

Leading the Development of a Sustainable Lithium Supply Chain

Johannes Klösener
Head of Pilotplant -- Langelshiem

RWEIMET Symposium 2023 Ressourcenmanagement

 Albemarle®

Forward-Looking Statements

This presentation, conference call and discussions that follow contain statements concerning our expectations, anticipations and beliefs regarding the future, which constitute “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements, which are based on assumptions that we have made as of the date hereof and are subject to known and unknown risks and uncertainties, often contain words such as “anticipate,” “believe,” “estimate,” “expect,” “guidance,” “intend,” “may,” “outlook,” “should,” “would,” and “will.” Forward-looking statements may include statements regarding expected: financial and operating results, production capacity, volumes, and pricing, demand for Albemarle’s products, capital projects, acquisition and divestiture transactions, market and economic trends, and all other information relating to matters that are not historical facts. Factors that could cause Albemarle’s actual results to differ materially from the outlook expressed or implied in any forward-looking statement include: changes in economic and business conditions; financial and operating performance of customers; timing and magnitude of customer orders; fluctuations in lithium market pricing; production volume shortfalls; increased competition; changes in product demand; availability and cost of raw materials and energy; technological change and development; fluctuations in foreign currencies; changes in laws and government regulation; regulatory actions, proceedings, claims or litigation; cyber-security breaches, terrorist attacks, industrial accidents or natural disasters; political unrest; changes in inflation or interest rates; volatility in the debt and equity markets; acquisition and divestiture transactions; timing and success of projects; performance of Albemarle’s partners in joint ventures and other projects; changes in credit ratings; and the other factors detailed from time to time in the reports Albemarle files with the SEC, including those described under “Risk Factors” in Albemarle’s most recent Annual Report on Form 10-K and any subsequently filed Quarterly Reports on Form 10-Q, which are filed with the SEC and available on the investor section of Albemarle’s website (investors.albemarle.com) and on the SEC’s website at www.sec.gov. These forward-looking statements speak only as of the date they are presented. Albemarle assumes no obligation to provide any revisions to any forward-looking statements should circumstances change, except as otherwise required by securities and other applicable laws.

COMMITTED TO BUILDING A MORE RESILIENT WORLD

Albemarle leads the world in transforming essential resources into critical ingredients for mobility, energy, connectivity and health.

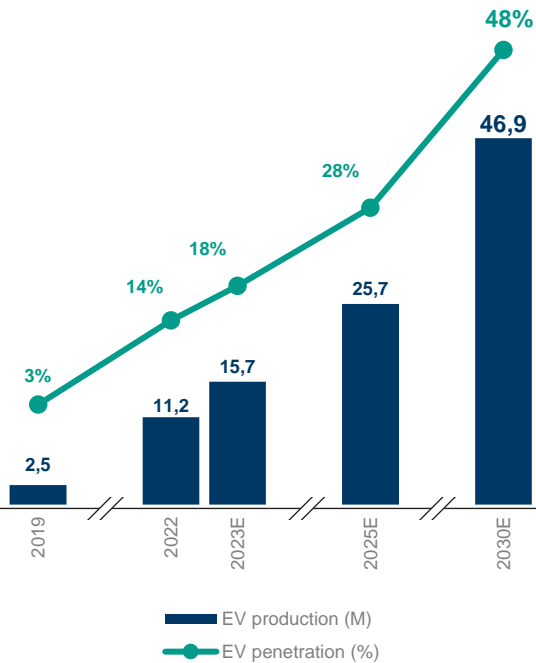
We partner to pioneer new ways to move, power, connect and protect with people and planet in mind.

