



Committed to building a more resilient world

2022 SUSTAINABILITY REPORT

About This Report

THE ALBEMARLE CORPORATION (ALBEMARLE) 2022 SUSTAINABILITY REPORT, COMMITTED TO BUILDING A MORE RESILIENT WORLD, PRESENTS OUR COMPANY'S APPROACH TO SUSTAINABILITY AND OUR PROGRESS TOWARD ACHIEVING OUR GOALS. THE TITLE OF THIS YEAR'S REPORT REFLECTS OUR COMPANY'S CORPORATE PURPOSE TO ENABLE A MORE RESILIENT WORLD AND UNDERSCORES OUR POSITION AS A GLOBAL LEADER IN TRANSFORMING ESSENTIAL RESOURCES INTO CRITICAL INGREDIENTS NECESSARY FOR THE TRANSITION TO A MORE SUSTAINABLE FUTURE.

The report is structured according to our sustainability framework topics: Natural Resource Management, People, Workplace & Community and Sustainable Value Creation and covers information for the 2022 calendar year, unless otherwise noted.

For stronger focus and better execution on our multiple growth opportunities, Albemarle has realigned two segments in our core portfolio: Energy Storage, focused on the transition to clean energy; and Specialties, combining the Bromine business with the Lithium specialties business. The resegmenting was effective January 1, 2023 and is reflected in forward-looking sections of this report. 2022 data and performance reflect historical segments unless otherwise noted.

Financially consolidated joint ventures are included on a pro rata basis in accordance with guidance published by the World Business Council for Sustainable Development (WBCSD)¹.

Our report content and disclosures reference the Sustainability Accounting Standards Board (SASB) and the Global Reporting Initiative (GRI) Standards, and in 2022, we began to report using the Task Force on Climate-Related Financial Disclosures (TCFD) recommendations to provide our investors and other stakeholders with more comprehensive information about the impacts of climate change on our business. For more information, please see our [GRI](#) and [SASB](#) Content Indices, our [TCFD Report](#) and our [Performance Data](#).

1. Guidance for Accounting and Reporting Corporate GHG Emissions in the Chemical Sector Value Chain, published January 30, 2013.

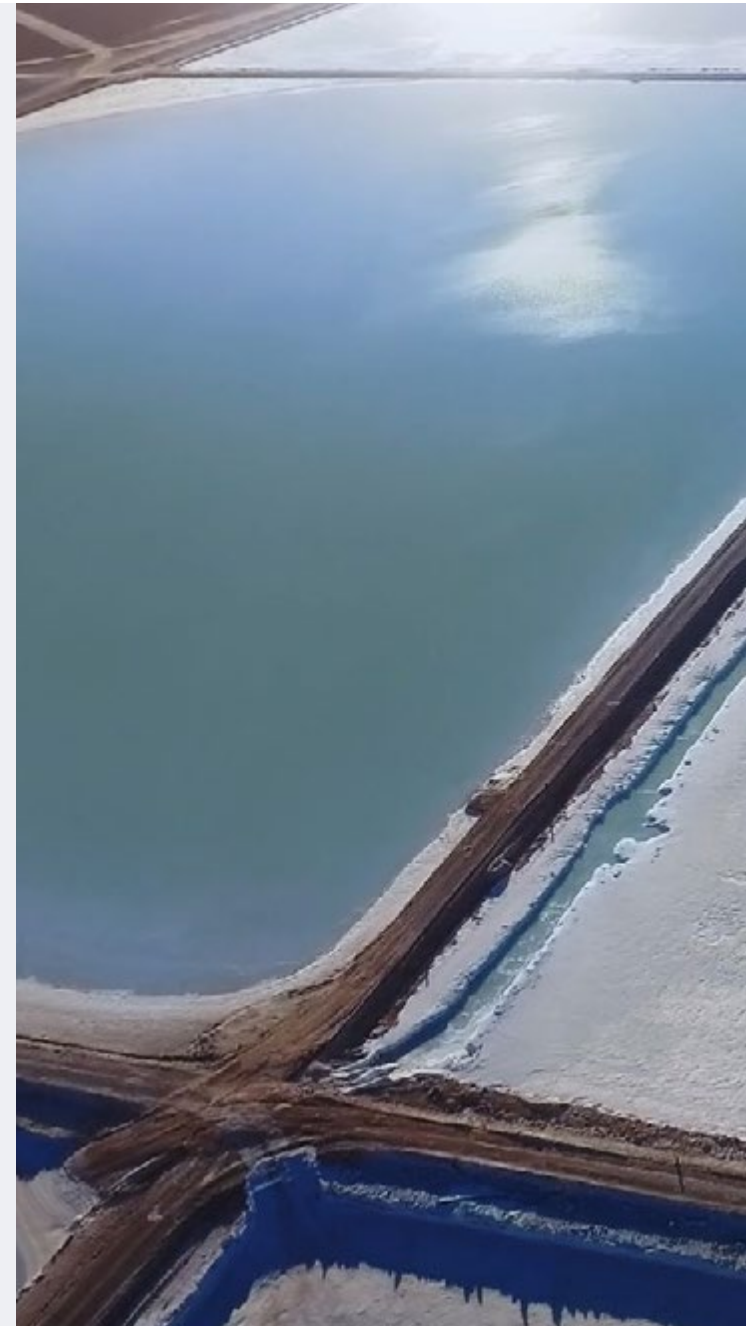


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A Message from J. Kent Masters, Chairman and Chief Executive Officer, and Gerald Steiner, Chair of the Health, Safety and Environment Committee

WE ARE PLEASED TO PRESENT ALBEMARLE'S 2022 SUSTAINABILITY REPORT.

In so many ways, 2022 was an extraordinary year for Albemarle. We successfully executed our growth strategy, delivering projects on five continents. We also delivered record financial and operational results in 2022 – net sales of \$7.3B and adjusted EBITDA of \$3.5B. We remained steadfast in our commitment to being an industry leader in sustainability while making steady progress toward achieving our goals.

Sustainability is a core part of Albemarle's strategy and operating model. We are committed to sustainability for the long term, and we are investing to deliver on our commitments. Our 2022 report is a comprehensive look at our progress integrating sustainability into all that we do including positive progress on current targets and ambitious new targets that will continue to push Albemarle to be a sustainable leader.

MORE RESILIENT PLANET

Albemarle products make the world more resilient by supporting the transition to a carbon-free economy. The innovative technologies we develop help make the world a healthier and safer place. Our Energy Storage business provides essential materials for clean transportation and electric vehicles (EVs). In 2022, we sold ~120,000 metric tons (mt) lithium carbonate equivalent (LCE) enabling the production of up to 4 million EVs. We also announced an initial investment of over \$180 million to establish the Albemarle Technology Park (ATP), a world-class facility designed for advanced materials research, process development and product innovation. In 2022, our Specialties business launched MercLok™, a game-changing remediation technology designed to rapidly stabilize mercury found in a range of soils and industrial waste that, if left untreated, can create environmental and health hazards. In Jordan, we have begun construction of our NEBO project, which will allow us to recycle waste



Kent Masters



Gerald Steiner

streams into additional finished product, thereby cutting water use, reducing costs and increasing revenues. Both MercLok™ and NEBO are proof points of our efforts to make the world safer and more sustainable while creating value for our stakeholders.

In April 2022, we were honored to become a signatory to the United Nations (UN) Global Compact CEO Water Mandate. Signing on to the Water Mandate underscores our commitment to water stewardship. Through this platform, we aim to proactively identify and manage business risks, create efficiency in our freshwater use and realize cost savings through water use efficiency. Participation in the Water Mandate also holds us accountable to our goal of reducing the intensity of our freshwater use in areas of high and extremely high overall water risk, which are Chile and Jordan respectively, by 25% by 2030.

In 2022, we brought online a \$100 million thermal evaporator at our La Negra plant in Chile. This advanced technology takes aqueous waste streams, which have traditionally been disposed to solar evaporation ponds, and turns them into high-purity water, which is recycled for use in our state-of-the-art processing plant. The thermal evaporator allows us to double the production capacity of lithium carbonate at La Negra without proportionally increasing our freshwater footprint.

MORE RESILIENT SUPPLY CHAIN

We have taken a leadership role in transparently showing how we produce our products. In 2022, our Salar de Atacama site became the first lithium mine in the world to undergo an audit by the Initiative for Responsible Mining Assurance (IRMA). Additional Albemarle sites in Australia are undergoing IRMA self-assessments and audits. In 2022, we also received our initial scores from the CDP for climate and water. We received a B for climate and a C for water – while good scores for our first scored submission, we continue to work hard to improve our management around these topics. We are proud to take these steps toward greater transparency, and we'll continue working toward improving our scores and performance over time.

MORE RESILIENT DOMESTIC U.S. LITHIUM SUPPLY

As one of the only lithium companies currently producing battery-grade lithium from U.S. resources, we are proud to partner with the federal government to strengthen

the domestic supply chain for the growing EV market. In 2022, Albemarle was awarded a \$150 million grant from the U.S. Department of Energy (DOE) as part of President Biden's Bipartisan Infrastructure Law to expand domestic manufacturing of batteries for EVs.

MORE RESILIENT PEOPLE

In 2022, we made important organizational changes to our talent acquisition and employee experience teams to meet the needs of our growing company. We invested significantly to deliver best-in-class employee learning and development programs to help us attract and retain the top talent needed to scale our organization in line with our growth strategy. In a highly competitive labor market, our employee voluntary turnover rate of 5.3% in 2022 was below the industry average.

Also, in 2022, we continued to strengthen our commitment to foster a diverse workforce, an equitable workplace and an inclusive culture for our employees. We want Albemarle to be a place where everyone feels valued for their contributions to our business success. We are pleased to report that, in 2022, we achieved our annual diversity goals. As we progress, we have set new goals to continue to cultivate a workforce with a broad representation of backgrounds and experience.

LOOKING TO THE FUTURE

As a global leader in transforming natural resources that are essential ingredients for modern living and a sustainable future, we will continue to accelerate our growth and leverage our competitive advantages to provide long-term value for our stakeholders. To execute our ambitious strategy, we will seize opportunities to innovate around new products and technologies with sustainability attributes and environmental benefits. We will also continue to work with our customers, suppliers and other business partners to find transformative solutions to create a more resilient world. We're on a journey of business and sustainability excellence, and we look forward to sharing our milestones with you in future reports.

We invite you to learn more about our sustainability initiative and performance toward achieving our goals in this report.

Sincerely,

J. Kent Masters

Chairman and Chief Executive Officer

Gerald Steiner

Chair of the Health, Safety, and Environment Committee

BY THE NUMBERS¹

\$7.3B

Net Sales

\$3.5B

Adjusted EBITDA²

47%

Adjusted EBITDA Margin²

Approx.

6,600

Employees³

Approx.

1,900

Customers in 70 Countries

2,100+

Active Patents

1. All data is as of or for the year ended 12/31/2022.

2. Non-GAAP financial measure. See Non-GAAP Reconciliations in Exhibit 99.1 of the Current Report on Form 8-K filed with the Securities and Exchange Commission (SEC) on February 15, 2023, for reconciliations to the most directly comparable financial measure calculated and reported in accordance with U.S. GAAP.

3. Includes permanent workers only, excludes our JVs.



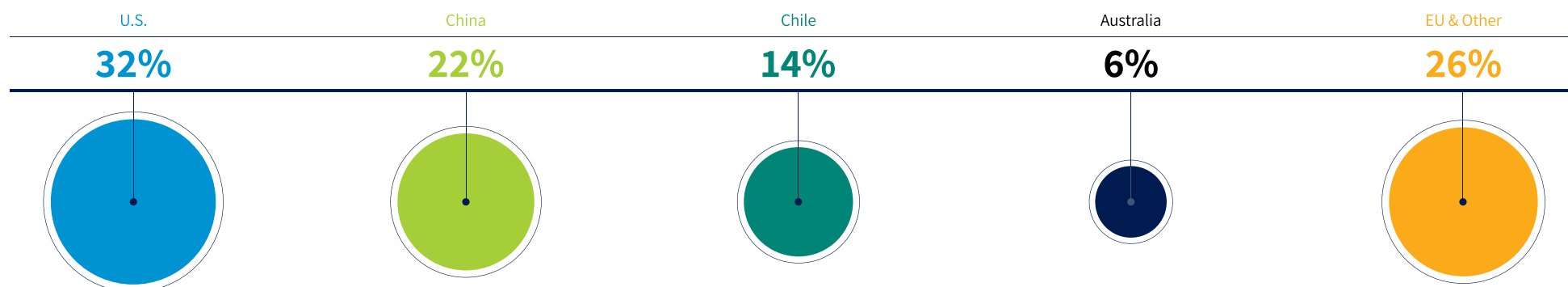
Who We Are

ALBEMARLE CORPORATION (NYSE: ALB) IS A GLOBAL LEADER IN TRANSFORMING ESSENTIAL RESOURCES, SUCH AS LITHIUM AND BROMINE, INTO CRITICAL INGREDIENTS FOR MOBILITY, ENERGY, CONNECTIVITY AND HEALTH.

Together with our world-class resources, technical and process knowledge, and safety and sustainability performance, we partner with our customers to pioneer new ways to move, power, connect and protect. We are committed to building a more resilient world where people and planet thrive.

At Albemarle, we transform essential resources to better serve people and the planet.

Diverse Global Workforce



FINANCIAL SUMMARY

	2022	2021	2020
Net sales	\$7.320B	\$3.328B	\$3.129B
Net income attributable to Albemarle	\$2.690B	\$124M	\$376M
Adjusted EBITDA ¹	\$3.476B	\$871M	\$819M
Adjusted EBITDA margin ¹	47%	26%	26%
Diluted earnings per share	\$22.84	\$1.06	\$3.52
Adjusted diluted earnings per share ¹	\$21.96	\$4.04	\$4.12
3-year weighted average ROIC ²	15.80%	10.67%	9.30%
Net debt to adjusted EBITDA	0.5x	2.3x	3.4x
Year-end credit ratings (S&P/Moody's/Fitch)	BBB/Baa3/BBB	BBB/Baa3/BBB	BBB-/Baa3/BBB
Dividends paid per share	\$1.58	\$1.56	\$1.54
Dividend yield	0.7%	0.8%	1.8%

For more financial information, please see our annual, quarterly and current reports filed with the U.S. Securities and Exchange Commission and available on our [website](#).

1. Non-GAAP financial measure. See Non-GAAP Reconciliations in Exhibit 99.1 of the Current Report on Form 8-K filed with the Securities and Exchange Commission (SEC) on February 15, 2023, for reconciliations to the most directly comparable financial measure calculated and reported in accordance with U.S. GAAP.

2. Adjusted Return on Invested Capital (ROIC), as defined in the [2023 proxy statement](#).

ALBEMARLE LEADS THE WORLD IN TRANSFORMING ESSENTIAL RESOURCES INTO CRITICAL INGREDIENTS AROUND FOUR TRANSFORMATIONAL IMPACT AREAS:

Mobility

From the battery in EVs to the initiator for airbags, Albemarle is fundamental in the development of mobility products and solutions.

Energy

From energy grid storage to the materials required for energy-efficient buildings, neither would be possible without Albemarle.

Connectivity

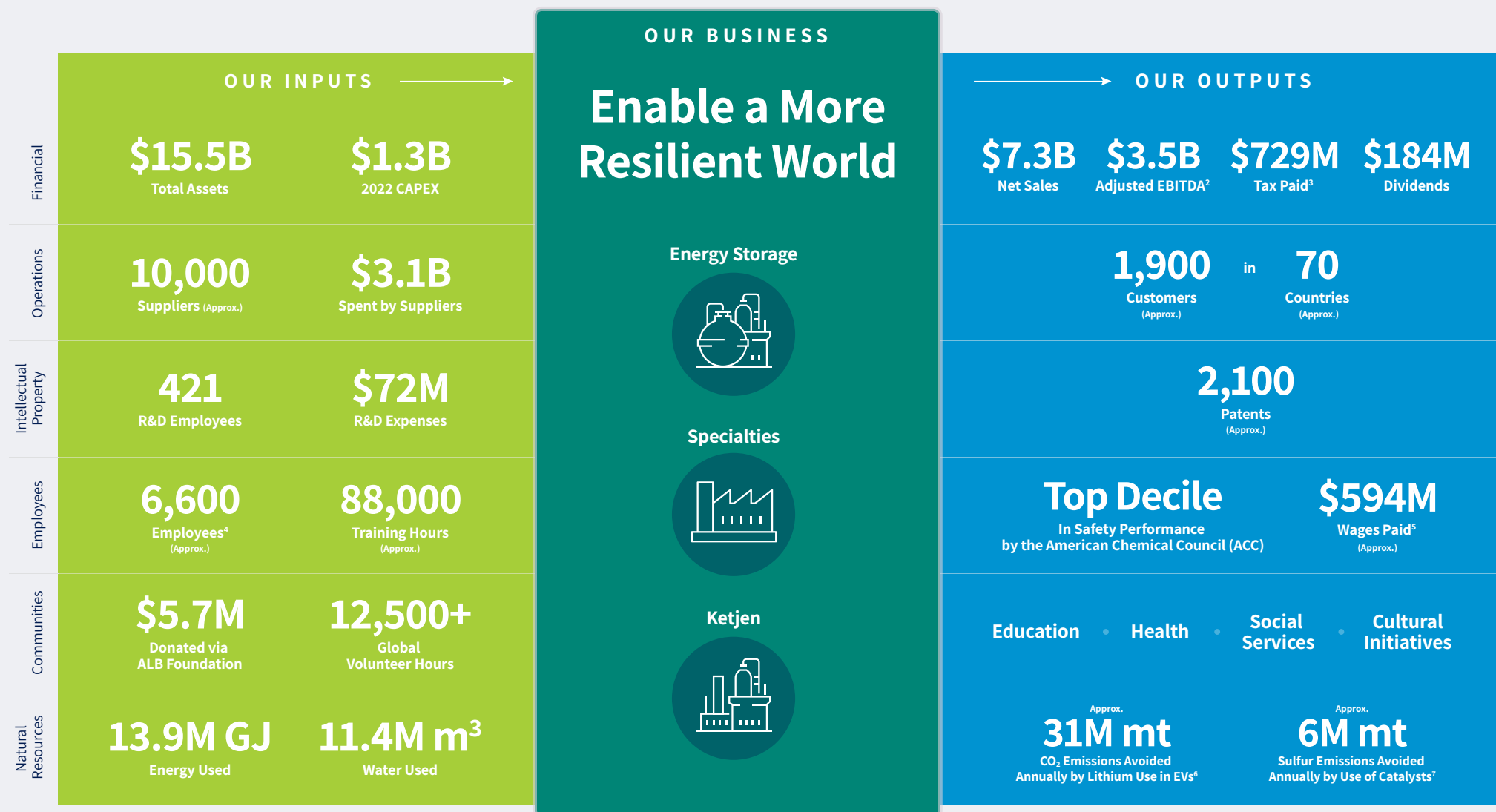
From fire safety solutions in industrial cabling to the protective glass on cell phones, Albemarle makes connecting safer and more reliable.

Health

From ingredients for medicines to disinfection, Albemarle helps ensure the food we eat is safe and plentiful, the water we drink is clean and the environment we live in is here to stay.



