resin DLE (first fill)	\$28
Contingency	\$190
<b>Total Initial Capital Costs</b>	<b>\$823</b>

## OPERATING COSTS

The most relevant cost under operating cost is reagents consumption (50.8%) followed by energy (16.6%). Both costs add up to US\$85.7 million, representing 67.5% of the operating direct costs.

### Summary of Operating Costs:

Description	US\$ million per year	US\$/tonne Li <sub>2</sub> CO <sub>3</sub>
<b>Direct Operating Costs:</b>		
Chemical Reactive and Reagents	\$64.56	\$2,583
Resin & Membrane replacement	\$13.31	\$533
Energy	\$21.14	\$846

Manpower	\$8.88	\$355
Catering and Camp Services	\$6.85	\$274
Maintenance	\$5.61	\$224
Site Vehicle Costs	\$0.29	\$11
Bus - In/Bus - Out transportation	\$0.55	\$22
Consumables	\$0.63	\$25
Li2CO3Transportation	\$5.20	\$208
Direct Cost Subtotal	\$127.02	\$5,081
Indirect Cost Subtotal	\$2.92	\$117
Total Operating Costs	\$129.94	\$5,197

#### CASH FLOW ANALYSIS

The economic analysis was performed assuming an 8% discount rate. Cash flows have been discounted to the beginning of the construction January 1, 2025, assuming that the project execution decision will be made, and major project financing would be carried out at this time. The pre-tax net present value discounted at 8% (NPV8%) is US\$1.846 million with a pre-tax internal rate of return (IRR) of 29.3% and payback period of 3.5 years. On an after-tax basis, the NPV 8% is US\$1.1 billion with an IRR of 24.1% and payback period of 3.6 years.

Cash Flow Chart:

[Click Image To View Full Size](#)

#### SENSITIVITY

Sensitivity analysis that was conducted on the Arizaro project revealed that the project is most sensitive to changes in lithium carbonate price, and to a lesser extent to initial capital costs, operating costs and sustaining capital requirements.

After-Tax IRR Sensitivity:

%	-30.0%	-15.0%	Base Case	15.0%	30.0%
Li2CO3 Price	14.7%	19.7%	24.1%	28.2%	32.0%
Initial Capex	31.5%	27.4%	24.1%	21.6%	19.5%
Opex	26.2%	25.2%	24.1%	23.1%	22.0%
Sustaining Capex	24.8%	24.5%	24.1%	23.8%	23.5%

After-Tax NPV Sensitivity:

US\$ million

-30.0%

-15.0%

Base Case

15.0%

30.0%



Li2CO3 Price	\$415	\$779	\$1,138	\$1,496	\$1,852
Initial Capex	\$1,300	\$1,220	\$1,138	\$1,055	\$973
Opex	\$1,320	\$1,229	\$1,138	\$1,046	\$955
Sustaining Capex	\$1,166	\$1,152	\$1,138	\$1,124	\$1,109

After-Tax Payback Sensitivity:

Years	-30.0%	-15.0%	Base Case	15.0%	30.0%
Li2CO3 Price	5.4	4.2	3.6	3.1	2.9
Initial Capex	2.9	3.2	3.6	3.9	4.2
Opex	3.4	3.5	3.6	3.7	3.8
Sustaining Capex	3.5	3.5	3.6	3.7	3.7

Cautionary Statement: The reader is advised that the PEA summarized in this news release is intended to provide only an initial, high-level review of the Project potential and design options. The PEA mine plan and economic model include numerous assumptions and the use of both indicated and inferred mineral resources. Inferred mineral resources are too speculative to be used in an economic analysis except as allowed for by NI 43-101 in PEA studies. Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no certainty that the Arizaro project envisioned by the PEA will be realized.