Wider adoption of EVs – driver for Albemarle’s expansion strategy

Global EV

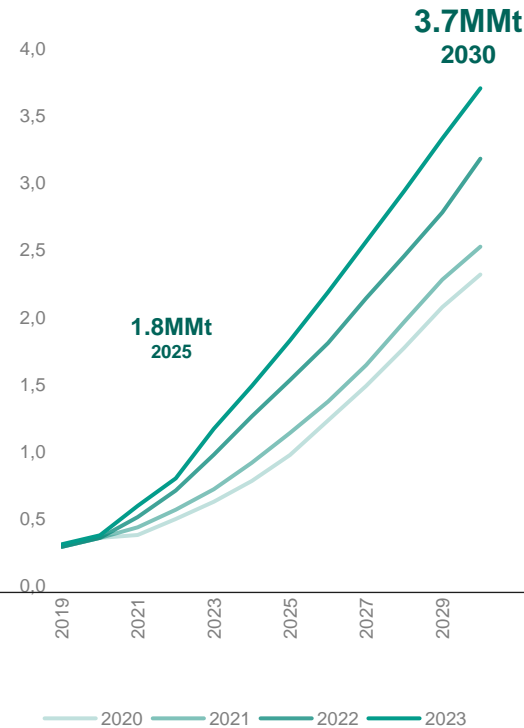
Production / Market Penetration¹

2022-2027
CAGR: 25-30%

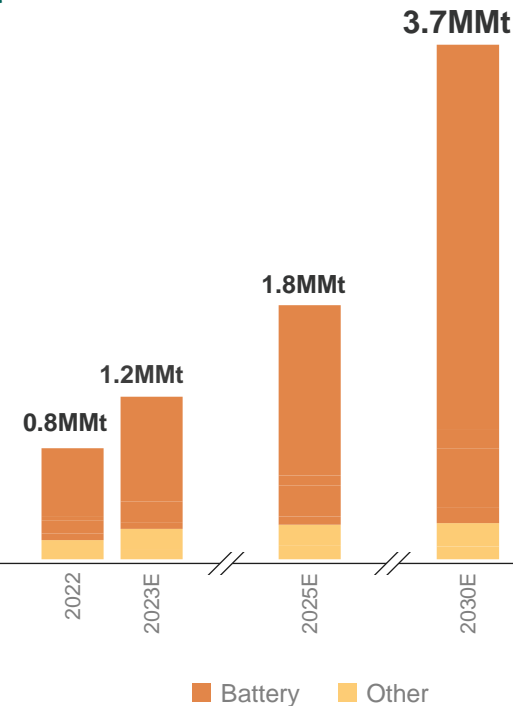


Global Lithium Demand

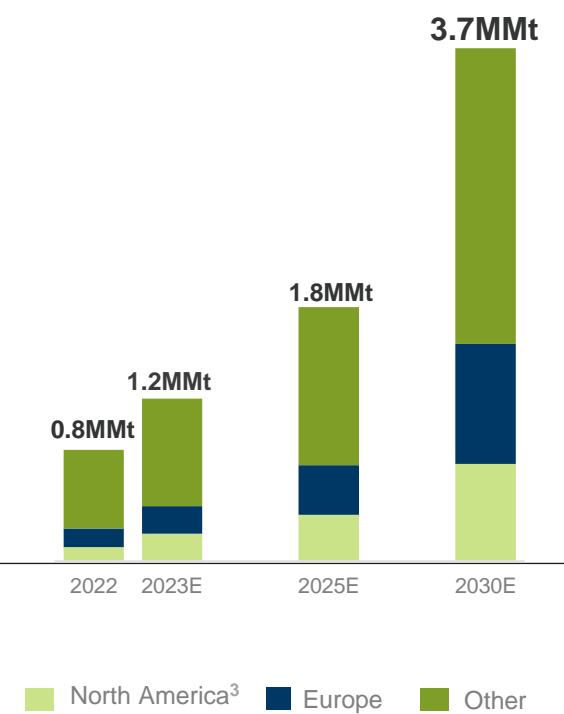
ALB Projections² (MMt LCE)



Battery/Non-battery² (MMt LCE)