How We Create Value¹



1. All data is as of 12/31/2022.
 2. Non-GAAP financial measure. See Non-GAAP Reconciliations in Exhibit 99.1 of the Current Report on Form 8-K filed with the Securities and Exchange Commission (SEC) on February 15, 2023, for reconciliations to the most directly comparable financial measure calculated and reported in accordance with U.S. GAAP.
 3. Includes net payments in 2022 for income, sales and use and property taxes, as well as commission payments to Chile.
 4. Includes permanent workers only, excludes our JVs.

5. Includes salaries and annual incentive paid in 2022, excludes long-term incentives and other benefits.
 6. Source - IEA Global EV Outlook, 2020 and Albemarle estimates. Represents CO₂ emissions avoided in 2022 based on Albemarle's historic value of lithium sold into EV batteries and the annual well-to-wheel avoidance of CO₂ emissions due to substitution of internal combustion engines by EVs.
 7. Estimated sulfur emissions avoided in 2022 by the use of HPC catalysts sold in 2022.

Our Purpose & Values

Albemarle's six core values help us achieve our corporate purpose to enable a more resilient world. They guide us in our work and in our interactions with our stakeholders. In 2022, we restated our values to include accountability to further underline that we take ownership and responsibility for our actions to reliably deliver results.

Care We improve the safety, well-being and resilience of our communities, employees and environment.	Curiosity We continuously learn and are comfortable taking informed risks to innovate.	Collaboration We work together, value each other and encourage diverse thought to drive more impactful solutions.	Humility We share the credit and value the ideas of others to achieve goals together.	Accountability We act with courage to take ownership for what matters and responsibly deliver results.	Integrity We do what we say with honesty and transparency for the benefit of all.
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OUR CORPORATE PURPOSE IS TO ENABLE A MORE RESILIENT WORLD.

Our Strategy

A CLEAR STRATEGY TO DELIVER ENDURING VALUE



Grow Profitably
Strategically grow lithium and bromine capacity to leverage low-cost resources.
Maintain capital discipline and operational excellence.

Maximize Productivity
Optimize earnings, cash flow and cost structure across our businesses.
Deploy operating model to build strong platform for growth.

Invest with Discipline
Actively manage portfolio to generate shareholder value.
Maintain Investment Grade credit rating and support our dividend.

Advance Sustainability
Drive continuous improvement on environmental, social and governance (ESG) performance across our businesses.
Accelerate our customers' sustainability ambitions.

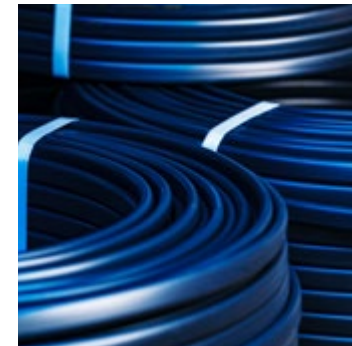


What We Do: Our Business Segments

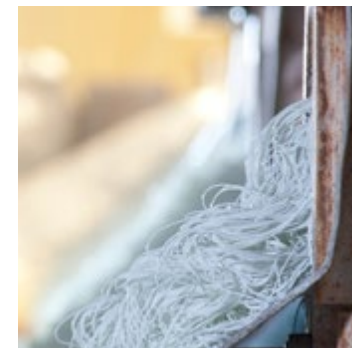
IN EARLY 2023, WE RESHAPED OUR LITHIUM AND BROMINE BUSINESSES TO ALLOW FOR A STRONGER FOCUS AND BETTER EXECUTION OF OUR MULTIPLE GROWTH OPPORTUNITIES FOR EACH CORE BUSINESS. OUR TWO CORE GLOBAL BUSINESS UNITS (GBUs) ARE NOW ENERGY STORAGE AND SPECIALTIES. WE HAVE ALSO REBRANDED OUR CATALYSTS BUSINESS, AS KETJEN, AND ARE IN THE PROCESS OF STRUCTURING KETJEN AS ITS OWN WHOLLY OWNED LEGAL ENTITY STRUCTURE.



ENERGY STORAGE



SPECIALTIES



KETJEN

Energy Storage

ALBEMARLE ENERGY STORAGE IS A LEADER IN PIONEERING BETTER LITHIUM USE THROUGH MORE RELIABLE SUPPLY, CONSISTENT QUALITY, SUSTAINABLE OPERATIONS AND INNOVATIVE TECHNOLOGY. THE ENERGY STORAGE GBU INCLUDES OUR HYDROXIDE, CARBONATE, BATTERY GRADE METAL AND ADVANCED ENERGY STORAGE BUSINESSES. THIS GBU FOCUSES ON THE MARKETS, CUSTOMERS, RESOURCES, PRODUCTION AND ADVANCED METALS RESEARCH CRITICAL TO ADVANCING THE GLOBAL ENERGY TRANSITION.

The opportunities for our Energy Storage GBU are far-ranging, enabling transformations in mobility, energy, connectivity and health. Our aim is to power the world's transformation to sustainable energy through reliable, high-performance lithium. In mobility, we are enabling the EV revolution. This extends from light-duty vehicles to electric bikes, trucks and buses. In the energy market, we are supporting the development of stationary storage to create grid flexibility in energy shifting and to integrate renewables like wind and solar into the grid, as well as residential storage that makes power more resilient and cost-effective.

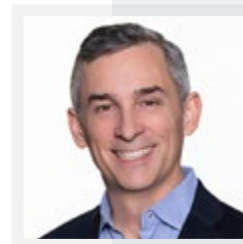
Our ambition is to lead the energy storage revolution, not only by expanding our world-class resources and conversion capacity, but by operating with the highest standards of responsibility and sustainability and practicing strong capital execution capability. We work closely with our customers to solve their most technical challenges, and we build partnerships to innovate around quality, higher energy density and sustainability.



Albemarle is a market leader and is well-positioned to power the world's transformation to clean energy. We are building partnerships with our strategic customers to innovate around quality and sustainability.”

Eric Norris

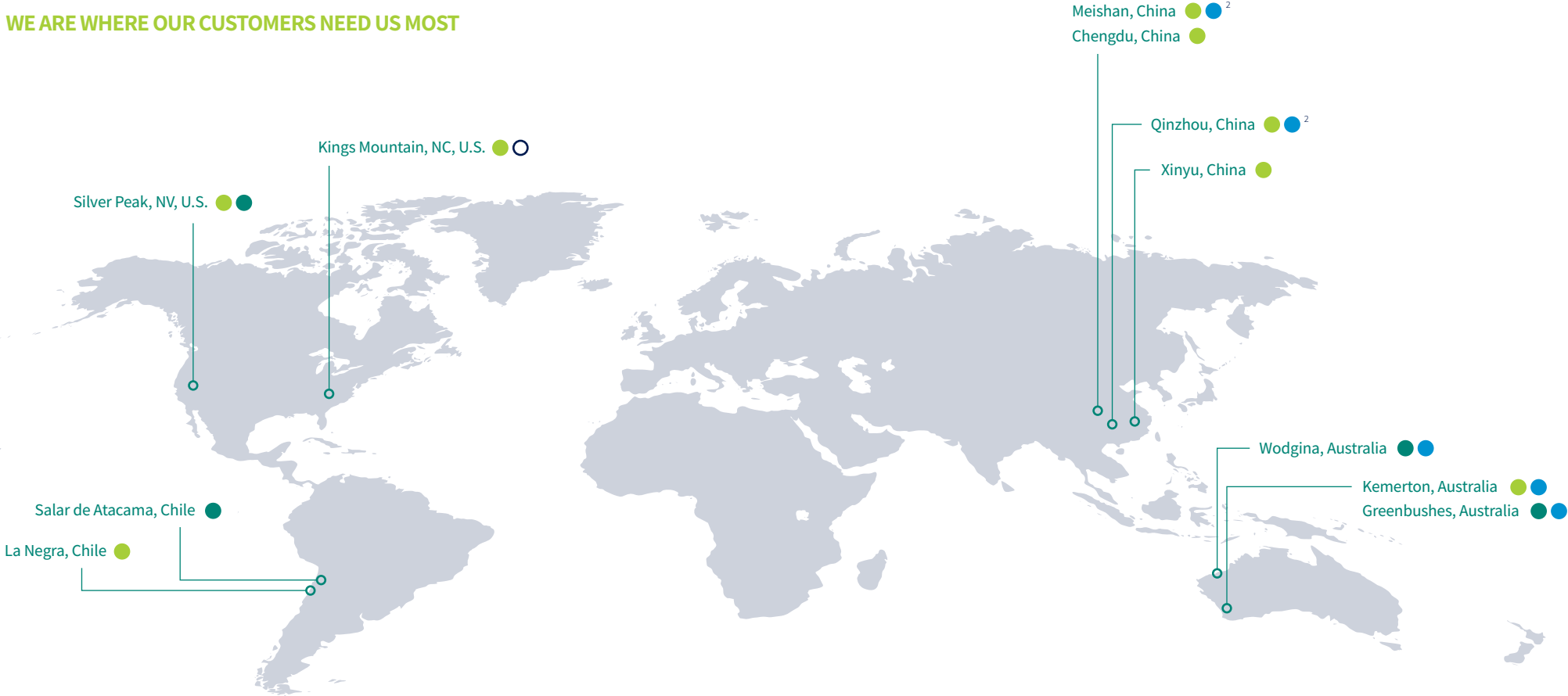
President, Energy Storage



AS PART OF OUR MINE-TO-MARKET INNOVATION STRATEGY, WE ARE INVESTING OVER \$180 MILLION IN THE ALBEMARLE TECHNOLOGY PARK, A WORLD-CLASS FACILITY DESIGNED FOR NOVEL MATERIALS RESEARCH, ADVANCES IN PROCESS DEVELOPMENT AND ACCELERATION OF NEXT-GENERATION LITHIUM PRODUCTS.

Energy Storage Global Snapshot

WE ARE WHERE OUR CUSTOMERS NEED US MOST



ENERGY STORAGE FINANCIALS¹

\$4.7B

Net Sales

\$3.0B

Adjusted EBITDA

65%

Adjusted EBITDA Margin

- Conversion
- Resources
- R&D
- Joint Venture

1. Figures for the 12 months ended December 31, 2022.
 2. JV subject to regulatory approval.

Specialties

OUR SPECIALTIES GBU OPTIMIZES OUR PORTFOLIO OF BROMINE AND HIGHLY SPECIALIZED LITHIUM SOLUTIONS AND SERVES A WIDE RANGE OF INDUSTRIES AND NEEDS. THE SUCCESS OF OUR SPECIALTIES BUSINESS IS DRIVEN BY STRONG UNDERLYING MACRO DEVELOPMENTS IN ENERGY, MOBILITY, CONNECTIVITY AND HEALTH.

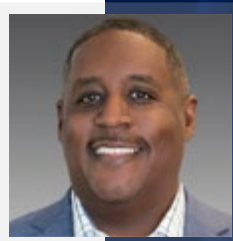
From our strength in bromine and lithium specialties, we pioneer solutions for customers that advance the modern world. Specialty products are essential in both internal combustion and electric vehicles, from high-voltage cables and powertrains to airbags and tires. EVs have additional applications for our products, with two times more wiring than a traditional internal combustion engine vehicles (ICEVs), as well as flame retardants for battery casings.

In energy, infrastructure for renewable grid and electrified transport is enabled by our fire safety solutions. Our clear completion fluids make deep-sea oil fields possible. In connectivity, the transition to 5G provides a market for our fire safety solutions business. And in health, our lithium specialties products are precursors for many pharmaceuticals, while bromine specialties are used to help ensure safer food and water supplies.



The Specialties business has deep bench strength in process technology expertise. Our R&D team is launching new products and processes to improve efficiency, circularity and sustainability.”

Netha Johnson
President, Specialties



Albemarle’s bromine and lithium specialties production is focused on maximizing stakeholder benefit while minimizing environmental impact. We prioritize responsible extraction and operations to position ourselves to be able to provide the cleanest, safest and most reliable supply network in the industry.

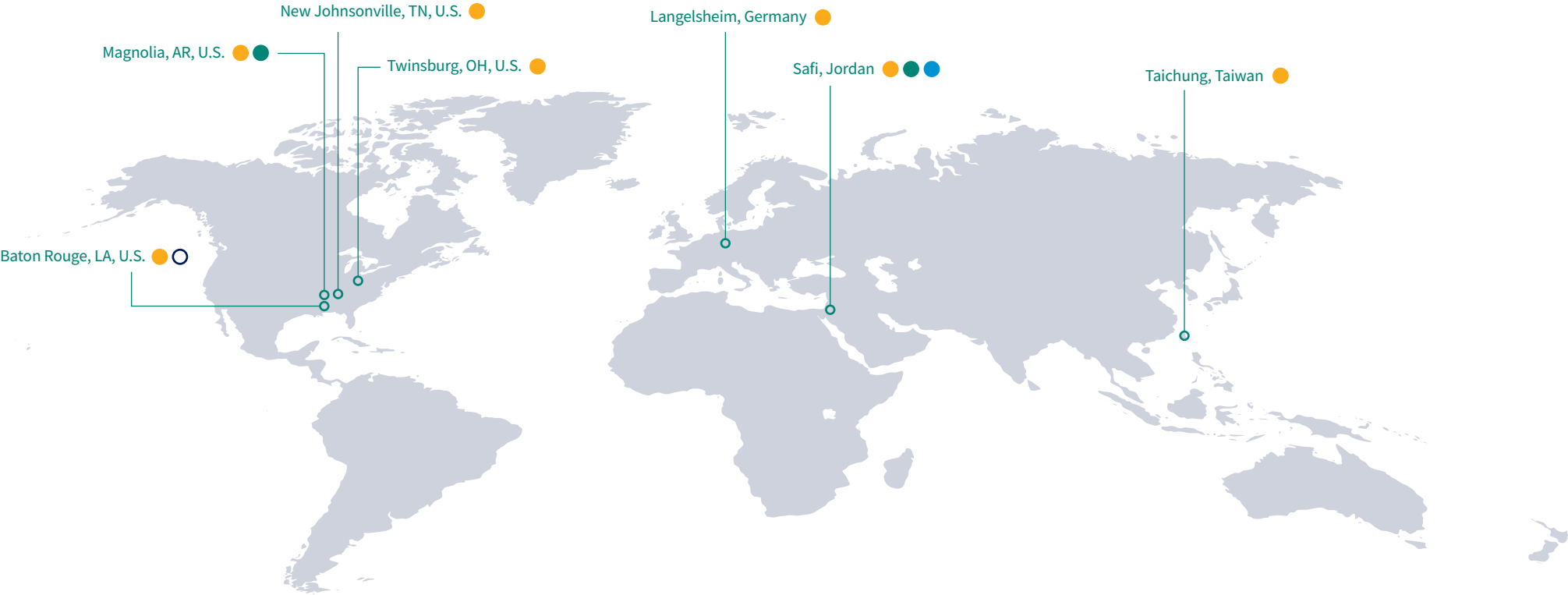
In 2022, we introduced two new products to the market, SAYTEX ALERO® and MercLok™. ALERO® is a next-generation polymeric or large-molecule fire safety solution that is more stable than previous-generation molecules, enabling a higher level of fire safety and environmental performance. In addition, ALERO provides enhanced stability leading to excellent recyclability of flame-retardant plastics.

MercLok™ is designed for the rapid stabilization of mercury found in a range of soils and industrial wastes. Mercury, a naturally occurring element, has been designated by the World Health Organization (WHO) to be one of the top ten chemicals of health concern, as even small amounts of exposure can lead to serious health issues. With high efficacy and low loading requirements, MercLok™ offers a compelling and innovative solution for industry by stopping mercury’s ability to spread by more than 99% and remediating the soil contamination.

MercLok™ stabilizes mercury contamination, preventing it from circulating in the environment and food chain.

Specialties Global Snapshot

WE ARE WHERE OUR CUSTOMERS NEED US MOST



SPECIALTIES FINANCIALS¹

\$1.8B

Net Sales

\$527M

Adjusted EBITDA

30%

Adjusted EBITDA Margin

- Production
- Resources
- R&D
- Joint Venture

1. Figures for the 12 months ended December 31, 2022.

Ketjen Corporation

KETJEN CORPORATION IS A WHOLLY OWNED SUBSIDIARY OF ALBEMARLE. KETJEN SERVES GLOBAL REFINING AND CHEMICAL MARKETS AS A PROVIDER OF ADVANCED CATALYSTS SOLUTIONS ENABLING THE LEADING PRODUCERS IN THE PETROCHEMICAL, REFINING AND SPECIALTY CHEMICALS INDUSTRIES TO CREATE ENERGY SOLUTIONS MORE EFFICIENTLY.

Ketjen globally supplies flexible, performance-based catalysts, technologies and related services through three product divisions: clean fuels technologies (CFT) – primarily composed of hydroprocessing catalysts (HPC); fluidized catalytic cracking (FCC) catalysts and additives; and performance catalyst solutions (PCS), primarily organometallics and curatives. Ketjen’s HPC products enable clean fuels by removing sulfur, nitrogen and other impurities from the feedstock. Customized FCC catalysts systems enable high-yield cracking of refinery petroleum streams into higher-value products, such as transportation fuels and petrochemical feedstocks like propylene. Ketjen’s HPC and FCC catalysts allow refineries to run their units at lower temperatures, thereby saving costs and reducing greenhouse gas (GHG) emissions. Ketjen’s custom solutions enable the energy sector to power progress in modern ways of living with people and planet in mind.

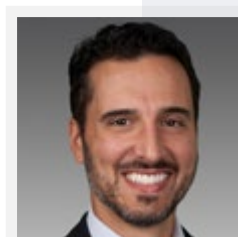
Ketjen has two platforms focused on accelerating renewables: hydrotreated vegetable oil (HVO) and pyrolysis oils.

- HVO continues to see regulatory support and is expanding beyond early adopters to other potential refining customers. Ketjen works with several key partners in the renewable fuels space.
- Pyrolysis oils are derived from thermally decomposed waste plastics. Demand is driven by large producers of consumer goods and the growing demand for recycled content.



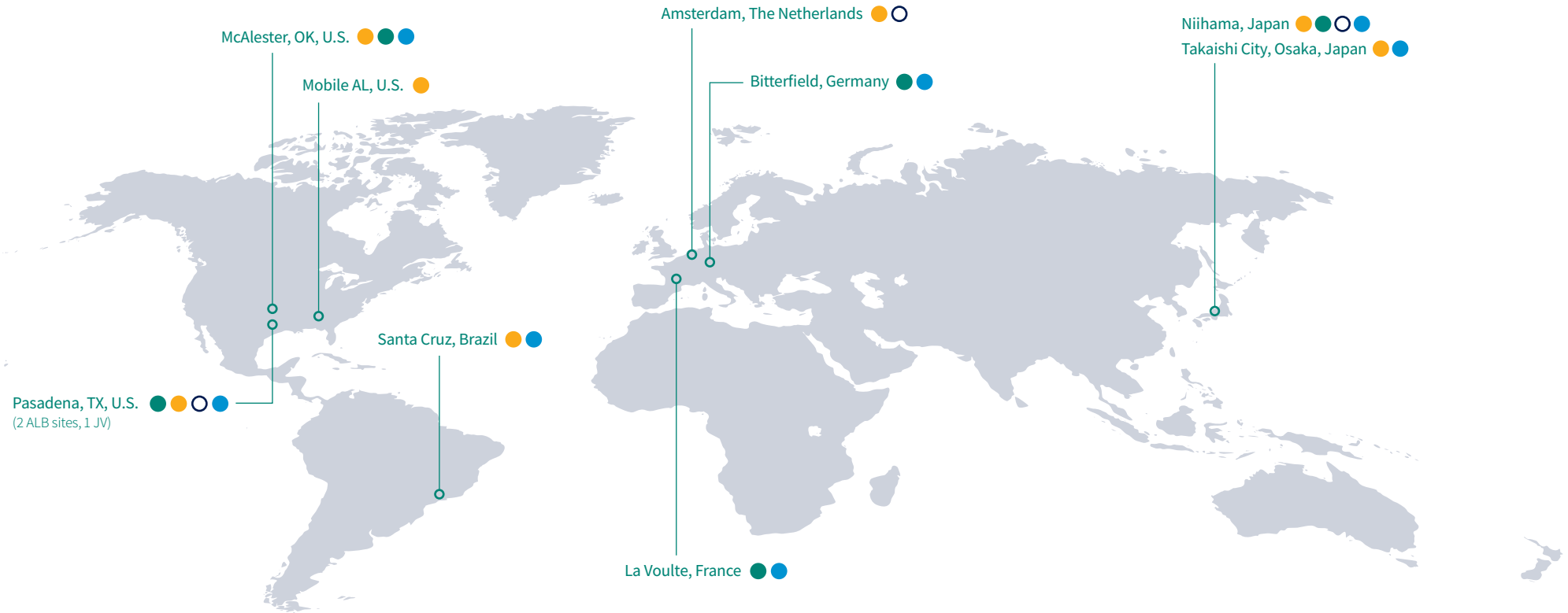
Ketjen’s advanced catalysts are the industry’s gold standard. We create value-added and performance-based solutions that enable a safer and more sustainable future.”

