



Lithium and Value Chain Test Bed **Diagnostic platform, R&D and testing of batteries and materials under operational conditions**

ITL Area: Lithium and Value Chain

Problem:



Chile faces a critical gap in its energy-transition pathway: on one hand, in energy storage, and on the other, in accelerating electromobility adoption in the mining sector. There is no national infrastructure capable of validating batteries and electric-mobility systems under extreme operating conditions, generating technical uncertainty and increasing investment and operational risks. This lack of capabilities affects safety in mining operations, the deployment of BESS solutions, and the circular-economy development around second-life batteries, making it urgent to establish a technological platform that enables standardized testing, qualification, and local traceability.

Solution:



Enabling technological platform designed to develop and consolidate a comprehensive battery and electromobility testing center in the Antofagasta Region, ensuring the performance, safety, and durability of cells, modules, packs, and electric vehicles through electrical, climatic, safety, and mechanical testing.

Test Bed Projects



Expected Impact:



- R&D in advanced battery materials and technologies
- Industry-oriented projects focused on validating technologies under extreme operation conditions
- Generation of technical evidence to support second life regulations, traceability and safety standards
- Startup incubation, pack commercialization and BMS development

Use cases of the Test Bed



- R&D in Battery materials and technologies: Development and validation of advanced components and degradation analysis methodologies.
- Energy Sector: Comprehensive service for validating battery systems under real operation conditions.
- Mining Sector: Comprehensive service for validating operational safety and electromobility.
- Circular Economy: Evaluation of SOH for second life batteries and recycling.
- Postmortem Analysis: Traceability of failed batteries.
- Startup Incubation

Benefits for Associative:



- Preferential access to customized technical data to reduce investment risks.
- Preferential rates for test-bed services.
- Participation in defining regulatory standards that will impact the entire industry.

Progress Status:



Pre Investment Stage

Contact: Víctor Rojas

Head of Lithium and Value Chain

Victor.rojas@itlchile.com



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