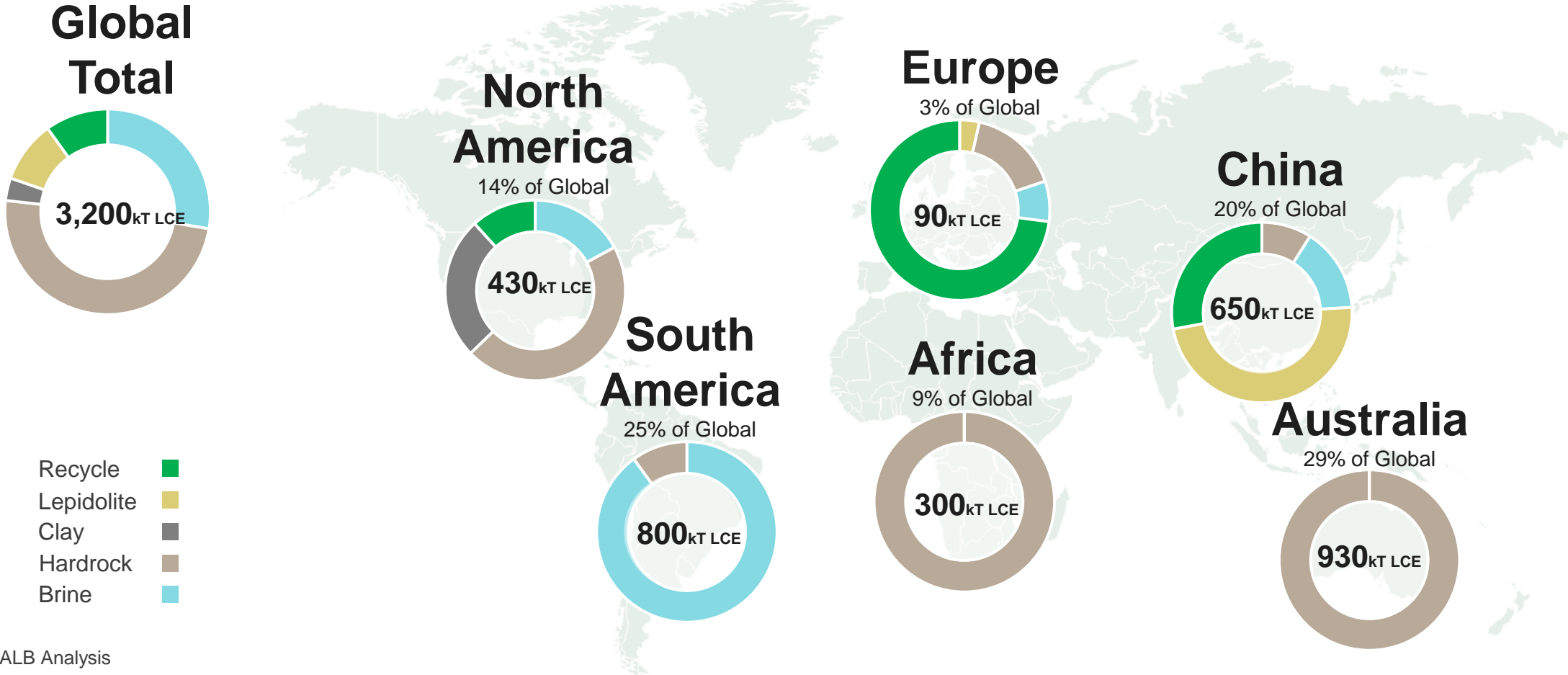


By Region of Use² (MMt LCE)



¹ S&P Global Mobility, Global Production based Alternative Propulsion Forecast, November 2022 ² Albemarle analysis ³ E.g., EVs built in North America, Grid batteries installed in North America, etc.

Despite significant industry efforts, supply will struggle to keep pace with demand



Source: ALB Analysis

We expect approximately 3.2 million MT LCE production by 2030 – including recycling