Raphael Crawford
President, Ketjen



Ketjen Global Snapshot

WE ARE WHERE OUR CUSTOMERS NEED US MOST



KETJEN FINANCIALS¹

\$900M

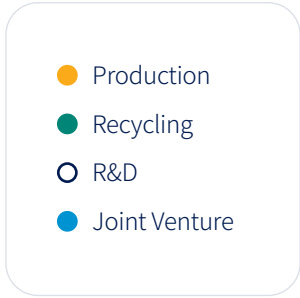
Net Sales

\$29M

Adjusted EBITDA

3%

Adjusted EBITDA Margin



1. Figures for the 12 months ended December 31, 2022.

Corporate Governance



Corporate Governance

OUR CORPORATE GOVERNANCE FRAMEWORK AND PRACTICES ARE DESIGNED TO HELP ENSURE THAT WE MANAGE OUR BUSINESS RESPONSIBLY AND THAT WE ENGAGE WITH AND ON BEHALF OF OUR STAKEHOLDERS WITH FAIRNESS, TRANSPARENCY AND ACCOUNTABILITY. CORPORATE GOVERNANCE CREATES THE STRUCTURE FOR ALBEMARLE TO PURSUE AND DISCLOSE OUR ENDEAVORS AND ACTIVITIES WITH INTEGRITY AND HONESTY.

Our Board of Directors (Board) exercises overall governance of our sustainability program and its alignment to the Albemarle Way of Excellence. Committees of the Board take the lead in discrete areas of oversight within their areas of responsibility, with the Health, Safety & Environment (HS&E) Committee monitoring progress on sustainability initiatives on a quarterly basis. Each of the committees regularly reports to the Board on sustainability matters.

BOARD OVERSIGHT ALIGNS WITH FRAMEWORK

		COMMITTEES		
		Health, Safety & Environment	Audit & Finance	Executive Compensation
Natural Resource Management	Energy & Greenhouse Gases	⊙		
	Water	⊙		
	Resource Stewardship	⊙		
	Waste	⊙		
People, Workplace & Community	Safety	⊙		
	Diversity, Equity & Inclusion			⊙
	Investment in Talent			⊙
	Community & Stakeholder Engagement	⊙		
Sustainable Shareholder Value	Value Chain Excellence	⊙		
	Product & Process Innovation	⊙		
	Business & Financial Resilience		⊙	
	Business Ethics & Regulatory Compliance		⊙	

For more information on corporate governance, please see our [2023 proxy statement](#).

Leadership and Board (As of May 2023)



Kent Masters
Chairman of the Board
CEO, Albemarle



James J. O'Brien
Lead Independent Director
Former Chairman & CEO, Ashland



Laurie Brlas
Former EVP & CFO,
Newmont Mining



Ralf H. Cramer
Former President and
CEO, Continental China



Glenda J. Minor
Former SVP & CFO,
Evraz North America



Diarmuid B. O'Connell
Former VP, Corp & Business
Development, Tesla Motors



Dean L. Seavers
Former President,
National Grid U.S.



Gerald A. Steiner
Former EVP, Sustainability
& Corporate Affairs,
Monsanto



Holly A. Van Deursen
Former Group
Vice President,
Petrochemicals, BP

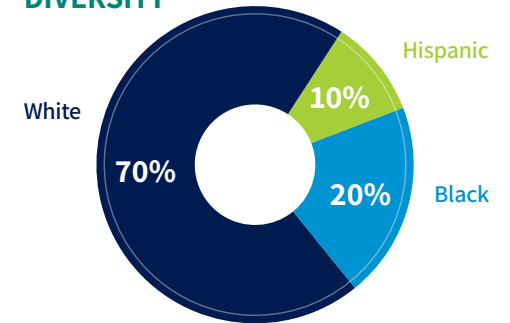


Alejandro D. Wolff
Former U.S.
Ambassador to Chile

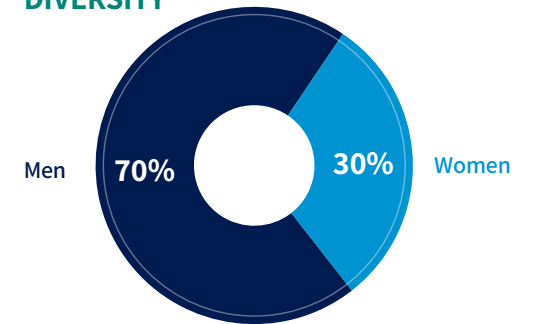


- Audit & Finance Committee
- Executive Compensation Committee
- Nominating & Governance Committee
- Capital Investment Committee
- 🌿 Health, Safety & Environment Committee
- C Committee Chairperson

RACIAL DIVERSITY¹



GENDER DIVERSITY¹



AVERAGE TENURE:

5+ Years

1. Statistics are based on Board self-identified characteristics. Albemarle has not independently verified the information.

Awards and Recognition



CEO Water Mandate Signatory

First year scored Climate (B) and Water (C)



THE PRODUCT SAFETY AWARD

Recognizes ACC member and Responsible Care Partner companies that have excelled at driving improvement in chemical product safety.

MercLok™ P-640: a game-changing remediation technology that captures mercury and helps prevent it from spreading throughout the food chain.

THE INITIATIVE OF THE YEAR AWARD (MEDIUM SIZE COMPANIES)

Recognizes ACC member and Responsible Care Partner companies that have developed exceptional programs to advance process safety and environmental performance.

Process Safety Maturity Assessment: a grading system used to gauge progress in each site's process safety journey.

SEVEN 2023 FACILITY SAFETY AWARDS

Bayport, Texas; Pasadena, Texas; Kings Mountain, North Carolina; New Johnsonville, Tennessee; Magnolia, Arkansas; Baton Rouge, Louisiana; and Silver Peak, Nevada.

THE WASTE MINIMIZATION, REUSE, AND RECYCLING AWARD

Provides ACC member and Responsible Care Partner companies an opportunity to share their achievements in the areas of waste minimization, reuse and recycling.

Kings Mountain, North Carolina; New Johnsonville, Tennessee; and Magnolia, Arkansas.



Sustainability at Albemarle

Message from the Sustainability Steering Committee

THE ALBEMARLE SUSTAINABILITY STEERING COMMITTEE (SSC) IS PLEASED TO PRESENT THE 2022 SUSTAINABILITY REPORT.

Albemarle’s SSC leverages the expertise and insight of a broad, diverse group of experienced professionals across Albemarle to set and drive achievement of our global corporate sustainability strategy. The SSC strives to create value and recognition by embedding sustainability throughout our business. It promotes sustainability performance with internal and external stakeholders and helps position Albemarle as a sustainability leader in our industry and beyond.

Below are our previously stated sustainability goals and actions that took place in 2022 to progress toward the goals. As discussed earlier in this report, in 2022, we announced the realignment of our core businesses into Energy Storage and Specialties. We also announced a separation of our Catalysts business into a wholly owned subsidiary, Ketjen. As a result of the shift in business structure, we are restating our GHG emissions targets as described below.

PREVIOUS GOAL	STATUS	2022 ACTIONS
Reduce scope 1 + 2 carbon-intensity of our Catalysts and Bromine businesses by a combined 35% by 2030	On track on absolute basis; behind on intensity basis	<ul style="list-style-type: none"> Signed contracts for renewable energy supply and certificates in North America, Chile and China, with supply beginning in 2023 Reduced electricity use as a result of new wells in Magnolia and energy reduction projects in Amsterdam Project AI (energy efficiency analytics) underway at Amsterdam and Magnolia sites
Grow our Lithium business in a scope 1 + 2 carbon-intensity neutral manner through 2030, in line with science-based targets	On track	<ul style="list-style-type: none"> Began transition to e-mobility at La Negra plant Started operation of photovoltaic plant at the Baquedano Logistics Center (SALMAG), which delivers clean energy to all site facilities Signed contracts for renewable energy supply and certificates with supply beginning in 2023 Project AI (energy efficiency analytics) underway at La Negra site
Reduce the intensity of freshwater usage by 25% by 2030 in Chile and Jordan	On track	<ul style="list-style-type: none"> Joined the UN Global Compact CEO Water Mandate Progressed NEBO project in Jordan Thermal evaporator brought online at La Negra Signed agreement to supply desalinated water starting in 2027
Increase global gender diversity by 1% per year, focusing on our manufacturing workforce	Ahead on global gender; on track for women in manufacturing	<ul style="list-style-type: none"> Hired a dedicated diversity recruiter
Increase U.S. racial diversity by 1% per year in senior-level management roles	Ahead	<ul style="list-style-type: none"> Partnered with organizations including Women in Manufacturing, International Women in Mining, HBCU Connect, Society of Asian Scientists & Engineers and Hiring Our Heroes

In last year's report, we introduced our initial scope 3 greenhouse gas assessment. This year, we are introducing a new scope 3, category 1 target to engage with suppliers to collect 75% (by 2023) and 90% (by 2024) of our raw material carbon footprint. This initial scope 3 goal will help set the foundation for a future scope 3 reduction target.

To highlight the importance of air quality, we are introducing a new goal to reduce 90% of our sulfur oxide (SO_x) emissions by 2027, with a 2022 baseline. We are investing more than \$30 million in a SO_x emissions reduction project that is scheduled to be completed in 2026.



CURRENT GOAL	CHANGE	STATUS	2023 OBJECTIVES
Grow our Energy Storage business in a scope 1 + 2 carbon-intensity neutral manner through 2030	Reflects resegmentation	On track	<ul style="list-style-type: none"> • Sign renewable energy contracts • Efficiency improvements
Reduce scope 1 + 2 carbon-intensity of Specialties by 35% by 2030 in alignment with science-based targets	Separated from Ketjen, reflects resegmentation	On track	<ul style="list-style-type: none"> • Sign renewable energy contracts • Efficiency improvements
Reduce scope 1 + 2 carbon-intensity of Ketjen by 35% by 2030 in alignment with science-based targets	Separated from Specialties	Behind on an intensity basis; in line on an absolute basis	<ul style="list-style-type: none"> • Sign renewable energy contracts • Efficiency improvements
Engage with suppliers to collect primary data for 75% (by 2023) and 90% (by 2024) of our raw material carbon footprint	New	New	<ul style="list-style-type: none"> • Implement processes and tools to collect data from suppliers on their environmental footprint • Incorporate life cycle assessments (LCA) requests into procurement processes
Reduce the intensity of freshwater usage by 25% by 2030 in Chile and Jordan	Unchanged	On track	<ul style="list-style-type: none"> • Ramp-up and optimization of the thermal evaporator in La Negra • NEBO project in Jordan Bromine Company (JBC) • Advance project to receive desalinated seawater for the Salar
Reduce the SO _x emissions by 90% by 2027 (baseline 2022)	New	New	<ul style="list-style-type: none"> • Advance SO_x emissions removal project

ANNUAL GOAL	STATUS	2023 OBJECTIVES
Increase global gender diversity from 24% to 26.5% with an emphasis on manufacturing, engineering and mining roles	New	Talent Attraction: <ul style="list-style-type: none"> Expand external partnerships Present diverse candidate slates and interview panels
Increase global gender diversity in director level and above positions from 21% to 22.5%	New	Talent Development: <ul style="list-style-type: none"> Grow CONNECT Group (ERG) engagement Build targeted talent development programs
Increase U.S. racial diversity at director level and above from 21% to 22.5%	New	Talent Retention: <ul style="list-style-type: none"> Annual employee empowerment survey Hybrid work environment

We are introducing more ambitious DE&I targets after successfully achieving our goal of increasing global gender diversity by 1% each year (with an initial focus on our manufacturing workforce) and increasing U.S. racial diversity in senior-level management roles by 1% each year (based on a 2021 baseline).

Our revised targets continue to focus on increasing gender and racial diversity with additional emphasis placed on roles in manufacturing, engineering and mining.

To set our diversity goals, we look at manufacturing industry benchmarks both globally and in the primary countries where we operate. Our ambition is to establish industry-leading representation and build a culture of engagement and inclusiveness.

We are proud of the work accomplished to date to achieve our sustainability targets, but we recognize that there is more to be done. As we build the infrastructure to assess, measure and track progress toward these targets, we continue to evolve our thinking and goal setting over time.

- Meredith Bandy – Vice President, Investor Relations & Sustainability (Chair)
- Edwin Berends – Vice President, Project Engineering
- Maria Brennan – Chief Supply Chain Officer
- Kristin Coleman – Executive Vice President, General Counsel, and Corporate Secretary
- Mark de Boer – Vice President, Sustainability
- Wesley Hamilton – Chief Technology Officer, Specialties
- Timitra Hildebrand-Jones – Vice President, Culture
- Bob Leliveld – Chief Technology Officer and Managing Director, Ketjen Corporation
- Andrew McBride – Chief Risk Officer
- Mark Mummert – Chief Operating Officer, Energy Storage
- Sean O’Hollaren – Chief External Affairs Officer
- Scott Tozier – Executive Vice President and Chief Financial Officer

Materiality

WE STAY INFORMED OF MATERIAL AND EMERGING ISSUES THROUGH CLOSE RELATIONSHIPS WITH OUR KEY STAKEHOLDERS. WE WANT TO KNOW WHAT'S MOST IMPORTANT TO THEM AND REMAIN RESPONSIVE TO THEIR QUESTIONS AND CONCERNS.

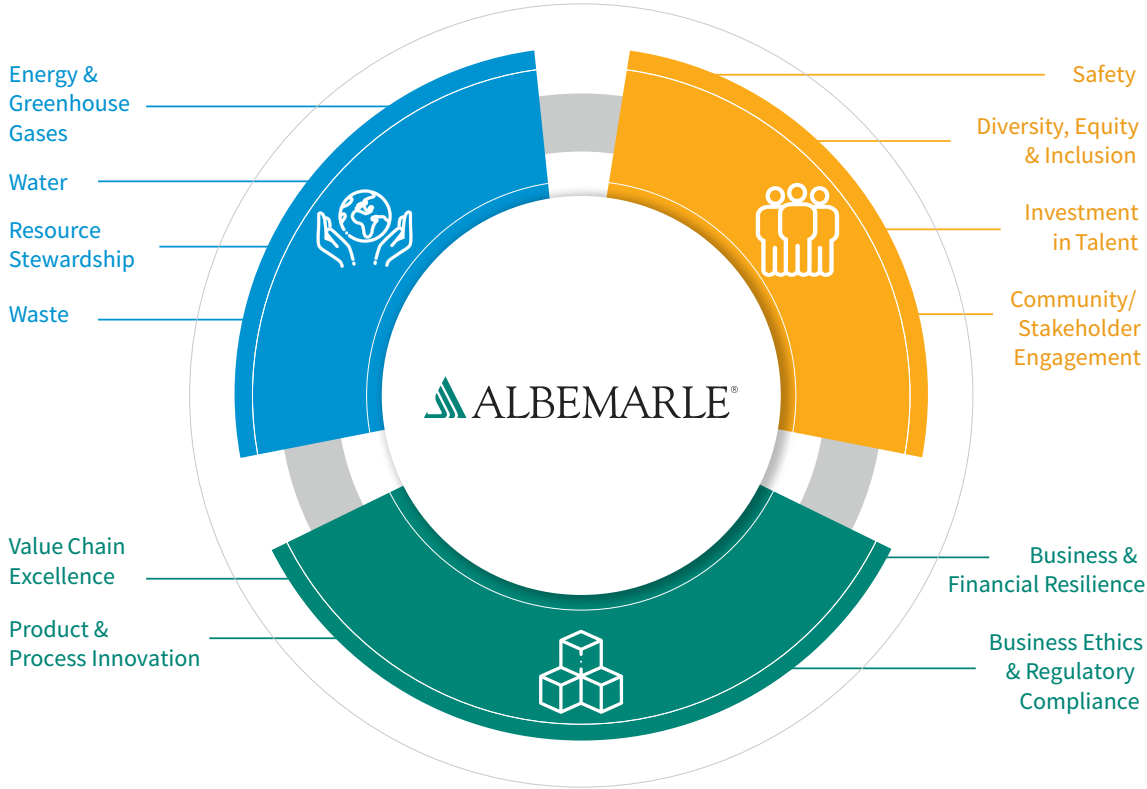
In 2019, we conducted a third-party materiality assessment to help us determine Albemarle's most material topics. We engaged internal and external stakeholders and leveraged the guidance of the GRI and SASB industry-specific standards as part of our assessment. We subsequently aligned our corporate strategy, sustainability management and reporting practices and incorporated Advancing Sustainability as one of our four strategic objectives. In 2021, we updated our materiality assessment to give greater prominence to business resilience and supply chain dependence, in light of the COVID-19 pandemic. In response to evolving stakeholder expectations and the acceleration of the clean energy transition, we will be undergoing a renewed materiality assessment in 2023.

NATURAL RESOURCE MANAGEMENT

Responsibly manage our use of resources and materials

SUSTAINABLE SHAREHOLDER VALUE

Foster the conditions that create sustainable value for shareholders



PEOPLE, WORKPLACE & COMMUNITY

Build an inclusive and diverse workplace focused on safety, mutual respect, development and wellbeing

Actively collaborate and engage in the communities in which we work

Our Commitment to Global Sustainability Initiatives

UN SUSTAINABLE DEVELOPMENT GOALS

In 2020, we mapped Albemarle’s corporate and sustainability priorities, core values, material topics and strategic focus areas to the United Nations Sustainable Development Goals (SDGs). The SDGs represent a global blueprint to address environmental and social challenges, including poverty, inequality, climate change and environmental degradation. Our mapping identified nine goals against which we believe our products, services and community engagement work can actively contribute toward the advancement of the SDGs.

UN GLOBAL COMPACT

With over 17,000 participants around the globe, the United Nations Global Compact (UNGC) is the world’s largest corporate sustainability initiative. It represents a call to action for companies to align strategies and operations with 10 universal principles focused on human rights, labor, environment and anti-corruption and to take actions that advance societal goals. Albemarle has been a member of the UNGC since 2021. Our sustainability report demonstrates Albemarle’s commitment to the principles of the UNGC.