#### UNIQUE PROJECT ADVANTAGES

The Arizaro Project enjoys certain unique advantages, which support a rapid development schedule, and low capital and operating costs:

- The process selection considers the incorporation of a Direct Lithium Extraction (DLE) stage. DLE processes have shorter start-up and ramp-up times, mainly due to their smaller infrastructure requirements and the ability to be designed with a modular concept. This modularity allows for incremental expansion, enabling a faster ramp-up to meet increasing demand. Additionally, the crucial aspect of brine's chemical composition homogeneity further enhances the efficiency and effectiveness of the process. With consistent brine composition, DLE operations achieve more predictable and reliable lithium recovery rates, enabling better production capacity planning and meeting demand requirements with confidence. Overall, integrating DLE into the process proves to be a strategic choice, streamlining operations and ensuring a reliable supply of lithium.
- Multiple opportunities to enhance project economics through optimization and further engineering have already been identified.
- More than 60 technologies combination were studied during PEA and trade off permits to optimize main sustainability variables, water and energy usage, water basin balance, reagent usage and Capex and Opex.
- Major discovery of lithium brines in the basin and major metallurgical testing including best possibilities for water and energy usage.
- Unique Technical team with operation, projects and production experience.
- Initial production water aquifer identified and permitting underway.

#### QUALIFIED PERSON, QA/QC STATEMENTS:

Leandro Sastre is a geology professional with over 20 years of experience in the international mining sector. He has worked extensively throughout Latin America with a focus on Argentina, Chile and Peru. Mr. Sastre has reviewed and approved the scientific and technical content of this news release.

#### ABOUT AUSENCO:

Ausenco Chile Limitada ("Ausenco") is a global engineering firm, experienced in the lithium industry. Ausenco has prepared multiple economic assessments and feasibility studies, specifically for, but not limited to, South American lithium brine extraction companies over the past several years. In addition to being DLE and production process experts, Ausenco's knowledge was invaluable for assessing current and conservative operating and capital costs, which incorporated the latest global cost estimates. All values are reported in US dollars, unless otherwise noted. References to CDN\$ have been converted at 1.35 x US\$.

#### ABOUT LITHIUM CHILE:

Lithium Chile is an exploration and lithium resource company with a property portfolio consisting of 111,978 hectares in Chile and 20,800 hectares in Argentina.

The Company will be filing an updated NI 43-101 report with an indicated resource of 1,737,000 metric tonnes of LCE and inferred resource of 1,583,000 metric tonnes of LCE from its Salar de Arizaro, Argentina project. The Phase 2 development program on the Salar de Arizaro is underway with results to be included in an updated NI 43-101 report which will be filed on SEDAR when completed.

Lithium Chile also owns 4 properties, totaling 21,329 hectares, that are prospective for gold, silver and copper. Exploration efforts are continuing on Lithium Chile's Carmona gold/silver/copper property which lies in the heart of the Chilean mega porphyry gold/ silver/copper belt.

Lithium Chile's common shares are listed on the TSX-V under the symbol "LITH" and on the OTC-QB under the symbol "LTMCF".

To find out more about Lithium Chile Inc., please contact Steven Cochrane, President and CEO via email: [steve@lithiumchile.ca](mailto:steve@lithiumchile.ca) or Michelle DeCecco, Vice President and COO, via email [michelle@lithiumchile.ca](mailto:michelle@lithiumchile.ca).

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This news release may contain certain forward-looking information and forward-looking statements within the meaning of applicable securities legislation (collectively "forward-looking statements"). Generally, forward-looking statements can be identified using forward-looking terminology such as "expected", "anticipated", "aims to", "plans to" or "intends to" or variations of such words and phrases or statements that certain actions, events or results "will" occur. Such forward-looking statements are based on various assumptions and factors that may prove to be incorrect, including, but not limited to, factors and assumptions with respect to the general stability of the economic and political environment in which the Company operates and the timely receipt of required regulatory approvals. You are cautioned that the foregoing list of material factors and assumptions is not exhaustive. Although Lithium Chile believes that the assumptions and factors on which such forward-looking statements are based upon reasonable assumptions, undue reliance should not be placed on the forward-looking statements because Lithium Chile can give no assurance that they will prove to be correct or that any of the events anticipated by such forward-looking statements will transpire or occur, or if any of them do, what benefits Lithium Chile will derive therefrom. Lithium Chile does not undertake to update any forward-looking statements herein, except as required by applicable securities laws. All forward-looking statements contained in this news release are expressly qualified by this cautionary statement.

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