Strengthening Global Footprint in Resources and Conversion

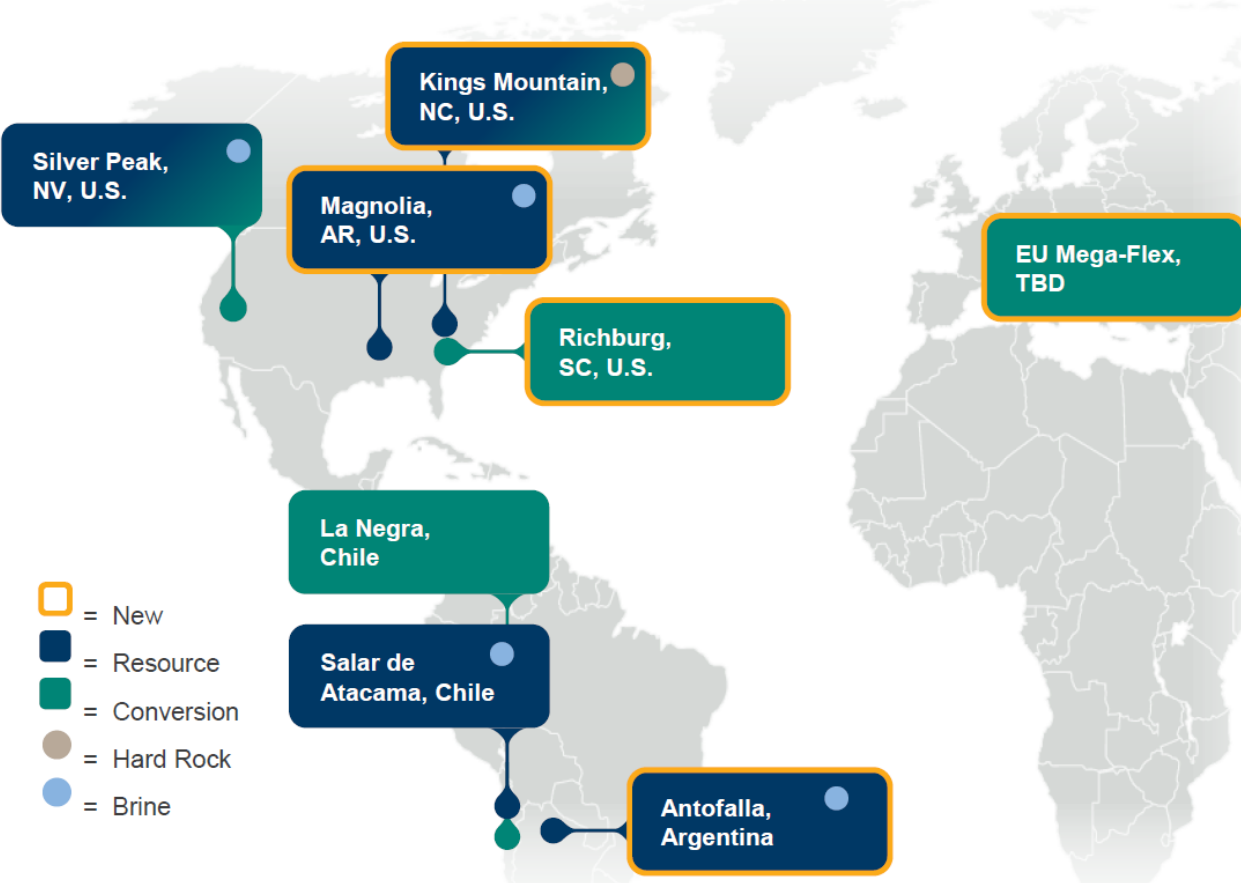
Expanding global lithium conversion capacity...

- Richburg, South Carolina selected as site for U.S. lithium processing facility, construction expected to begin late in 2024

...To leverage world-class brine and spodumene resources

- Salar Yield Improvement Project on schedule for mechanical completion by the middle of 2023
- Silver Peak new wells and expansion projects continue to progress
- Kings Mountain mine studies continue to progress

Americas/EU Resource & Conversion



Diversified supply chains supporting customer regionalization

Strengthening Global Footprint in Resources and Conversion

Expanding global lithium conversion capacity...

- **Kemerton I** is operating and producing lithium hydroxide, which remains subject to customer qualification
- **Kemerton II** is progressing through commissioning
- **Kemerton III/IV** final investment decision reached, begun construction
- **Meishan** construction progressing on-schedule with mechanical completion expected in 2024

...To leverage world-class spodumene resources

- **Wodgina** Train 3 commissioning
- **Greenbushes** CGP3 construction progressing

Australia/Asia Resource & Conversion



Full vertical integration from lithium resource to conversion is a competitive advantage

Call to Action: Building a sustainable supply chain to electrify the US & EU will require collaboration across multiple levels

PARTNERING



...across the value chain

ENABLING



...a US innovation hub

LEADING



...a sustainable approach to protect society

ENGAGING



...with the communities

The responsibility to ramp up the supply chain to electrify the US & EU requires forward-looking and creative partnerships across the value chain

Innovation in battery technology and advancement in sustainable mining and recycling technologies requires a strong R&D infrastructure

A sustainable future for society is the core of our activities. Every incremental step to reduce global carbon footprint leads to a better future for society

The battery supply chain can only be sustainable with mutually beneficial connections in the communities where we operate

Partnering – Creating higher value for the industry through global strategic partnerships

Partnering to Pioneer *With All*

Cathode Producer



Partner and improve lithium salts quality -
Setting the battery grade specifications for the future