UNGC CEO WATER MANDATE

In April 2022, our CEO, Kent Masters signed the UNGC [CEO Water Mandate](#), committing Albemarle to action and continuous improvement across six focus areas in water management and stewardship –direct operations, supply chain and watershed management, collective action, public policy, community engagement and transparency. In partnership with over 200 companies, the United Nations, governments, civil society organizations and other stakeholders, the CEO Water Mandate mobilizes business leaders to deepen their commitment to water stewardship. The Mandate was created out of the acknowledgment that global water challenges create risk for a wide range of industry sectors, the public sector, local communities and ecosystems alike.

THE UNSDGs ARE A BLUEPRINT TO ACHIEVE A BETTER AND MORE SUSTAINABLE FUTURE



Natural Resource Management



We responsibly manage our use of resources and materials.



People, Workplace & Community



We are committed to building an inclusive and diverse workplace. We promote collaboration and engage in the communities where we work and live.



Sustainable Shareholder Value



We foster the conditions that create sustainable, long-term value for our shareholders and stakeholders.



AS RESPONSIBLE STEWARDS OF THE ENVIRONMENT, WE MONITOR AND MANAGE OUR ENVIRONMENTAL AND SOCIAL IMPACTS AROUND ENERGY, GHG EMISSIONS, AIR QUALITY, FRESHWATER, WASTE, MINERALS AND BIODIVERSITY. OUR CEO AND GBU PRESIDENTS ARE ACCOUNTABLE FOR ALBEMARLE'S ENVIRONMENTAL PERFORMANCE, AND THE HS&E COMMITTEE OF THE BOARD PROVIDES OVERSIGHT OF ALBEMARLE'S NATURAL RESOURCE MANAGEMENT PROGRAMS. THE COMMITTEE MEETS QUARTERLY WITH OUR VICE PRESIDENT, INVESTOR RELATIONS (IR) AND SUSTAINABILITY, TO REVIEW OUR NATURAL RESOURCE MANAGEMENT PERFORMANCE AND RESULTS, AND THE HS&E COMMITTEE REPORTS TO THE BOARD ON A QUARTERLY BASIS. OUR [HEALTH, SAFETY, SECURITY AND ENVIRONMENTAL POLICY STATEMENT](#) OUTLINES OUR COMMITMENT TO OUR ENVIRONMENTAL STEWARDSHIP.

Natural Resource Management

Energy and Emissions

OUR APPROACH

AS A WORLD LEADER IN THE TRANSFORMATION OF ESSENTIAL RESOURCES INTO CRITICAL INGREDIENTS FOR MOBILITY, ENERGY, CONNECTIVITY AND HEALTH, WE KNOW THAT WE MUST DO OUR PART TO REDUCE ENERGY USE AND EMISSIONS OF OUR ENERGY-INTENSIVE OPERATIONS. COMPLIANCE WITH AIR EMISSIONS REGULATIONS IN THE JURISDICTIONS IN WHICH WE OPERATE IS IMPORTANT TO ALBEMARLE, AND WE HAVE SET TARGETS FOR OURSELVES THAT GO ABOVE AND BEYOND MANDATED THRESHOLDS FOR NO_x AND SO_x EMISSIONS. IN 2021, WE DEVELOPED ALBEMARLE'S [CLIMATE STRATEGY](#) WHICH OUTLINES OUR COMMITMENT TO REDUCING GHG EMISSIONS AND ACHIEVING OUR AMBITION TO BE NET-ZERO IN OUR OPERATIONS BY 2050. WE CAN ACHIEVE REDUCTIONS IN OUR GHG EMISSIONS BY STRIVING FOR OPTIMAL ENERGY EFFICIENCY IN OUR OPERATIONS AND INCREASING RENEWABLE ENERGY USE.

We collect environmental data for all Albemarle sites within our boundary and joint ventures on an annual or more frequent basis. This data collection comprises energy from renewable and non-renewable sources, related scope 1 and scope 2 GHG emissions and other emissions, such as NO_x and SO_x.

Our climate strategy progress is reviewed by senior executive leadership and the Board on an ongoing basis. The HS&E Committee reviews progress on targets at least quarterly.



ACTIVITIES AND HIGHLIGHTS

PRICEWATERHOUSECOOPERS LLP (PwC) PERFORMED A LIMITED ASSURANCE ENGAGEMENT OVER OUR ENERGY CONSUMED, SCOPE 1 AND SCOPE 2 GHG EMISSIONS, AS WELL AS WATER WITHDRAWAL, WATER CONSUMED, AND PERCENTAGE OF FRESHWATER CONSUMED IN REGIONS WITH HIGH AND EXTREMELY HIGH OVERALL WATER RISK AREAS. SEE PwC'S REPORT OF INDEPENDENT ACCOUNTANTS ON [PAGE 140](#). THE ORGANIZATIONAL BOUNDARIES, EMISSION FACTORS AND ADDITIONAL INFORMATION ON OUR METHODOLOGY ARE DETAILED IN THE MANAGEMENT ASSERTION LETTER.

In 2022, we completed the full CDP Climate Change questionnaire for the first time and received a B. Our score of a B corresponds to management-level engagement, meaning we are addressing the environmental impacts of our business on climate change and providing for good environmental management. In line with our core value of accountability, we disclose our score, as well as make our complete response publicly available. Sharing this information reflects our commitment to be transparent about our operations and holds us accountable to our external stakeholders. We are using the feedback we received with our score to highlight where we need to do better and to work toward improving our climate change management.

At Albemarle, we strive for continuous improvement in our energy consumption and aim to reduce our energy use both in intensity and absolute terms.

Our products directly contribute to emissions reductions. For example, one kilogram of carbon dioxide equivalent (CO₂e) emitted in our lithium production delivers more than 50 kilograms of CO₂e avoidance per year in the use phase¹. Bromine is added to Bromobutyl rubber to extend tire life, reduce fuel consumption and minimize CO₂e emissions. Ketjen catalysts contribute to cleaner, more efficient transportation fuels, which reduces GHG emissions by refiners.

We implement processes and practices that achieve sector-leading environmental performance. For example, at our Kings Mountain facility, we have installed thermal oxidizers to prevent volatile organic compounds (VOCs) and emissions, such as SO_x from being emitted into the atmosphere. We are currently looking at electrifying our vehicle fleets at our global operations as a further way to reduce our emissions footprint.

1. Executive summary - [The Role of Critical Minerals in Clean Energy Transitions - Analysis - IEA](#)



Highlight Story

OUR SO_x REDUCTION COMMITMENT

In 2022, our sulfur oxide (SO_x) emissions were 1,360 metric tons, down 6% year-on-year. In 2023 we are introducing a new goal to reduce Albemarle's overall SO_x emissions by 90% by 2027. We are committed to this goal of voluntary reductions by investing in technology and reuse of the pollutant. At our Magnolia facility, we will be investing \$35 million to enable the conversion and potential reuse of sulfur compounds for the production of a flame retardant and the sale of the remaining material for reuse in other industries.

We are introducing a new goal to reduce Albemarle's overall SO_x emissions by 90% by 2027.

ENERGY EFFICIENCY

INVESTMENT IN TECHNOLOGICAL INNOVATIONS SUCH AS ENERGY-EFFICIENT EQUIPMENT AND THE DESIGN OF OUR FACILITIES IS KEY TO THE EXECUTION OF OUR ENERGY REDUCTION STRATEGY.

Closed-loop heat integration processes, such as those in place at our Amsterdam facility, are designed to capture and reuse heat that would otherwise be released during our slurry-drying process, thereby reducing the amount of natural gas necessary for production. Introducing innovative process technology also helps us mitigate against the financial impacts of the rising energy costs and better positions Albemarle for future regulatory changes. We work with Schneider Electric, a global specialist in energy management, to help us manage our global energy procurement and negotiate PPAs (power purchase agreements) to more efficiently manage our energy supply.



We actively seek ways to improve efficiency to provide more sustainable products for our customers. This year's improvement in bromine production energy efficiency at the Magnolia site was an example of this mindset."

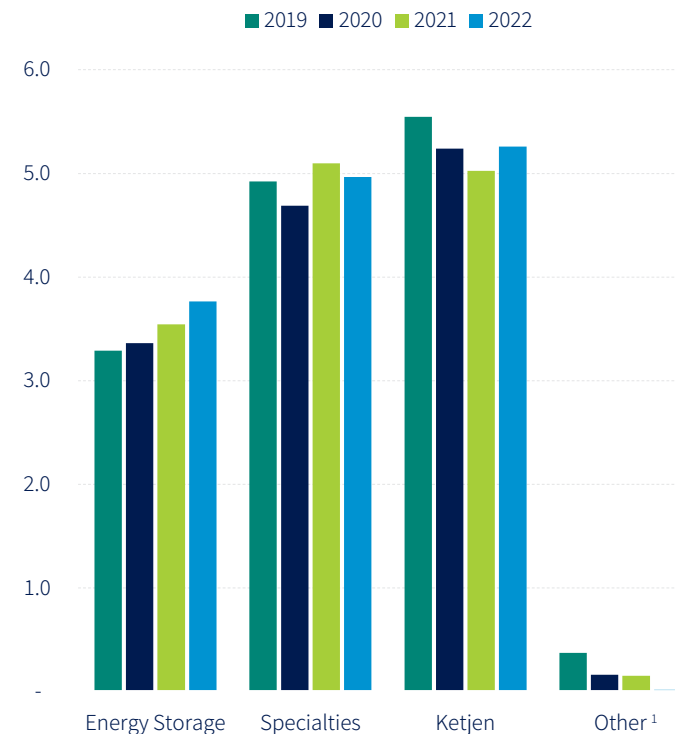
Joe O'Day

Specialties GBU Asset Strategy and Sustainability Director



Energy Use

(million GJ)



1. "Other" includes the Fine Chemistry Services (FCS) business, which was divested in 2021.

RENEWABLE ENERGY

RENEWABLE ENERGY IS FUNDAMENTAL TO ACHIEVING OUR 2030 GOALS AND ONE OF OUR MOST POWERFUL NEAR-TERM OPTIONS TO REDUCE OUR FOOTPRINT.

Examples of 2022 initiatives include:

- Started operation of the photovoltaic facility at the Baquedano Logistics Center (SALMAG), which delivers clean energy to site facilities.
- Signed renewable energy contracts for 140,000 MWh (0.5 million GJ) in the U.S., Chile and China to come online in 2023.
- Initiated transition to e-mobility at our La Negra facility in Chile with the introduction of four electric buses for administrative personnel and the installation of an electric charging station.

In 2023, we will continue to review our renewable energy strategy with a view to expanding the use of renewable energy at additional Albemarle production sites globally.



At Albemarle, we're incorporating additional renewable energy into all aspects of our operations. From developing solar power for Kemerton, to exploring Renewable Natural Gas alternatives in the United States, green energy is a global pursuit within our model of Sustainable Procurement and complements the role Albemarle already plays in the world's clean energy transition."

Jesse Counihan
Regional Procurement Manager, NA and EMEA

GOAL	STATUS	2022 ACTIONS
Grow our Lithium business in scope 1 and 2 carbon-intensity neutral manner through 2030	On track	<ul style="list-style-type: none"> • La Negra facility began transition to e-mobility • Started operation of photovoltaic facility at the Baquedano Logistics Center (SALMAG), which delivers clean energy to site facilities • Signed contracts for renewable energy supply and certificates with supply beginning in 2023 • Project AI (energy efficiency analytics) underway at La Negra site
Reduce scope 1 and 2 carbon-intensity of our Catalysts and Bromine businesses by a combined 35% by 2030, in alignment with science-based targets	On track on absolute basis; behind on intensity basis	<ul style="list-style-type: none"> • Signed contracts for renewable energy supply and certificates in the U.S., Chile and China, with supply beginning in 2023 • Installed new, more energy efficient wells in Magnolia and energy reduction projects in Magnolia, JBC and Amsterdam • Project AI (energy efficiency analytics) underway at Amsterdam and Magnolia sites



Project Albemarle Intelligence

BAYPORT FACILITY

Using AI, we perform a detailed model analysis of how our Bayport, Texas, facility can run in the most efficient way so that we can improve quality, yield, productivity and raw material consumption. Advanced analytics are an important tool for managing GHG emissions at our facilities. Project AI is now underway at our Amsterdam, La Negra and Magnolia sites, with an anticipated rollout at our Xinyu location in 2023.

We are on track to meet our target to grow our Lithium business in a carbon-intensity neutral manner through 2030, based on scope 1 and 2 Lithium GHG emissions. In 2022, Albemarle's Lithium GHG-intensity was 2.7 mt CO₂e/mt product, down year-on-year primarily due to additional lower carbon-intensity brine-based production in Chile, as well as increased use of renewable energy globally. In the future, Lithium carbon-intensity is expected to remain below our 3.0 mt CO₂e/mt product intensity target as we anticipate reduction measures to offset higher rock-based production volumes.

Lithium Progress Toward Target - Intensity

(mt CO₂e/mt product)



Based on our product life cycle assessments, we estimate that our brine-based carbonate has a significantly lower footprint (1.0 – 1.5 kg CO₂e/kg for scope 1 and 2) than our rock-based hydroxide (at least 5 kg CO₂e/kg for scope 1 and 2). Our long-range plan includes bringing more rock-based resources online and increasing our share of hydroxide production to

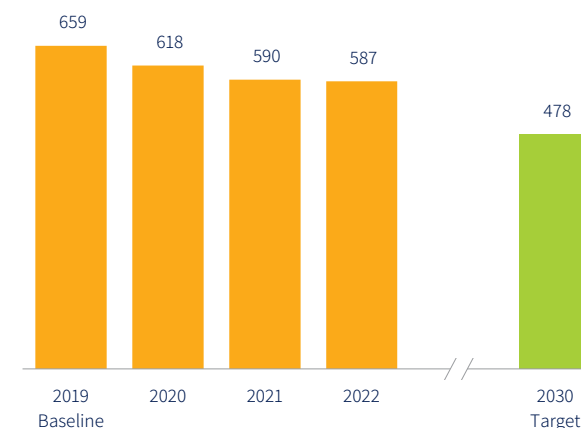
accommodate increasing demand for high-nickel battery chemistries. This product mix shift means that our target to grow our Lithium business in a carbon-intensity neutral manner will require significant reductions in our rock-based hydroxide carbon footprint. We will continue to look at ways to achieve carbon footprint reductions through energy efficiency practices and investments in technology.

On a combined basis, Bromine and Catalysts are tracking in line with our WB2C science-based target (SBT). Bromine's scope 1 and scope 2 GHG emissions were 280 kt CO₂e in 2022, down 8.4% year-on-year due to lower production volumes, energy savings and a higher fraction of renewable energy in the electricity mix. Catalysts' scope 1 and scope 2 GHG emissions were 306 kt CO₂e in 2022, up 8% year-on-year due to higher production volumes and a reduced use of renewable electricity partially offset by energy efficiencies and savings.

In 2022, we announced the resegmentation of our core businesses, Energy Storage and Specialties, with Catalysts being rebranded as Ketjen. With this change, we are restating our emissions reduction targets to reflect this new GBU structure. Our new Energy Storage target is to grow our Energy Storage business in a scope 1 and 2 carbon-intensity neutral manner through 2030. We split our Catalysts and Bromine targets into two individual emissions reduction targets. Our new Specialties target is to reduce the scope 1 and 2 carbon-intensity of Specialties by 35% by 2030 in line with science-based targets. Our new Ketjen target is to reduce the scope 1 and 2 carbon-intensity of Ketjen by 35% by 2030 in line with science-based targets.

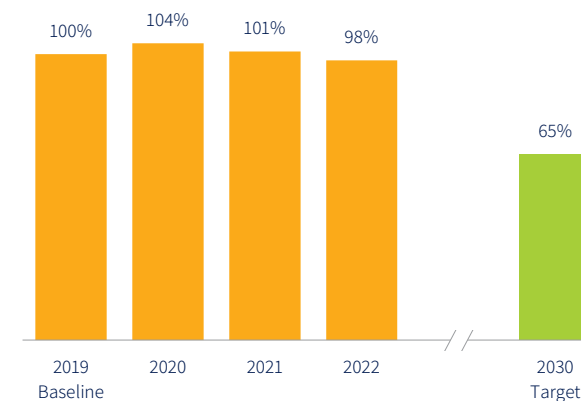
Bromine + Catalysts Progress Toward Target - Absolute

(kt CO₂e)



Bromine + Catalysts Progress Toward Target - Intensity

(relative intensity)





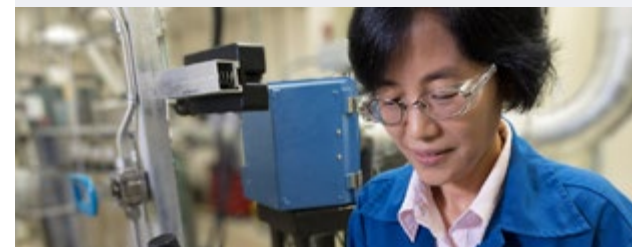
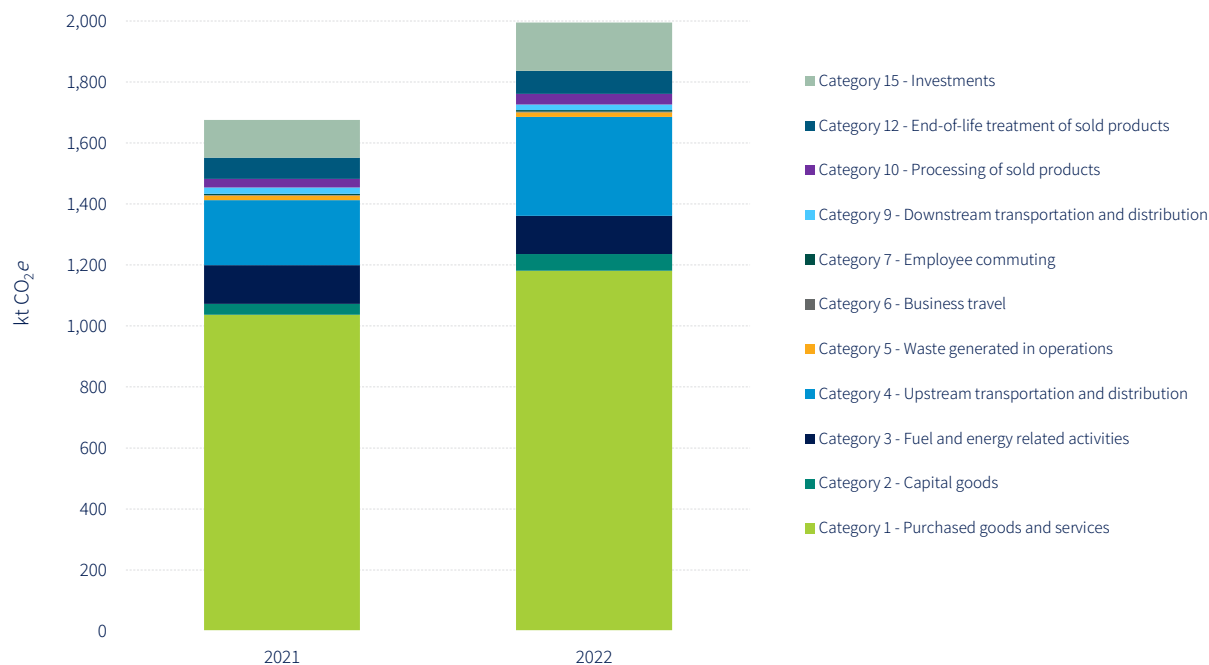
Our total scope 3 emissions increased by 319 kt from 2021 to 2022, which represents a 19% increase. This was driven by higher production, more complete data and some changes in methodology. The top five categories of scope 3 emissions comprised about 95% of Albemarle's scope 3 emissions. Raw materials-related emissions (category 1) increased by 144 kt, a 14% increase, driven by higher production volumes. We also had a more complete data set this year which increased our category 1 emissions. Upstream transportation-related emissions (category 4) increased by 110 kt, a 52% increase, largely driven by higher volumes of raw material and product transportation.

Investments, such as JVs, (category 15) increased by 36 kt, a 30% increase, due to higher production volumes at the Talison (Greenbushes) operations, and upstream fuel and electricity related activities (category 3) decreased by 1 kt, a 1% decrease, mainly due to more efficient electricity transport. Finally, capital goods (category 2) emissions increased by 19 kt, a 54% increase, due to higher Capex related to construction and commissioning of new production facilities.

2022 GHG EMISSIONS

THOUSAND METRIC TON CO ₂ e	ENERGY STORAGE	SPECIALTIES	KETJEN	OTHER	TOTAL
Scope 1 emissions	181	192	244	1	618
Scope 2 emissions (market-based)	139	88	62	2	292
Scope 2 emissions (location-based)	118	148	66	2	334
Scope 1 + 2 emissions	320	280	306	3	909
Scope 3 emissions	725	502	759	8	1,994
Scope 1 + 2 + 3 emissions	1,045	782	1,066	11	2,904

The graph below compares our scope 3 emissions between 2022 to 2021 and highlights the category contributions to our total scope 3 emissions:



In 2023, we are introducing a new scope 3, category 1 target to better understand our raw material carbon footprint. Our procurement team is incorporating the collection of environmental data from suppliers into our procurement process and prioritizing the products we estimate to contribute the most to our scope 3 footprint. We aim to collect data from 75% of our suppliers by 2023 and 90% of our suppliers by 2024. This initial scope 3 goal will help set the foundation for a future scope 3 reduction target. In 2023, we will also be performing a scope 3 data readiness assessment with the intent to obtain limited assurance on our scope 3 emissions data in 2024.

Our Direct and Indirect Emissions

UPSTREAM ACTIVITIES

Scope 3¹



OUR ACTIVITIES

Scope 1



Operations

Total Emissions for Scope 1:
618

Scope 2²

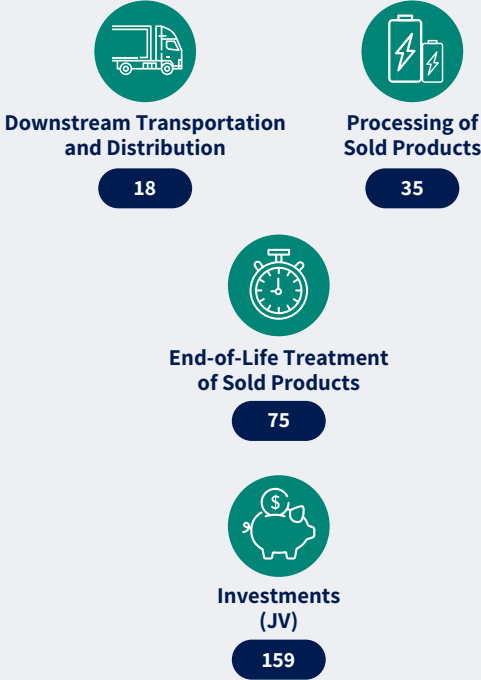


Electricity and Steam

Total Emissions for Scope 2:
292

DOWNSTREAM ACTIVITIES

Scope 3¹



TOTAL GHG EMISSIONS: 2,904 kt CO₂e

SCOPE 3 TOTAL: 1,994 kt CO₂e

1. Scope 3 categories 8, 11, 13, and 14 are deemed zero, in line with the GHG Protocol.
2. Using market-based methodology.

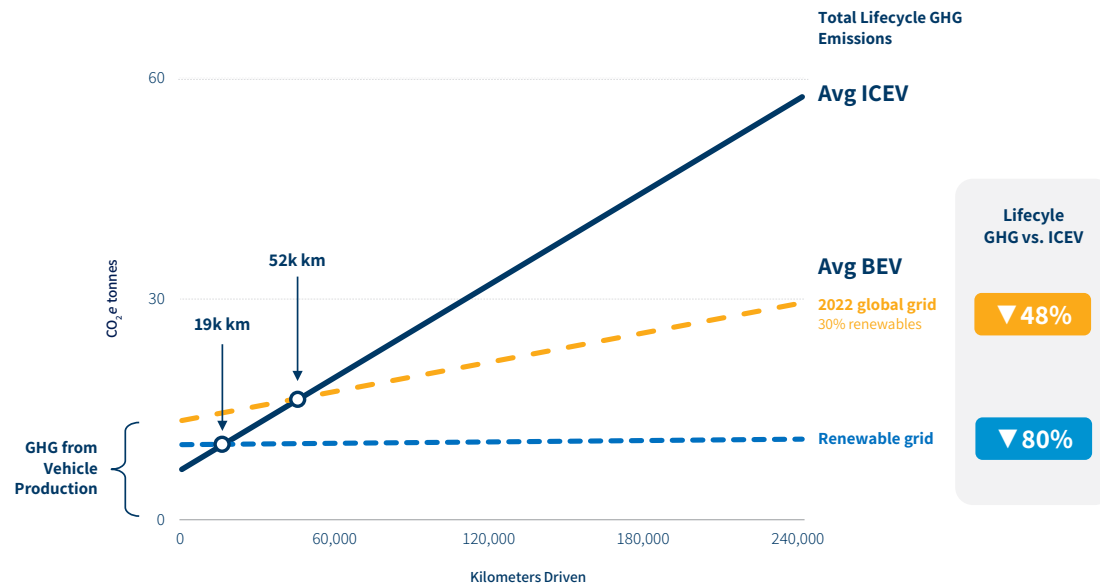
AVOIDED EMISSIONS

OVER THE VEHICLE LIFE CYCLE, EVs HAVE A LOWER CARBON FOOTPRINT THAN INTERNAL COMBUSTION ENGINE VEHICLES (ICEVs).

During the use phase, powering a vehicle with electricity emits less carbon than fueling a vehicle with gasoline, more than offsetting higher production emissions. This means that the emissions Albemarle generates to make lithium salts for battery applications directly contribute to reduced life cycle emissions in the automotive industry.

Assuming the current global electricity grid, the average EV breaks even with ICEVs in terms of emissions after about 51,500 kilometers driven, and EVs have 48% lower life cycle emissions than ICEVs. As the global electricity grid shifts toward more renewable energy, the benefits of an EV are expected to grow. Assuming a 100% renewable grid, EV emissions break even with ICEVs after just 19,000 kilometers driven, and EVs have 80% lower life cycle emissions than ICEVs.

BEV vs. ICEV GHG Emissions by Use Kilometers¹

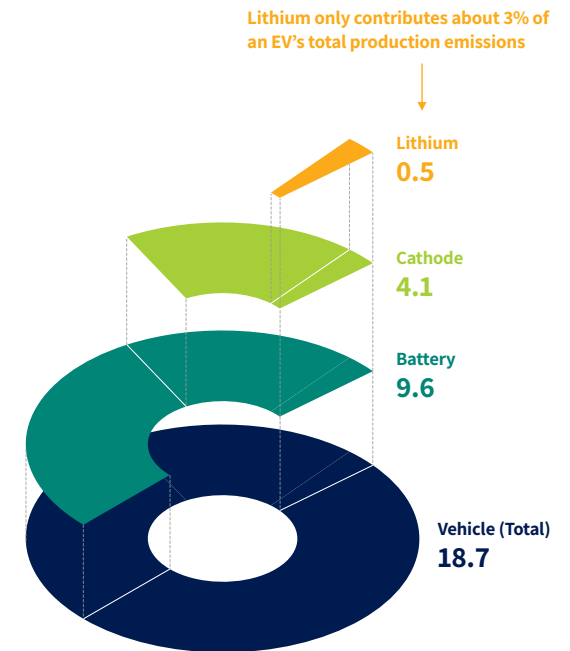


1. Assumes average mid-sized sedan for EV and ICEV. Source: ALB Analysis, [MIT Trancik Lab](#).
 2. Assumes average-size pickup truck with a 98 kWh NMC811 battery.

Moreover, the lithium in an EV battery contributes only a small percentage to production-phase emissions of an EV, typically about 3% of the vehicle's total production emissions.

Lithium's Contribution to GHG Emissions from EV Production²

(CO₂e tonnes)



Albemarle is committed to reducing our carbon footprint across our operations and in our supply chain while meeting the automotive industry's increasing demand for lithium to enable the energy transition.

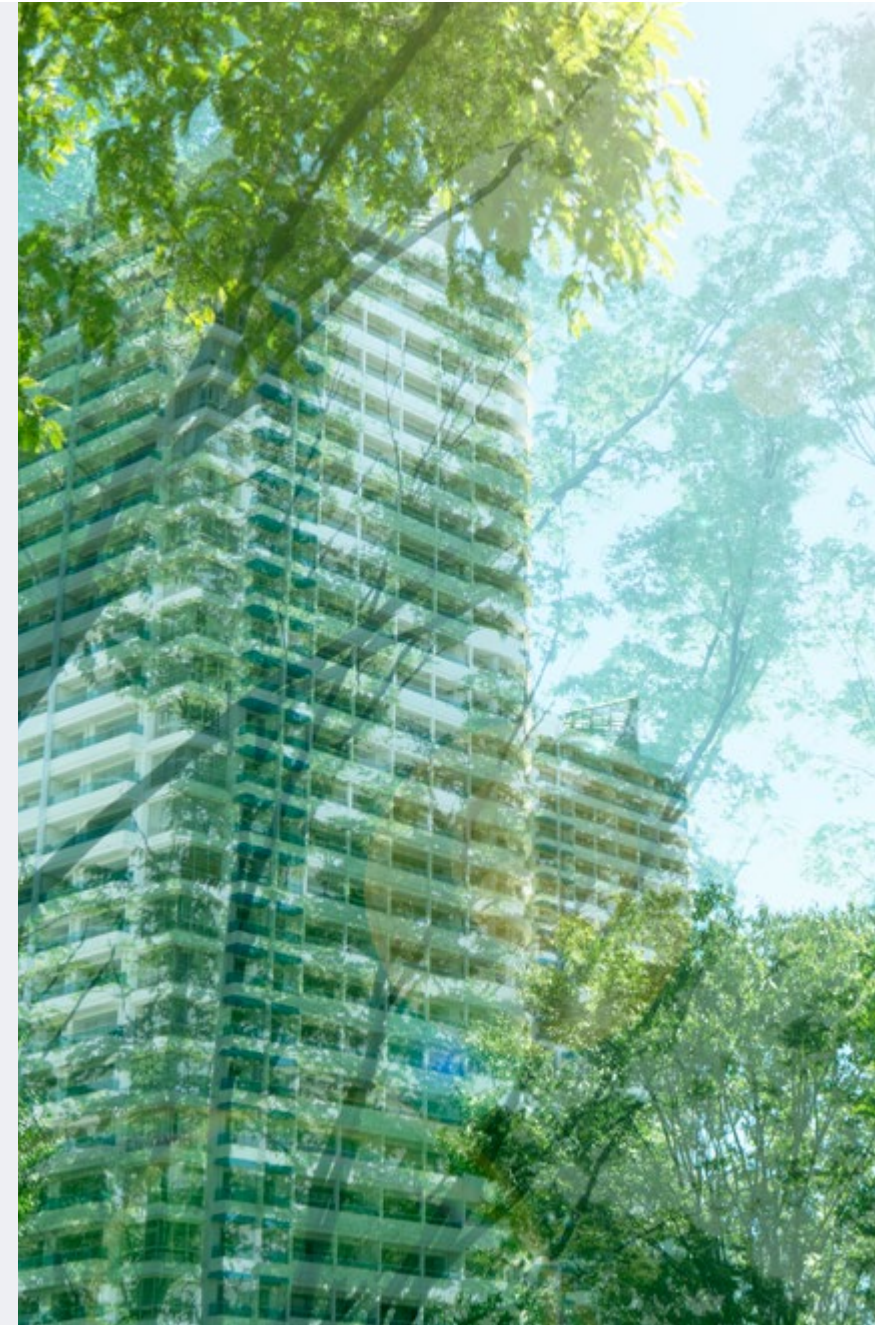
Life Cycle Assessments

JUST AS OUR CUSTOMERS ARE INTERESTED IN THE ENVIRONMENTAL FOOTPRINT OF OUR PRODUCTS, WE ARE EAGER TO UNDERSTAND THE FOOTPRINT OF OUR RAW MATERIALS.

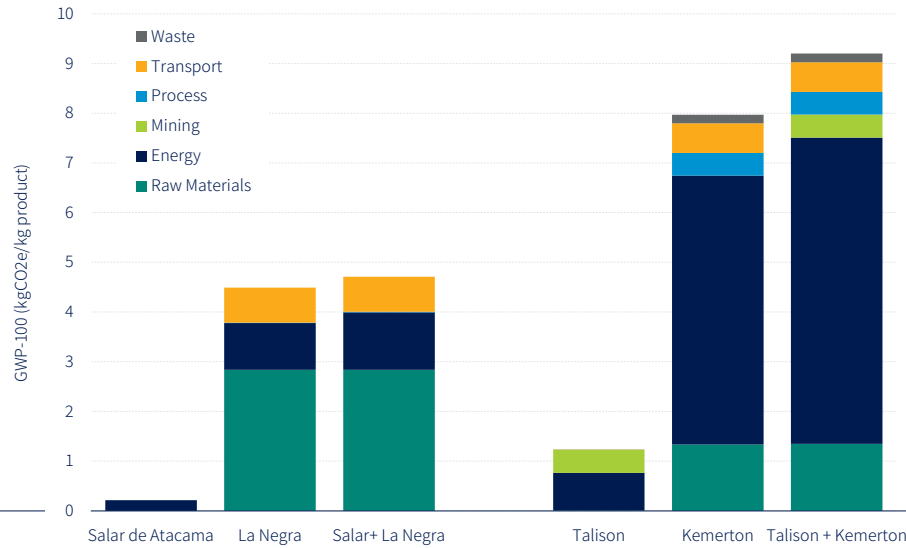
This information helps supply chain partners to account for scope 3 emissions and achieve a reduction in the environmental footprint in the supply chain. It requires the development of Life Cycle Assessment (LCA) expertise within the company with initial focus on the carbon footprint of products. This expertise is also beneficial for product and process innovation.

In 2021, we completed our first LCA related to rock-based lithium hydroxide and brine-based lithium carbonate performed in accordance with ISO 14040/14044 standards using primary data from our Salar de Atacama, La Negra, Greenbushes and Talison operations and design data for the Kemerton production facilities.

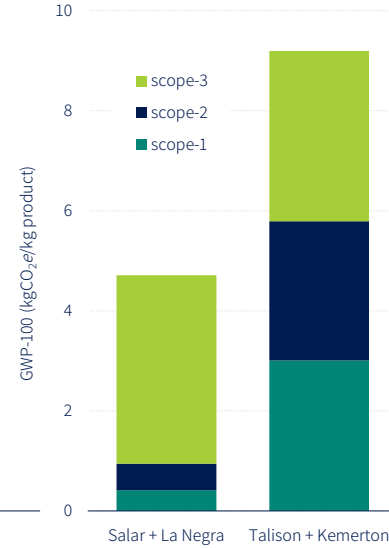
In 2022, we created a full-time position for a Life Cycle Assessment Manager at our Amsterdam operations to continue our work in this area and improve calculation tools. We work collaboratively with external experts and academic institutions, such as the Universidad Católica de Chile and Curtin University in Perth, Australia, to establish externally verified LCAs of both brine-based and rock-based lithium. We anticipate results from these LCAs in 2023.



GWP-100 ("Global Warming Potential") of Battery Grade Lithium from Various Sources¹



Distribution of GWP by Scope¹



We have initiated incorporating LCA requests into our procurement processes to gain insight into the environmental impact of our suppliers. In 2022, we engaged with various suppliers of natural soda ash – a key ingredient in the production of lithium carbonate – to assess the compound’s carbon footprint (GWP-100). In our outreach to our suppliers, we used questionnaires to collect energy-related and other mining-associated GHG emissions, such as ventilated air methane (VAM). The carbon footprint information we obtained was used as part of our vendor selection criteria and applied as a primary data source for the overall scope 3 assessment and LCA of our lithium carbonate products. We aim to collect primary carbon footprint data of our most important raw materials in 2023 and 2024.

1. Source: Albemarle 2021 LCAs



Water

WE UNDERSTAND THAT WATER IS KEY TO A SUSTAINABLE FUTURE AND CRITICAL FOR SOCIO-ECONOMIC DEVELOPMENT, ENERGY AND FOOD PRODUCTION, HEALTHY ECOSYSTEMS AND HUMAN SURVIVAL. RESPONSIBLE MANAGEMENT OF OUR WATER RESOURCES IS A CORE COMPONENT OF ALBEMARLE'S SUSTAINABILITY STRATEGY. OUR AIM IS TO CONSERVE FRESHWATER WHERE POSSIBLE AND TO LOWER OUR WATER FOOTPRINT BY REDUCING OUR FRESHWATER USE INTENSITY IN CHILE AND JORDAN BY 25% BY 2030.

We carefully measure freshwater withdrawals from surface water (from wetlands, rivers and lakes), groundwater, rainwater collected and stored, and water obtained from municipal water supplies or other entities at and around our operating sites through real-time water monitoring systems. Freshwater consumption is reviewed at GBU portfolio meetings on a quarterly basis and Albemarle invests in advanced technology to reduce our freshwater footprint. Our senior executive leadership and Board review progress on our freshwater consumption on an ongoing basis. The HS&E Committee reviews progress on targets at least quarterly.

Our measurement of freshwater use does not include brine, which is a naturally occurring accumulation of saline groundwater that contains enriched sources of dissolved bromine and lithium, among other elements. Brine is several times saltier than the ocean, and this extreme salinity makes brine unusable as a freshwater source for human consumption or agriculture.

We believe that innovation is key to responsible water management, and we are committed to making the necessary capital investments in technologically advanced systems. This includes the thermal evaporator at our La Negra conversion facility, which has helped us reduce our freshwater consumption by 11%.