Battery Producer



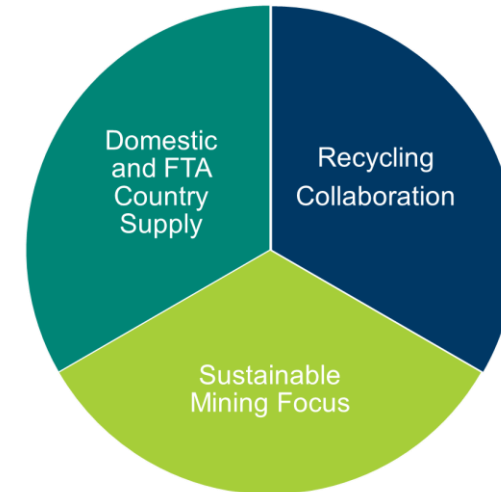
Partner and accelerate scale up –
driving next-generation safer, denser
and cost-effective batteries

OEM



Partner and build out a sustainable
recycling footprint – ensuring a
closed-loop for lithium

Example: Agreement with Ford



 ALBEMARLE®

Enabling - Albemarle Technology Park - A collaboration hub to innovate from mine-to-market



Charlotte
North Carolina

200+
new jobs

\$200+ MM
investment

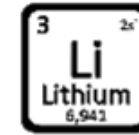
Early 2025
occupancy

Technology Hub
for Southeast US EV industry



Increased Lithium Recovery

Process innovation & development from lab to small-scale piloting



New Lithium Products

High-performance materials that maximize value of each lithium atom



Rapid Commercialization

Closed-loop development, qualification, & reduced time to market



Customer Collaboration

Integrated development with strategic battery & EV manufacturers

Accelerating material, process, and product development for advanced energy storage

Enabling - Albemarle plant Langelshheim – learn from the past for the future



Langelshheim
Germany

600+
jobs

planned
investment

101 years
Lithium experience

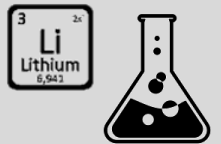
Lithium Salts Chemistry

Since 1922 Lithium salts are processed on site to divers Li special products



Lithium Recycling

In 2012 a recycling pilot plant was built to process Li-salts to battery grade LiOH



Internal Recycling

LiCl by products is recycled internally in a X000 mt Scale since decades



Customer Collaboration

Creating a demonstration environment for 1st recycling streams from Li-Batteries

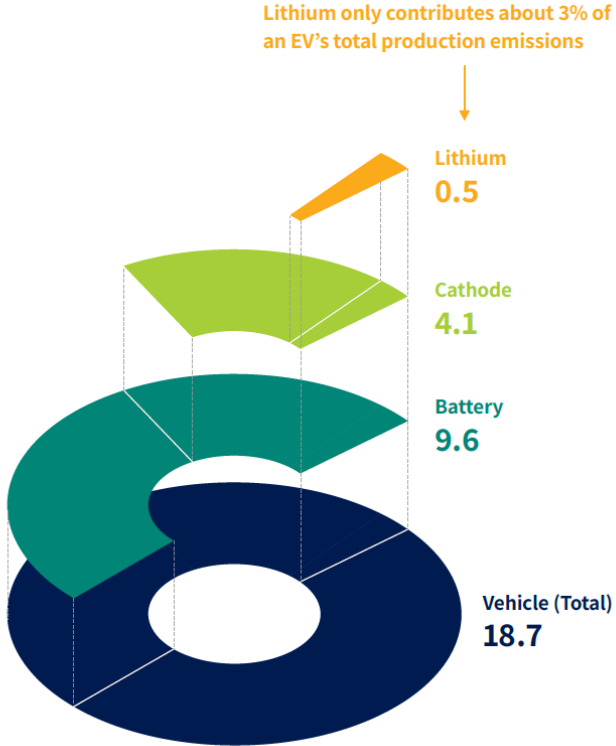


Accelerating material, process, and product development for advanced energy storage

Leading – Albemarle’s contribution to carbon footprint reduction

Lithium’s Contribution to GHG Emissions from EV Production

(CO₂e tonnes)

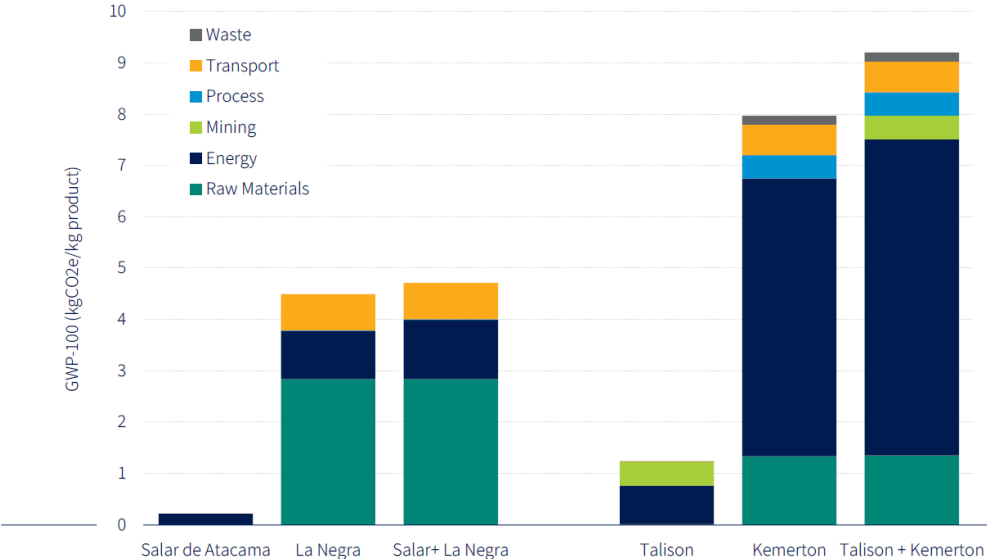


Assumes average-size pickup truck with a 98 kWh NMC811 battery.

Albemarle’s Lithium Supply Chain has a very low carbon footprint

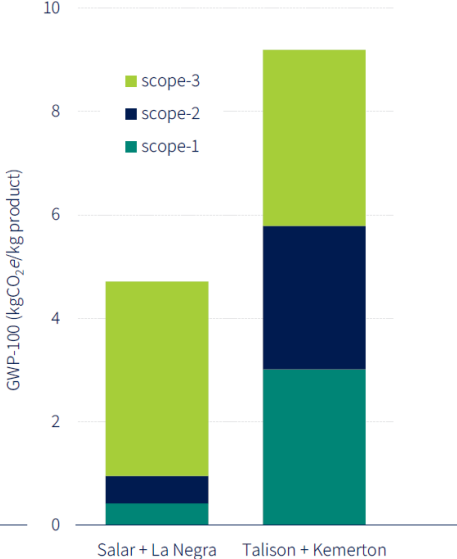
- **Brine:** Operations from the Salar de Atacama has the lowest carbon footprint of all producing Lithium resources
- **Spodumene:** Albemarle’s unique conversion capabilities in Australia generate a much lower footprint than operations that rely on a footprint outside of Australia
- **Recycling:** A regional recycling value chain for Batteries decreases shipment

GWP-100 ("Global Warming Potential") of Battery Grade Lithium from Various Sources



Source: Albemarle LCA 2021.

Distribution of GWP by Scope



- Lithium is enabling carbon free mobility and broader energy storage
- Batteries have a carbon footprint, with Lithium being a comparatively small but relevant contributor



Engaging - Albemarle becomes first lithium producer to complete IRMA audit

Initiative of Responsible Mining Assurance

- Objective, independent third-party verification of industrial-scale mine sites
- 400+ standards represent the most comprehensive definition of responsible mining
- Developed by NGOs, communities, unions, minerals producers and minerals purchasers

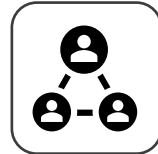
Collaborative, Multi-Stakeholder Process



How IRMA has benefited Albemarle



Developed further trust and transparency with stakeholders and communities



Further improvement of responsibilities and accountabilities at our operation sites



More ambitious goal setting with focus on continuous improvement



Confirmed our leadership in setting standards in sustainable mining

July 2021
Mine Self-Assessment

September 2021
Official Audit announced

December 2021
Desktop Assessment

April 2022
On-Site Assessment

Official IRMA Audit
Completion

Lithium Recycling from Batteries – From Black Mass Extract to Battery Grade

Johannes Klösener
Head of Pilotplant -- Langelshiem

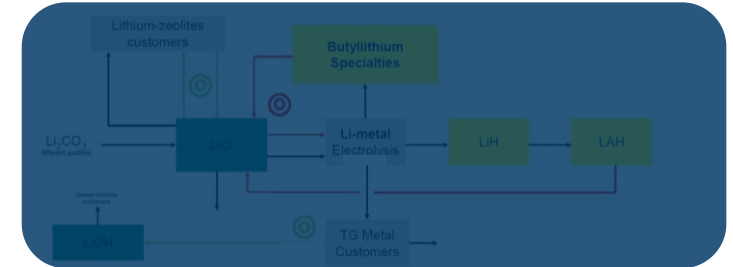
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Albemarle has a long history of integrated lithium production in Europe