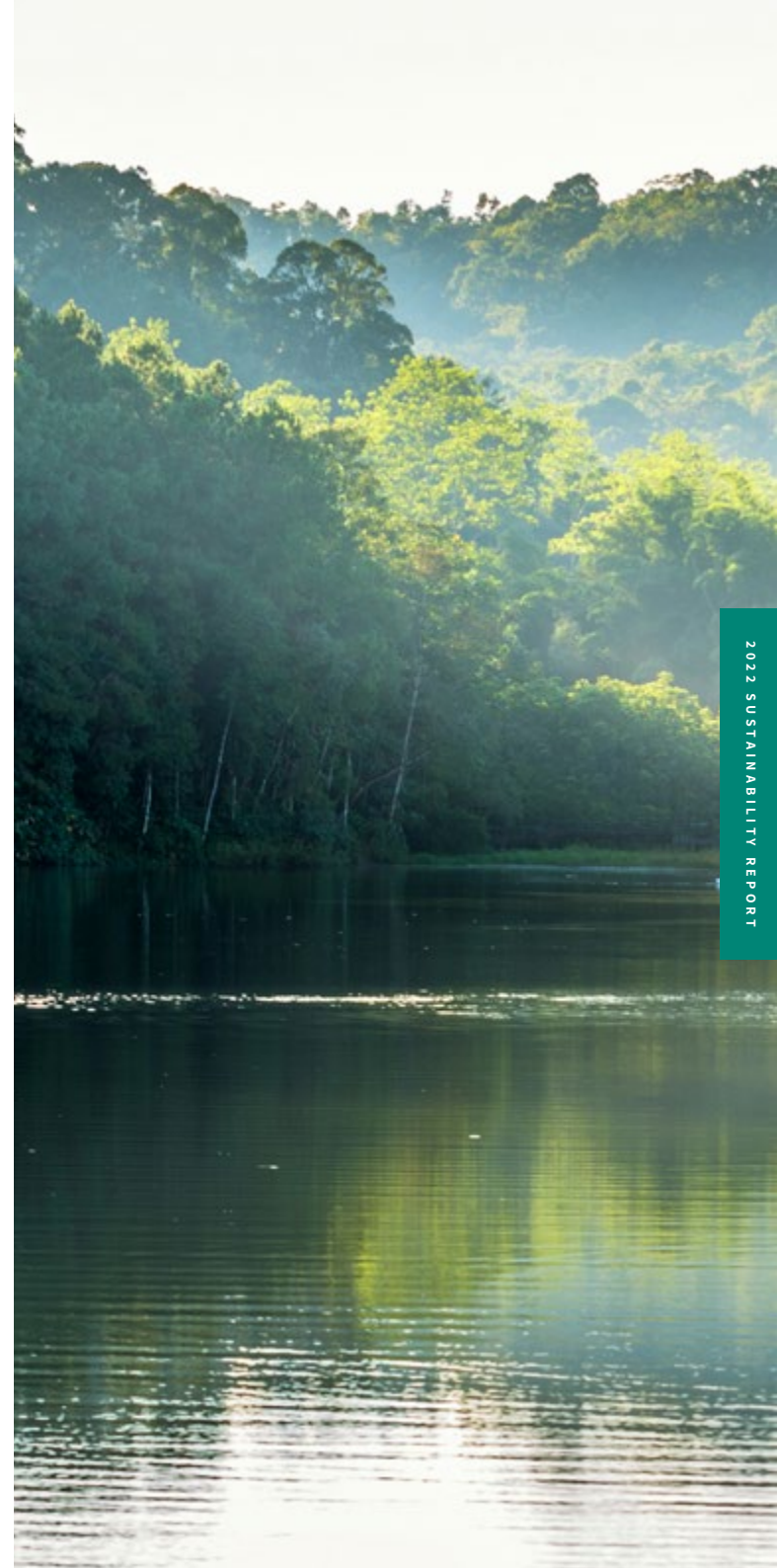
ACTIVITIES AND HIGHLIGHTS

IN 2022, ALBEMARLE JOINED THE [UN GLOBAL COMPACT CEO WATER MANDATE](#), A GLOBAL INITIATIVE IN PARTNERSHIP WITH THE PACIFIC INSTITUTE, WHICH MOBILIZES BUSINESS LEADERS TO ADVANCE WATER STEWARDSHIP PRACTICES.

Albemarle's endorsement of the Mandate commits us to action and continuous improvement over time across six key areas of focus in water management and to report annually on progress through our UN Global Compact communication. The six core areas for continuous improvement of water stewardship include direct operations, supply chain and watershed management, collective action, public policy, community engagement and transparency. Through the platform, we can identify and manage business risks, create efficiency in our water use, realize cost savings through water use efficiency and honor our sustainability commitments.

In 2022, we also completed the full CDP Water Security questionnaire for the first time and received a C. Our score of a C corresponds to awareness-level engagement, meaning we are comprehensively evaluating how our business operations interact with and affect water security. In line with our core value of accountability, we disclose our score, as well as make our complete response publicly available. Sharing this information reflects our commitment to being transparent about our operations and holds us accountable to our external stakeholders. We are using the feedback we received with our score to highlight where we need to do better and to work toward improving our water management.

We actively engage with the Initiative for Responsible Mining Assurance (IRMA) and use IRMA's standards for responsible mining to conduct independent assessments of our freshwater management in our Salar de Atacama operations. We are also conducting IRMA self-assessments at our sites in Greenbushes and Wodgina with the intent to complete them in 2023.



GOALS AND PROGRESS

ALBEMARLE'S TOTAL WATER CONSUMPTION IN 2022 WAS 11.4 MILLION M³, UP 0.9% YEAR-ON-YEAR DRIVEN BY INCREASED PRODUCTION VOLUMES AND OFFSET BY SPECIFIC WATER REDUCTION MEASURES.

We prioritize water reduction projects in areas classified as high overall water risk (Chile) and extremely high overall water risk (Jordan) – the two highest risk categories as classified by the Aqueduct Water Risk Atlas of WRI (the World Resources Institute).

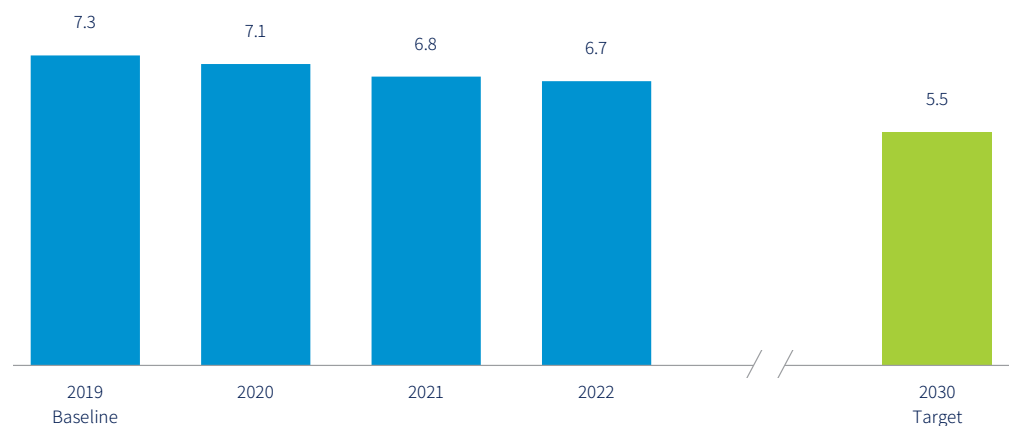
The 2022 water intensity for Chile and Jordan was 6.7 m³ water/mt product, down 3.1% year-on-year as improvements in Chile offset higher water intensity in Jordan. Chile's water intensity was down 20.5% year-on-year thanks to the continued ramp-up of the thermal evaporator at our La Negra site. Jordan's water intensity increased by 5.5% year-on-year due to a product mix shift to more water intensive products as a response to market demand.



GOAL	STATUS	2023 OBJECTIVES
Reduce the intensity of freshwater usage by 25% by 2030 in Chile and Jordan	On track	<ul style="list-style-type: none"> • Joined the UN Global Compact CEO Water Mandate • Progressed NEBO project in Jordan • Thermal evaporator brought online at La Negra

Freshwater Usage Intensity in Chile & Jordan

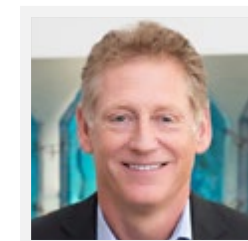
(m³ water/mt product)



Albemarle is committed to responsible management of our water resources, and our sustainable business practices align with our endorsement of the CEO Water Mandate.”

Kent Masters

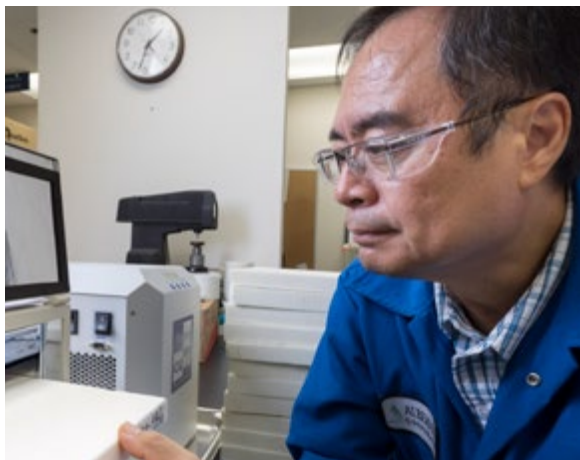
Albemarle Chairman, and Chief Executive Officer



GLOBAL WATER STEWARDSHIP SNAPSHOT

Jordan

Our Jordan operations are located in one of the world's highest overall water risk areas where every drop of water is precious; therefore, Jordan is a key focus for water intensity management. We are exploring several different water sourcing options and have introduced innovative technology to recycle by-product streams from our brominated flame retardant (BFR) production process that helps reduce energy, raw materials and water consumption, as well as GHG emissions. We also progressed the NEBO project. NEBO will allow us to recycle a waste stream into additional finished Wellbrom product – increasing revenues, reducing costs and improving sustainability. NEBO is expected to cut freshwater use by 11% in our Jordanian operations.



Chile

Albemarle does not consume freshwater in the production of lithium in the Salar de Atacama. We are allocated 0.5% of the freshwater rights in the basin and only use half of that for ancillary purposes, such as rinsing equipment. Albemarle actively engages with IRMA and uses their standard to conduct independent assessments of our water management in the Salar. The thermal evaporator brought online in 2022 at our La Negra site allows us to double our lithium production without a corresponding increase in freshwater use. This advanced technology allows us to reduce freshwater use by 30% per kilogram of lithium carbonate produced. We have also signed an agreement with a third party, CRAMSA, to provide us with up to 500 l/s desalinated water starting in 2027 and pending permitting and construction. This would allow us to analyze the implementation of direct lithium extraction methods in our Salar de Atacama facility.

U.S.

In Magnolia, Arkansas, we are piloting technology that will take water from an artificial marsh to clean and filter it through reverse osmosis for the creation of steam to power production processes in our facility. At our Silver Peak, Nevada, facility, we are implementing process improvements that are projected to reduce our freshwater usage by 8% in 2023.



Australia

At our Kemerton production facility, a water management plan has been adopted to help ensure that the quality and quantity of surface water and groundwater that flow from our production facility are maintained relative to pre-development conditions to protect the receiving environment. The Kemerton Water Management Plan focuses on surface and groundwater management, temporary drainage, monitoring and implementation, and remediation measures. The plan was developed in synergy with the Kemerton South Water Management Strategy, incorporating Water Sensitive Urban Design principles and taking into consideration the significant hydrological constraints present in the area. The four-year data from the groundwater and surface monitoring program show that there have been no impacts to ground and surface water quality over the construction, commissioning and operations startup period. Additionally, the spodumene shed extension project will minimize the water captured, transported, treated and disposed of as contaminated water.

Waste

WE CONTINUOUSLY SEEK WAYS TO MINIMIZE OUR WASTE THROUGH PROCESS IMPROVEMENTS AND RECYCLING INITIATIVES. THROUGH TECHNOLOGICAL INNOVATION, WE AIM TO FIND BENEFICIAL USES FOR WASTE PRODUCTS. THIS ALLOWS US TO LIVE UP TO OUR ENVIRONMENTAL COMMITMENTS WHILE ALSO PROVIDING POTENTIAL NEW REVENUE STREAMS FOR ALBEMARLE.

ACTIVITIES AND HIGHLIGHTS

U.S.

Bromine by-products and/or waste streams are recycled in multiple ways at our Magnolia site. A by-product containing bromide from one production unit can be directly used as raw material for a different production unit, or the stream can be converted back to bromine in a recycle tower. However, some streams cannot be reused in this way. Those streams are diverted to a thermal oxidizer called the Bromine Recovery Unit (BRU) to fully recover the bromine molecules for a second use in the facility. In addition, the site also developed new chemistry to convert a waste stream generated from flame retardant production back to raw materials, thereby saving raw materials and energy usage — helping to close the loop.

Australia

Improvements to waste management infrastructure include the construction of a waste transfer station (WTS). The WTS provides interim storage of specific bulk waste generated from process maintenance activities and other related activities before collection by a suitably licensed contractor for transport to an appropriate facility. The implementation of the WTS allows for better control and tracking of waste generated by the Kemerton operations.





Tailings

Albemarle is committed to developing strategies and investigating alternate uses for tailings, a waste by-product that is generated in the extraction process of spodumene. At our Kemerton facility, plans are progressing for the proposed conversion of lithium aluminosilicate (LAS) tailings into a lightweight aggregate. The project has been supported by the Australian government's Modern Manufacturing

Initiative and is being rescope as Albemarle looks to significantly expand operations at Kemerton. The LAS Aggregate facility has the potential to reduce the amount of material sent to landfill and produce a valued product in line with the Western Australian government's 2030 goal of becoming a sustainable, low-waste, circular economy.

At our Kings Mountain site, we are selling legacy tailings to a company that converts them into Sandspar, an ingredient that can be used in the production of ceramic tile. We are investigating how our tailings might be sold to other industries, such as the cement, concrete and glass industries.

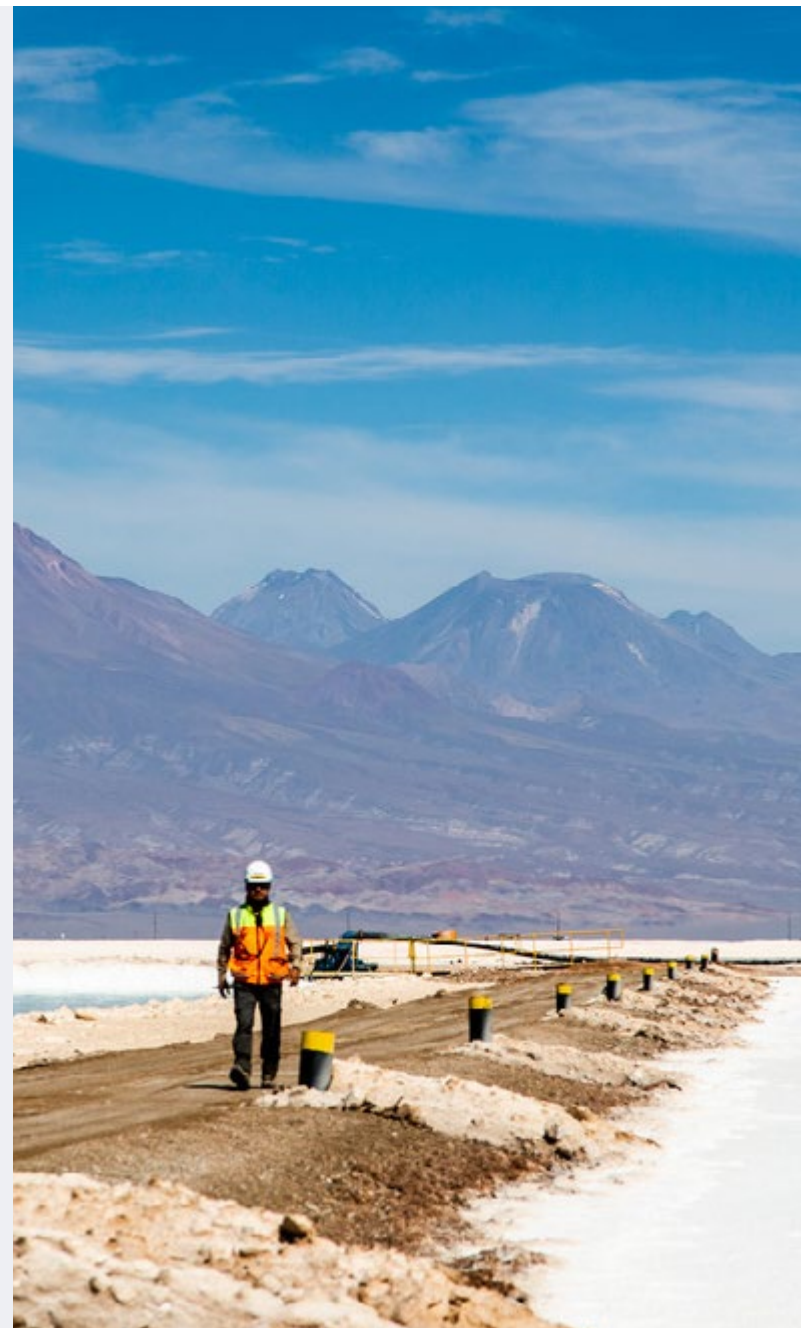
Resource Stewardship

MINERALS

WE DEPEND ON THE AVAILABILITY OF LITHIUM AND BROMINE FOR OUR BUSINESS OPERATIONS. AS ALBEMARLE CONTINUES TO GROW, WE NEED TO BE ABLE TO DELIVER THE RAW MATERIALS THAT WE REQUIRE TO BE SUCCESSFUL IN THE FUTURE. IT IS, THEREFORE, OUR DUTY TO MANAGE THOSE RESOURCES RESPONSIBLY, EFFICIENTLY AND EFFECTIVELY BOTH AT OUR OWN PRODUCTION SITES AND AT OUR JOINT VENTURE FACILITIES. OUR AIM IS TO MAXIMIZE THE MINERALS WE EXTRACT AND OPTIMIZE RECOVERY AND RECYCLING PROCESSES.

In the Salar de Atacama, we monitor brine resources and report data to the relevant Chilean authorities and the local and Indigenous communities. We meet regularly with the communities to discuss the data. We also sit on the boards of directors of our MARBL, Talison and JBC joint venture operations where we share information on our minerals management and compliance with applicable laws and regulations. In some cases, communities have used funds provided by Albemarle to hire independent third-party experts to interpret this data.

In 2022, we created a framework for sustainable resource development, which we have applied to the start-up of our Kings Mountain site. We rolled out a comprehensive environmental and social baseline characterization that goes over and above the most rigorous U.S. environmental requirements for regulatory permitting. This framework aligns with industry best practices and the IRMA Standard for Responsible Mineral Exploration and Development (or “IRMA-Ready”). As we continue to grow internationally, we plan to use this framework for future site assessments.



BIODIVERSITY

THE UN BIODIVERSITY CONFERENCE (COP15) HELD IN DECEMBER 2022 CALLED ON GOVERNMENTS TO TAKE MEASURES TO HELP ENSURE THAT BUSINESSES MONITOR, ASSESS AND TRANSPARENTLY DISCLOSE RISKS, DEPENDENCIES AND IMPACTS OF THEIR BUSINESS ACTIVITIES ON NATURE. OUR COMMITMENT UNDER IRMA ALSO OBLIGATES US TO PREVENT AND MITIGATE ANY NEGATIVE IMPACTS OF OUR OPERATIONS ON NATURAL HABITATS AND SENSITIVE ECOSYSTEMS.

At Albemarle, we are doing our part to help protect and conserve biodiversity within our areas of operations. Our priority is to avoid the negative impacts of our operations to biodiversity and ecosystems. Prior to a site opening, we assess the potential impact of the project on biodiversity as part of our Impact Assessment process and conform with all local regulations. We apply international best practices in conducting thorough analyses and site surveys. For example, at our Kings Mountain site, the assessments include a threatened and endangered species survey for both federal and state species, comprehensive biological and aquatics survey, wetlands survey, and cultural resource survey.