1922-Present



Li salts production in different grades



Developing recycling loops for internal and external streams

2008-Present



Research in Recycling of LIB

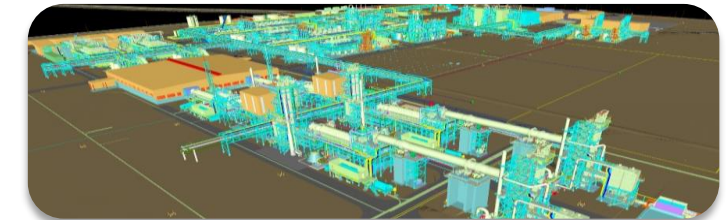


Pilot plant for conversion of Li-salts to LiOH Bg

Pre-2030



Restart and extent pilot scale conversion of recycled Li-streams



European BG Spod Conversion Mega-site

Albemarle's strong position to accelerate the recycling Value chain

Expected recycling streams

- **Li₂SO₄**: Handled and process in >100 kT/a to LiOH bg or Li₂CO₃
- **Li₂CO₃**: Produced, converted and purified in different scales to obtain Li₂CO₃ (bg) or LiOH bg
- **LiOH**: Upgrade from tg to bg with in our production value chain
- **Extraction**: Spodumene processing >100 kT/a to extract Li-value, understanding of Extraction of different BM on R&D scale

Technology & Partnership

- **Partnering**: Strong position to partner with Organisation, OEM and Cell manufacturer
- **Megaflex-plant**: Using input stream from Natural resources and recycling to benefited from a better economy of scale



Recycling of lithium is essential to develop a circular lithium supply chain

Key Takeaways

Demand remains strong

Li demand forecasted to outpace supply until end of decade

Recycling

Playing a pioneer roll in the recycling of Lithium values from LIB is an important a part of our sustainable value chain.

Partnerships

Across entire value chain, essential for circular lithium supply chain

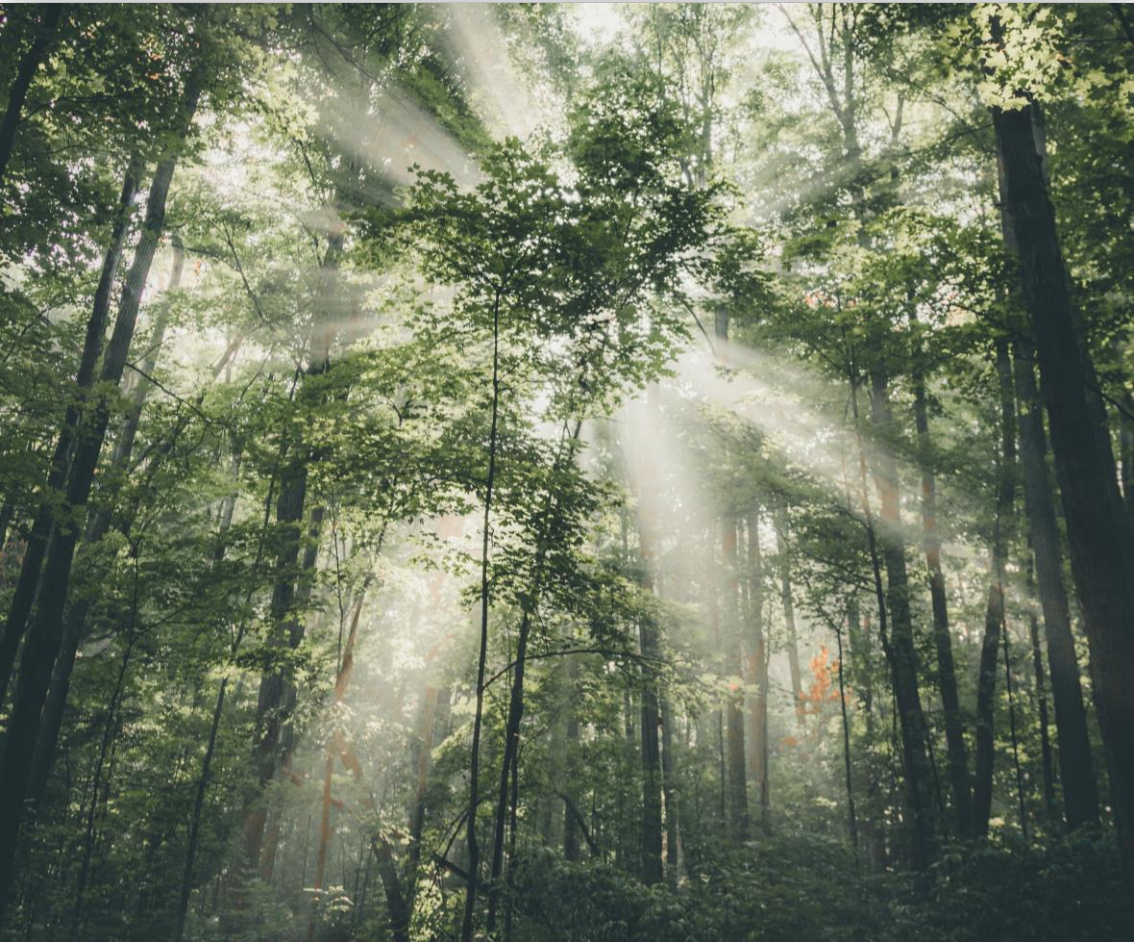
Mine-to-Market Innovation

Mega-Flex & ATP create regional innovation hub, establish long-term growth, and accelerate MTM innovation

Sustainability is foundational

We are serving society by providing a key tool for the decarbonization of our planet, while striving to create benefits for the communities we are operating in.

Growing our Inclusive Team of Empowered, Inspired Employees



We are all innovators at **Albemarle**, presented with a once-in-a-lifetime opportunity for our team members to become part of something **purposeful, transformative**, and entirely **unprecedented**.

INTERESTED IN BEING AN ESSENTIAL
ELEMENT TO A BRIGHTER FUTURE?
Learn about careers at
[Albemarle at albemarle.com/careers](http://Albemarle.com/careers)



An aerial photograph of a wooden bridge spanning a river, with a car driving across it. The surrounding area is a dense forest. The image has a dark blue overlay.

 Albemarle

Albemarle has a long history of integrated lithium production in North America

1940s-1980s



Spodumene Resource (Kings Mountain, NC)
Idled in the mid 1980s



Spod Conversion Plant (Kings Mountain, NC)

1990s-Present



Brine to Li_2CO_3 Production (Silver Peak, NV)



Li_2CO_3 to BG LiOH Conversion (Kings Mountain, NC)

Pre-2030



Restart of Spodumene (Kings Mountain, NC)



BG Spod Conversion Mega-site (Richburg, SC)

Lead – Proposed Kings Mountain Mine



Kings Mountain



Brownfield Development

Advanced exploration & development phase



Economic Growth

Kings Mountain and throughout Cleveland County



Job Creation

Chemical, electrical, mechanical, & mining engineers. geologists & metallurgists. environment, health & safety, and admin professionals



IRMA

Committed to leadership in setting standards in sustainable mining

Kings Mountain
North Carolina

300+
new jobs

IRMA
Commitment

2027+
Production

IRA Compliant Supply
for North American EV industry

Leading the proposed reopening of a world-class resource

Enable – Lithium Hydroxide Mega-Flex



Mega-Flex



Future site of
Albemarle
Mega-Flex

Richburg
South Carolina

300+
new jobs

\$1.3+ Bil
investment

IRA Compliant Supply
for North American EV industry



Process

Diverse lithium feedstock, including lithium from recycled batteries



50-100 kT Annual Capacity

Battery-grade lithium hydroxide



2.4 Million EV's Annually



Inflation Reduction Act

Will increase production of US-based lithium resources to fuel clean energy revolution

Enabling the build out of a sustainable NA supply chain



Albemarle estimates the Richburg facility will create more than 300 new jobs with an average annual wage of approximately \$93,000. In addition, the project would create more than 1,500 construction jobs."

Invest – Workforce Development



Primary STEM education

Investing in county school system



Mining & Engineering track

Partnering with local community colleges & universities



Internships & Scholarships

Annual opportunities



Veteran Hiring

Building out military veteran talent development programs

Recognizing the importance of creating a long-term talent pipeline