We are committed to operating our facilities in a responsible manner and keeping air, water and soil emissions as low as possible and reducing waste from all sources to levels that are not harmful to biodiversity and ecosystem functions. We are also taking part in biodiversity conservation initiatives to help protect biodiversity near our existing operations both on terrestrial and aquatic ecosystems. For example, at Kings Mountain, we created a 2,000-square-foot habitat for pollinators, such as the monarch butterfly, a species in decline. The habitat was created out of a reclaimed rock pile from a previous lithium mining site. For this initiative, Albemarle received the Wildlife Habitat Council Pollinators Project Award for excellence in corporate conservation.

In addition, our Integrated Avian Management Program at our Silver Peak site monitors the migration of birds and records avian mortalities. The program also provides guidance on the prevention of bird fatalities. In the Peine-Punta La Negra lagoon in Chile, we have donated over \$1 million since 2016 to support the monitoring of the migration of flamingo populations.

Albemarle is committed to innovation and the implementation of new technologies. Our Salar Yield Improvement Project utilizes proprietary technology to increase the lithium recovery from brine without the use of water or chemicals. This project is expected to be completed in 2023 and is anticipated to increase lithium recovery from 50% to 65%.



Case Study

BIODIVERSITY IN THE SALAR DE ATACAMA

In 2021, we inaugurated the first botanical nursery of its kind at our Atacama operations. To date, six species have been successfully reproduced and are irrigated using recycled and treated water from our facility. Through a combination of scientific and Indigenous knowledge, the plants are being bred to eventually reforest the surrounding area and help preserve the cultural and biological heritage of the Salar region.

Albemarle received a Sustainable Initiatives Award from the Sustainability HUB of La Tercera PULSO newspaper for the nursery, winning first place in the Climate Action and Affordable, Safe, Sustainable and Modern Energy categories. The purpose of the Sustainability HUB is to identify, disseminate and promote sustainable, high-impact initiatives in Chile.



In 2022, we began working with the Institute of Ecology and Biodiversity (IEB), a Chilean nonprofit organization whose main objective is to conduct frontier scientific research in biodiversity sciences and contribute to the sustainable development of Chile. We initiated research on how climate change will impact local biodiversity in the Atacama salt basin. The study looks at how native species are currently performing in the different areas of the region and how they react to water scarcity scenarios. We anticipate the research to be published in 2023. Together with IEB, we are also planning to install an Eddy Tower for the real-time measurement of CO₂e to better understand and analyze the effects of climate change on photosynthesis in the Tilopozo Wetlands of the Atacama Desert. Based on the model in Chile, we are looking to collect baseline data for biodiversity for all Albemarle sites.



Certifying through IRMA that our processes are sustainable is fundamental to Albemarle's corporate strategy. We are proud of our role in leading the way toward establishing this industry standard."

Ignacio Mehech Castellón

VP of External Affairs and Country Manager, Chile



INITIATIVE FOR RESPONSIBLE MINING ASSURANCE (IRMA)

As one of the world's leading producers of lithium, it is important for us to take a leadership role in transparently showing how we produce lithium sustainably. The IRMA audit program uses an internationally recognized standard developed in consultation with a wide range of stakeholders to assess mine sites for their environmental and social impacts. In 2021, Albemarle's Salar production site was the first lithium mine in the world to complete an IRMA self-assessment and undergo a third-party audit in accordance with the IRMA standards. We continue to work with IRMA to certify the results of this audit.

The certification process has helped us identify areas for improvement. For example, we learned that community stakeholders would like to have the ability to get in touch with us via means that are not technology-based. In response, we are in the process of setting up mailboxes in communities within a 100-mile radius of the Salar site, which will be monitored by Albemarle employees on a regular basis.

In 2021, our Wodgina and Greenbushes operations began the IRMA self-assessment process, and we anticipate we will complete these assessments and start a third-party audit in Greenbushes in 2023.



Our People, Workplace & Community

Safety

PROVIDING A SAFE WORKPLACE FOR OUR EMPLOYEES, CONTRACTORS AND VISITORS IS OF UTMOST IMPORTANCE TO US AND REFLECTS OUR CORE VALUE OF CARE. WE PRIDE OURSELVES ON OUR STRONG SAFETY CULTURE AND PERFORMANCE.

OUR APPROACH

Responsibility for a safe work environment begins at the very top levels of our organization. Our CEO, together with our GBU Presidents, is accountable for Albemarle's safety performance, and the Health, Safety & Environment (HS&E) Committee of the Board provides oversight of Albemarle's safety program. The committee meets quarterly with our Vice President, HS&E, and Operational Excellence team to review safety performance, safety trends, audit results and corrective action plans, and the HS&E Committee reports to the Board on a quarterly basis. Albemarle's Executive Leadership Team (ELT) reviews objectives and performance quarterly under our OKR (objectives and key results) system. GBU Presidents host quarterly town halls to report on our company's safety performance, and safety performance results are tied to management compensation. Our actions are guided by [Albemarle's Health, Safety, Security and Environmental Policy Statement](#).

Albemarle's safety program has been adapted from the Responsible Care RC14001 chemical industry program, which integrates the American Chemistry Council's (ACC) Responsible Care requirements with those of ISO 14001 and the OSHA Process Safety Management standards. The program applies to both our corporate headquarters and our individual sites. Each of our sites employs an HS&E manager or safety manager equivalent who, along with their team, implements country-specific safety policies and procedures and provides local safety resources.

We believe that safety is everyone's responsibility. As such, all Albemarle employees are required to complete safety training and are expected to proactively identify and prevent workplace injuries and illness. Shift change meetings include the sharing of safety information, and employees are encouraged to join subcommittees relating to specific safety topics. We also conduct regular audits of our HS&E programs at our sites to help ensure compliance.



INVESTING IN SAFETY

As part of our focus on continuous improvement, we implemented a new HS&E incident management system in 2022. We created a single platform that standardizes and streamlines data collection of incidents, near misses, safety improvement ideas and corrective action plans across our global network of operations. Through this new system, we can track leading indicators, and we use data analytics to identify trends in real time to help us pinpoint areas of risk that require attention. This gives us the ability to take swift action for enhanced incident and issues management, often before an incident can occur, and allows us to report on our safety performance at site, GBU and corporate levels.

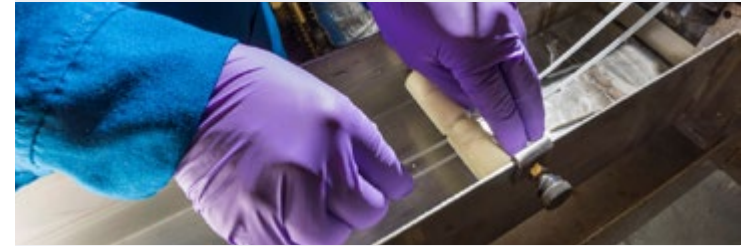
We are also focusing on the role that the mechanical integrity of our equipment plays in ensuring safety by increasing our investment in preventative maintenance and engineering controls. In 2022, all Albemarle sites conducted self-assessments to identify mechanical integrity gaps and were required to develop roadmaps on how to close the highest priority gaps.

To help improve contractor safety, we created three regional contractor safety lead positions in 2022 – one each in the Americas, Asia Pacific and EMEA. The safety leads for our contractors help ensure that all of our protocols and guidelines are followed as outlined in our guides. To support safety training for contractors, we created a construction safety standard and safety manuals, which can be used by our contractors as reference guides while onsite at our Albemarle facilities.



Determining root causes and driving corrective actions to completion through our auditing program has pointed us to our true north. Our goal is to truly empower our employees to make improvements leading to a safer work environment.”

Sarah Palazzi
Magnolia HS&E Leader



LOOKING AHEAD, WE WILL BE CONDUCTING HS&E MATURITY ASSESSMENTS ACROSS ALL ALBEMARLE SITES DESIGNED TO HELP ENSURE CONSISTENCY IN THE UNDERSTANDING OF SAFETY RISKS AND HOW TO TAKE APPROPRIATE ACTION. WE ALSO CONTINUE TO FOCUS ON SAFETY EDUCATION AND TRAINING TO MEET THE NEEDS OF OUR GROWING COMPANY.

Safety Performance

AT ALBEMARLE, WE PRIDE OURSELVES ON OUR INDUSTRY-LEADING SAFETY RECORD. OVER THE PAST YEARS, WE HAVE ADVANCED SIGNIFICANTLY IN OUR HS&E PERFORMANCE AND HAVE MADE STEADY AND CONSISTENT YEAR-OVER-YEAR PROGRESS TOWARD OUR ULTIMATE GOAL OF ZERO INCIDENTS.

We drive continuous improvement in our safety protocols, programming and training and measure ourselves against past performance, industry peer performance and internal targets that we set for ourselves to reward our accomplishments. In 2022, we were proud to achieve the goal of ranking among the top decile of our American Chemistry Council (ACC) peers.

While restrictions regarding COVID began to ease in 2022, the virus persisted in affecting business operations, including ours, with waves of lockdowns and travel restrictions in various parts of the world. At Albemarle, we continue to respond to any acute outbreaks using our established protocols, and we offer vaccinations where needed. As countries transition away from a public health emergency to an endemic state of COVID, so too are we shifting our COVID response. We anticipate updating our health and safety policies based on risk-based protocols while retaining communicable disease best practices and learnings from the pandemic to enhance awareness and adherence to communicable disease prevention at all Albemarle sites.

“Albemarle’s robust safety standards, policies and procedures help to ensure that every Albemarle employee can go home safe and healthy every day.”

Bo Brantley

Vice President, HS&E and Manufacturing Excellence

In 2022, we achieved our goal of ranking in the **top decile** for safety performance benchmarked against our American Chemistry Council peers.

TOTAL RECORDABLE INJURY RATE (TRIR) EMPLOYEES AND CONTRACTORS



Diversity, Equity & Inclusion

WE RECOGNIZE THAT DIVERSITY IS KEY TO OUR BUSINESS SUCCESS, AND WE KNOW THAT HAVING A DIVERSE WORKFORCE WITH A BROAD REPRESENTATION OF BACKGROUNDS AND EXPERIENCE HELPS US STAY COMPETITIVE AND RESILIENT. OUR GOAL IS TO CREATE A WORK ENVIRONMENT WHERE EVERY EMPLOYEE HAS A SENSE OF BELONGING AND FEELS VALUED FOR THEIR CONTRIBUTIONS TO OUR COMPANY, WHERE ALL VOICES AND IDEAS ARE HEARD AND WHERE THERE IS A SHARED UNDERSTANDING OF RESPECT FOR ALL PEOPLE OF ALL BACKGROUNDS. WE ACTIVELY WORK TO REMOVE SYSTEMIC BARRIERS, AND WE CHALLENGE AND RESPOND TO BIAS AND DISCRIMINATION WITHIN OUR WORKPLACE.



We received an inclusion score of 80% in our first employee Empowerment Survey launched in 2022.

80% of employees who participated in the survey feel like they belong, are treated with dignity, respect, and are comfortable voicing their ideas and opinions, even when different from others.

OUR APPROACH

Albemarle's Vice President of Culture, together with our Chief Human Resources Officer, has oversight in ensuring that diversity, equity and inclusion are front and center in our talent acquisition and employee experience practices. They provide DE&I updates to the Executive Compensation Committee of the Board on a quarterly basis. Our DE&I Steering Committee, comprised of a diverse group of

leaders representing all Albemarle GBUs, functions and regions, was established to develop our DE&I Strategic Plan, which was rolled out in 2021. The Strategic Plan serves as our roadmap for integrating diversity, equity and inclusion into all our business practices and decision-making processes. The DE&I Steering Committee meets monthly to track progress toward the DE&I Strategic Plan.



ACTIVITIES AND HIGHLIGHTS

In 2022, we hired a dedicated diversity recruiter responsible for developing and managing partnerships with organizations that can support Albemarle in attracting a diverse talent pool. Through this position, we engaged in new partnerships, which included groups such as Women in Manufacturing, International Women in Mining, HBCU Connect, Society of Asian Scientists & Engineers, and Hiring Our Heroes to help us recruit a more diverse workforce. In 2022, for the first time, and in alignment with our commitment to transparency, we published our EEO-1 Report.

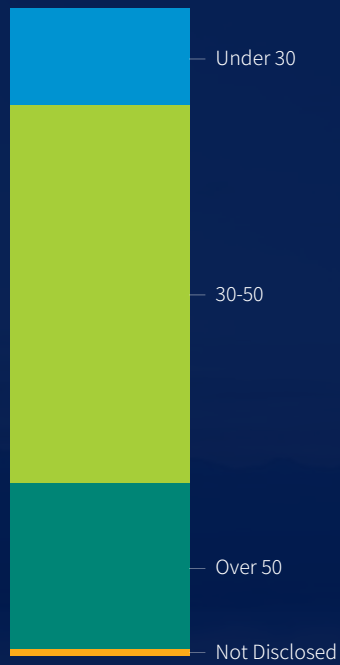
CONNECT GROUPS

We leverage our employee resource groups (ERGs) called CONNECT groups to help us embed DE&I in our corporate culture. Our CONNECT groups, which drive DE&I initiatives throughout the organization, are executive-sponsored and funded by Albemarle. The groups are in alignment with our core values and have a mandate to strengthen relationships across our organization. They achieve this by providing cultural education and awareness, supporting career development through mentoring and networking opportunities, and advancing our diversity recruitment efforts. CONNECT groups also contribute to the communities where we operate through engagement with local nonprofit organizations.

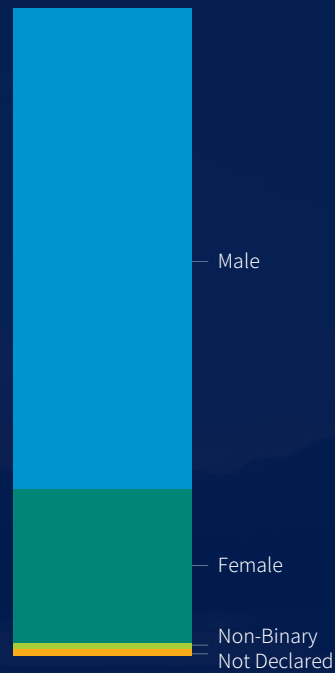


We held our second annual CEO Day of Understanding in December 2022. Over 800 employees attended the event which focused on fostering a culture of inclusion and understanding.

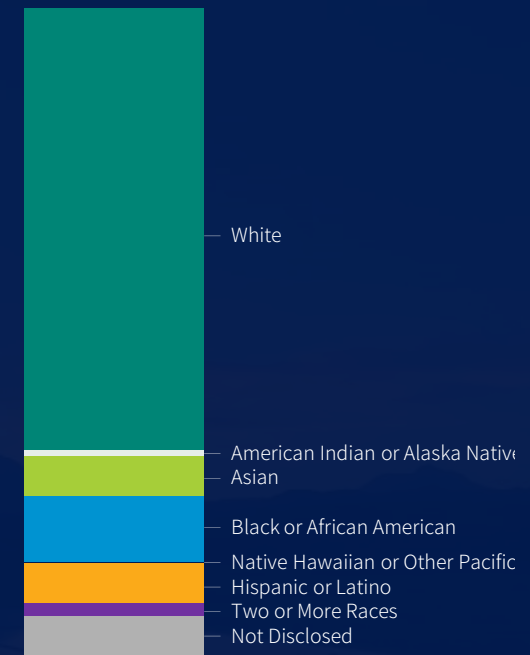
GLOBAL WORKFORCE BY AGE



GLOBAL WORKFORCE BY GENDER



U.S. WORKFORCE BY RACE



GOING FORWARD, WE PLAN TO IMPLEMENT A DE&I LEARNING PLAN FOR ALL EMPLOYEES FOCUSED ON INCLUSIVE LEADERSHIP AND UNCONSCIOUS BIAS. THE DE&I LEARNING PLAN WILL BE ROLLED OUT IN PHASES THROUGHOUT 2023. THE LEARNING PROGRAMS WILL ENHANCE PERSONAL DEVELOPMENT AND BUILD THE EFFECTIVE INTERPERSONAL SKILLS OUR EMPLOYEES NEED TO WORK IN OUR GLOBAL ORGANIZATION WITH A DIVERSE WORKFORCE.

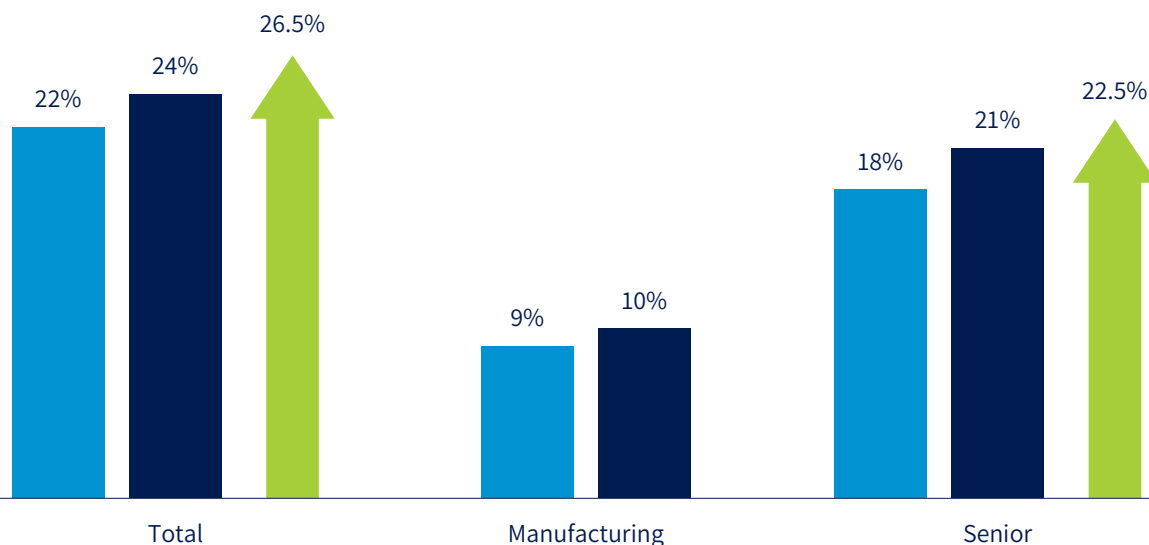
ALL EMPLOYEES, INCLUDING OUR MOST SENIOR LEADERS, WILL HAVE THE OPPORTUNITY TO EXPAND THEIR KNOWLEDGE OF BASIC DE&I INFORMATION, BIAS AWARENESS, CULTURAL AWARENESS AND LEADING WITH A DE&I MINDSET.

GOALS & PROGRESS

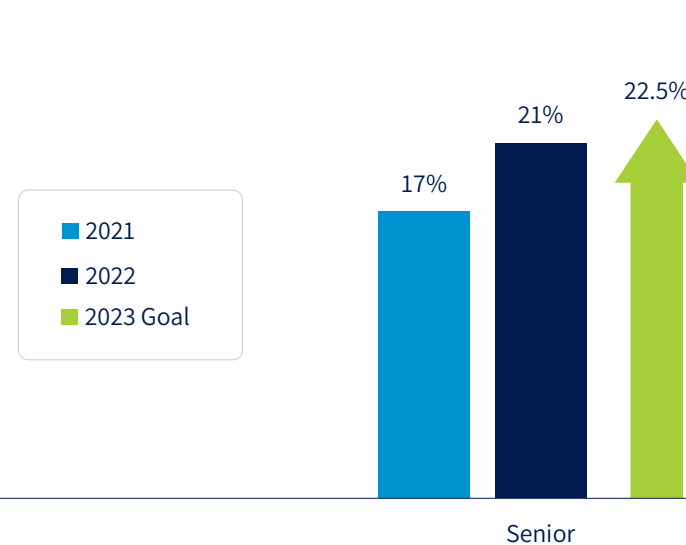
We introduced new and revised DE&I targets this year to reflect our ambition to establish industry-leading representation and to build a culture of engagement and inclusiveness. Our revised targets continue to focus on increasing gender and racial diversity with additional emphasis placed on roles in manufacturing, engineering and mining. For more information on our new DE&I goals and the objectives we have outlined to achieve them, see the [Letter from the Sustainability Steering Committee](#) section of this report.

We are proud to announce we exceeded our 2022 DE&I goals and set even more ambitious annual DE&I goals for 2023.

Global Female Representation



U.S. Non-White Representation



GOAL	STATUS	2022 ACTIONS
Increase global gender diversity by 1% per year, focusing on our manufacturing workforce	On track/ahead	<ul style="list-style-type: none"> Hired a dedicated diversity recruiter
Increase racial diversity in senior-level management roles by 1% (U.S.)	On track/ahead	<ul style="list-style-type: none"> Partnered with organizations including Women in Manufacturing, International Women in Mining, HBCU Connect, Society of Asian Scientists & Engineers, and Hiring Our Heroes

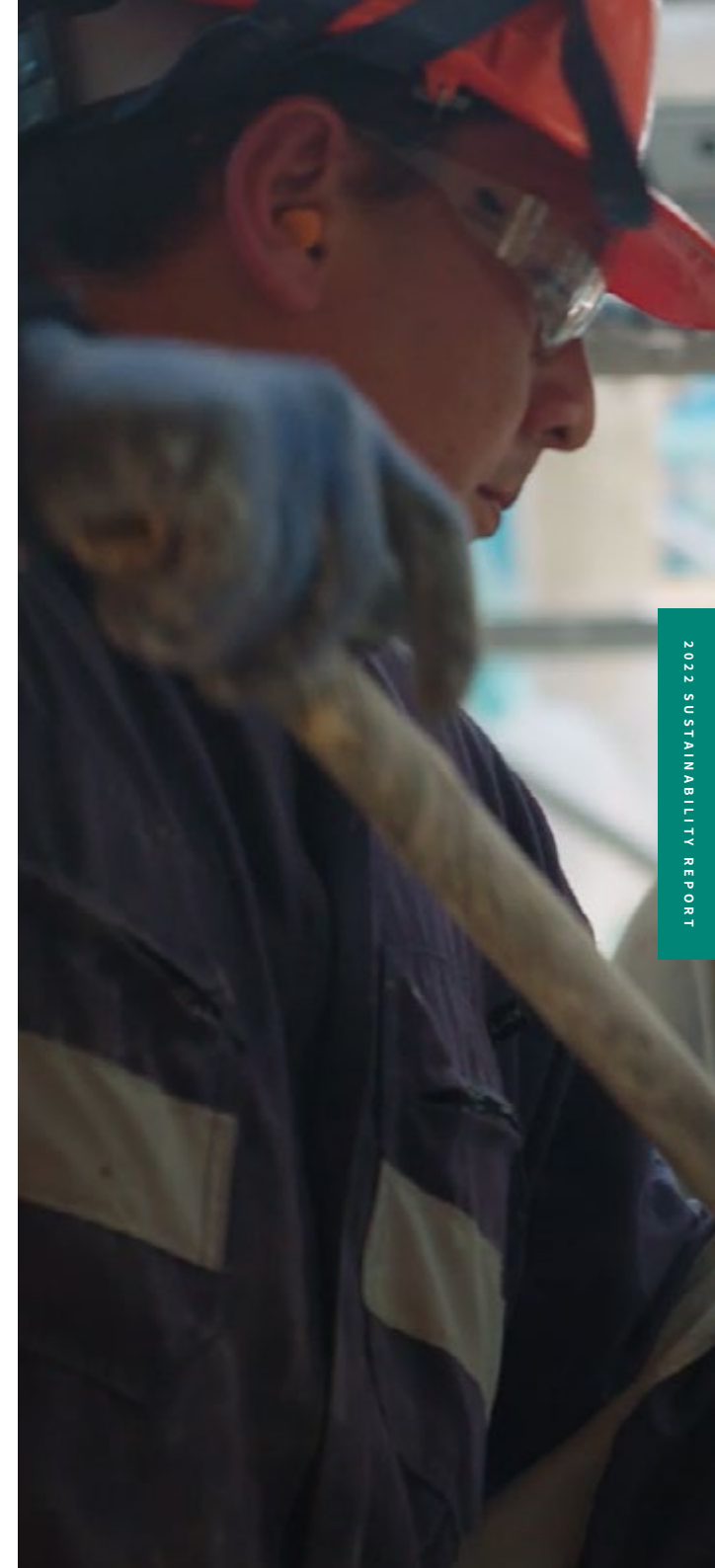
DIVERSITY IN OUR SUPPLY CHAIN

IT IS IMPORTANT TO US TO HAVE DIVERSITY IN EVERY ASPECT OF OUR BUSINESS OPERATIONS, INCLUDING OUR PROCUREMENT PRACTICES. OUR SUPPLIER DIVERSITY PROGRAM COMMITS US TO PROACTIVELY SEEK OUT AND MAINTAIN A DIVERSE SUPPLIER BASE. IT IS OUR AIM TO BUILD LOCAL SUPPLIER CAPABILITY AND PROMOTE LOCAL ENTERPRISE THROUGH THE LOCALIZATION OF OUR SUPPLY CHAIN.

We use TealBook, a procurement intelligence software platform, to help us obtain up-to-date data about a supplier's diversity performance and other sustainability indicators. According to TealBook, for 2022, 11% of our global spend was with diverse-owned companies and small businesses. This represents an increase of \$47M over the previous year. Our Supplier Diversity Program was rolled out in the United States in 2022 with a focus on women-owned businesses. In 2023, we will be extending the program across the globe and look forward to reporting on our supplier diversity progress in future sustainability reports.

In 2022, we also completed our first "full cycle" pilot effort that focuses on minority-owned businesses. During the pilot phase, we worked with HTD Talent, a Charlotte-based, minority-owned business specializing in IT talent and expertise. Our program identified, evaluated, socialized and promoted HTD to our HR and IT teams. HTD engaged with the business and is actively placing resources within Albemarle. This effort will serve as a blueprint for future diverse spend success.

In 2022, \$318M of our spend was with diverse-owned companies and small businesses.



Investment in Talent

AT ALBEMARLE, WE PRIDE OURSELVES ON ATTRACTING THE BEST AND THE BRIGHTEST TALENT IN OUR INDUSTRY AND INVESTING IN PROVIDING THEM WITH BEST-IN-CAREER EMPLOYEE EXPERIENCES. AS EXTERNAL AND INTERNAL PRESSURES ACCELERATE CHANGE WITHIN OUR COMPANY, WE RECOGNIZE THAT WE NEED TO SCALE UP OUR GLOBAL WORKFORCE BY HIRING, DEVELOPING AND RETAINING GLOBALLY DIVERSE AND HIGHLY SKILLED PEOPLE.

OUR APPROACH

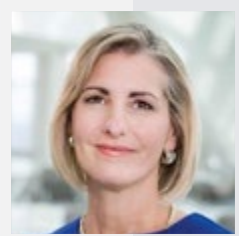
Our focus on talent begins with the Board, who oversees ELT succession planning, including CEO succession planning. The Board meets with the ELT annually to review and strengthen development plans. The Executive Compensation Committee of the Board evaluates and provides feedback on our workforce strategy and plans, including oversight of the performance of our executive officers and Albemarle’s performance on goals aimed at attracting and retaining top talent. Albemarle’s ELT

is responsible for our people strategy alignment with Albemarle’s business strategy in order to have the organizational capability we need as we continue to grow our workforce. Our ELT provides guidance on human capital and leadership development investments, setting the talent agenda, approving the learning and leadership development budget, and establishing enabling systems and structures that can scale and support our ambitions and goals.



People leaders at Albemarle play an important role in building potential and resilience in our employees. Managers are encouraged to understand strengths, provide ongoing feedback, coach for development and support employees’ attainment of career goals. We believe these leadership actions create a great employee experience and will have a significant positive impact on the future success of Albemarle.”

Melissa Anderson
Chief Human Resources Officer



ACTIVITIES AND HIGHLIGHTS

In 2022, we made significant investments to build out our talent acquisition, talent development and employee experience teams. Our newly created Talent and Organization Advancement group is comprised of senior experts with deep knowledge and experience in talent strategy, leadership and organizational development, career growth and internal mobility, performance management, succession planning and talent analytics. Other strategic hires in 2022 include a Senior Director of Human Resources in APAC responsible for Albemarle’s APAC talent and culture strategy. In EMEA, we created a manufacturing excellence, HS&E, and learning and development role with a global focus to acknowledge the need for manufacturing-specific learning and development. As a result, we have started to pilot innovative ways of learning that include virtual and augmented reality at some of our EMEA manufacturing sites.

We also improved our reporting and analytics around HR data to drive organizational insights and decision-making. Using data analytics, we overhauled our HR processes to become more efficient in areas, such as our hiring practices with the aim of reducing the time it takes to fill vacant positions.

GLOBAL LEARNING AND DEVELOPMENT

We believe that global learning and development are fundamental for retaining and attracting the talent we need to succeed. In 2022, we saw a decline in the number of overall training hours. We attribute the drop to a number of factors, including changes in learning system providers, changes in the type of training offered, and an acceleration in the number of new hires in 2022 who may not immediately have had the opportunity to avail themselves of the training programs offered by Albemarle. We are taking steps to address employee needs and wishes for additional training and development opportunities and have initiated:

- Evolving our learning platform into a career hub for employees to manage their growth and development and enabling personalized learning strategies tailored to individual career aspirations.
- Expanding the reach and availability of training programs offered through Albemarle University.
- Issuing a monthly LinkedIn Learning Newsletter that provides curated microlearning content that emphasizes key behavioral competencies, such as feedback, coaching and personal development.
- Leveraging technology to help monitor and inform global training via a dashboard that provides valuable insights into L&D consumption.
- Offering educational reimbursement up to \$7,500 annually to all U.S. employees from their first day of employment.

In 2022 we provided Albemarle employees with access to over 275,000 sessions, courses, and videos, and we added LinkedIn Learning supplements to the Albemarle University offering.

LEADERSHIP DEVELOPMENT

Our commitment to leadership development extends across all levels of the organization to equip our employees with the knowledge, tools and resources to scale and grow their leadership with the company. Leadership development programs are designed specifically for leaders at different levels of the organization and are targeted to build and enhance leadership diversity in alignment with Albemarle values. In 2022, we delivered formal development programming for over 300 existing and future leaders to nurture skills needed to lead themselves and others in today's work environment. Coaching opportunities for growth and development are made available both through a virtual coaching app and external professional coaches.

ELEVATE

In 2021, we launched our women's career development program aimed at increasing the number of women leaders in our organization. The program was so well received that we have made it available to any employee in the company who aspires to advance to a leadership role. Starting in 2022, employees are able to participate in one of four cohorts of the Elevate Leaders program:

- **Aspiring Leaders** –for professionals interested in exploring whether a leadership career path is right for them
- **Transforming Leaders** – for existing leaders who want to advance in the organization
- **Mosaic Leaders** – for diverse leaders
- **Empowering Women** – for women

G.R.O.W.

At Albemarle, our leaders volunteer as mentors because they understand that mentorship can be an enriching aspect of the employee experience and strengthens our internal talent pipeline. We have seen how collaborative and reciprocal relationships between our executive leaders and their mentees lead to mutually beneficial growth and development opportunities. Our formal G.R.O.W. Mentoring Program structure offers all interested employees the opportunity to be matched with a mentor and provides participants with training and resources for engaging in a mutually beneficial relationship.

Through Albemarle's G.R.O.W. Mentoring Program, we:

- **Guide** top talent in developing strengths.
- **Ready** top talent by identifying development opportunities.
- **Outfit** top talent with actions to support development.
- **Widen** the horizon of top talent to unlock potential career opportunities.

300+ LEADERS DEVELOPED AT ALBEMARLE IN 2022 VIA 11 PROGRAM COHORTS

Looking to the future, we will continue to build on our learning and leadership programs so that they better meet the needs and expectations of our employees. We will also be focusing on improving our onboarding process to create an immersive and engaging onboarding experience for our new hires.

BUILDING A STRONG INTERNAL TALENT PIPELINE

In 2022, we took a focused approach to building our internal talent pipeline. An enterprise-wide talent and succession process was implemented to enable us to take a thoughtful approach to developing the capabilities needed across our various regions and GBUs. We invested in talent systems that help align employee interests, strengths and development needs with succession and development plans.

To help ensure that we have the right successors for the critical roles in our organization, we have taken a concerted and deliberate look at succession planning. At the ELT level, we created talent profiles for our executive leaders and critical high-potential talent. These profiles facilitate the identification of skills, capabilities and experiences required for leadership roles and enable us to match the right leader to the right opportunity at the right time. To better understand our talent pipeline, we added follow-up practices to provide visibility into employee skills and talent movement metrics.

ACCESSING EARLY TALENT

LAUNCH

We know firsthand that early talent programs are a great source of talent and that investing early pays off. Established in 2018, LAUNCH is our highly successful two-year rotational program for recent college and university graduates. The program, which was originally intended for engineering students, was expanded in 2022 to include general business management. We welcomed four new participants to the program in 2022 and extended 15 job offers with an 87% acceptance rate. In 2023, we will be expanding our LAUNCH cohorts to nine members per cohort with a focus on HR, finance and analytics career pathways within Albemarle.

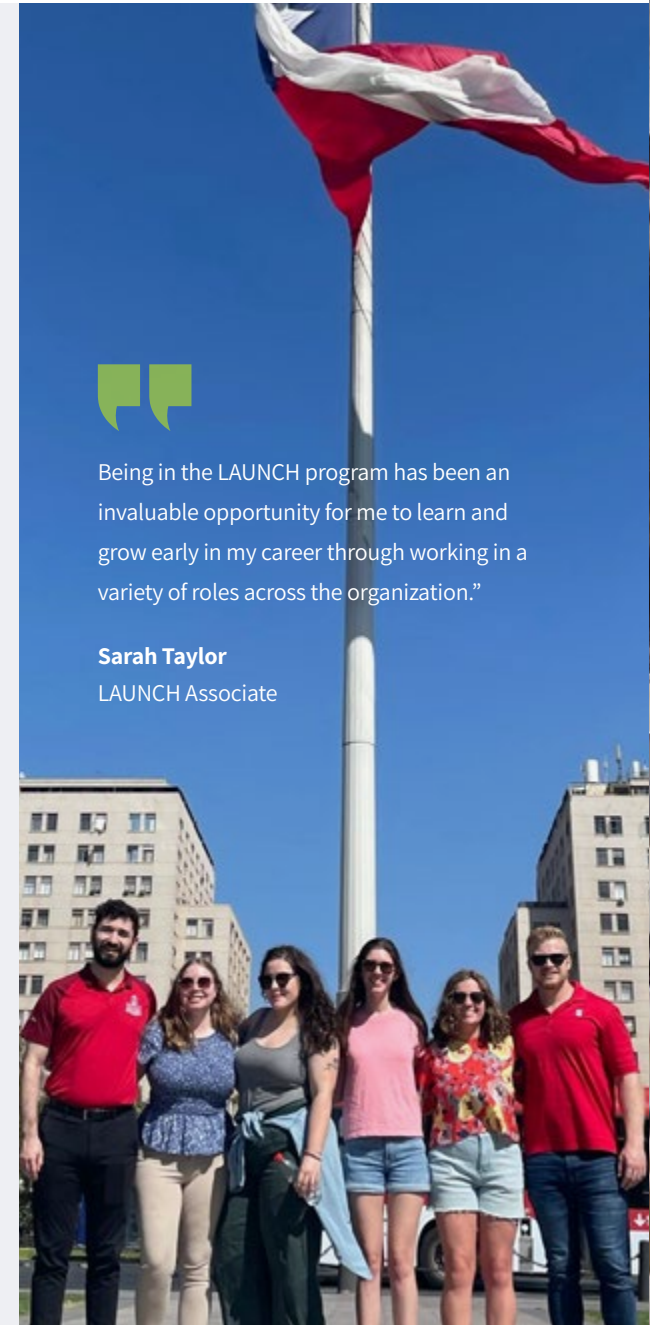
PERFORMANCE MANAGEMENT

In 2022, we introduced two new approaches to strengthen and reflect our high-performance culture. First, we introduced an OKR framework. OKRs help us align and execute our strategy through measurable goals and outcomes tied to our most critical priorities. In tandem, in our performance excellence approach, we introduced a new performance impact scale with clear behavioral descriptors of employee contribution (including descriptors for our core values and Albemarle Way of Excellence). We believe the scale is more comprehensive in reflecting the impact employees have on the company. The simplified process encourages more interaction regarding performance between employees and managers through regular touchpoints that occur within the flow of everyday work. In addition, we launched new tools, training and support for HR leaders and employees to better enable accurate evaluation and targeted employee development. One OKR at the ELT level involves all employees having at least two review conversations annually with their manager about their career, development and/or performance.



Being in the LAUNCH program has been an invaluable opportunity for me to learn and grow early in my career through working in a variety of roles across the organization.”

Sarah Taylor
LAUNCH Associate





RETURN TO OFFICE

In April 2022, as part of our return-to-office program, we implemented a framework to provide our non-manufacturing-based employees with the flexibility to choose their work location. We reviewed each type of role at Albemarle to assess the suitability for remoteability. Approximately 50% of Albemarle employees are eligible to choose between working at an Albemarle office, fully remote or a combination thereof through a hybrid work model. Technology introduced during the pandemic facilitates virtual interaction and collaboration for remote work.

COMPENSATION & BENEFITS

We understand that in order for our employees to bring their best selves to work, they need to be thriving physically, emotionally and financially. To address all three of these aspects of wellbeing, we take a holistic view of the benefits package we offer to our workforce. Our Total Rewards package provides our employees with competitive wages, comprehensive health insurance and performance incentives. These incentives include our Annual Incentive Plan (AIP), which is available to all permanent employees not covered by collective labor agreements or local incentive plans. This incentive payout is based on a mix of company financial results, company stewardship metrics and individual performance. The Total Rewards we offer take into account regional differences and requirements and continuously evolve and expand to meet changing needs. An annual pay equity analysis across our global operations guides us in adjusting salary levels where needed and helps our hiring managers to understand how best to apply fair remuneration practices. We review salaries for all jobs worldwide by gender and in the U.S., by gender and race, on an annual basis in the fourth quarter. In 2022, Albemarle employees, including new hires, received an inflation pay increase in addition to their regular annual increase, for an average pay increase of 8% across all employees.

We aspire to be the best employment experience in our employees' careers.

COMMITTED TO EMPLOYEE WELLBEING

In 2022, we “rebranded” sick days to wellness days to reflect the importance of overall health. We also wanted to shine a light on the significance of mental health by engaging employees on this topic. Throughout 2022, several of our CONNECT groups organized mental health-focused events and discussions. On Mental Health Day, October 10th, we invited a mental health professional to provide training around suicide prevention. Also in 2022, Albemarle signed Thrive Global and SHRM’s mental health pledge, acknowledging that employee wellbeing and mental health are critical to business. In addition, we provided global suicide prevention education for all our employees through a QPR (Question, Persuade, Respond) training program.

LISTENING TO OUR EMPLOYEES

In 2022, we launched our first global employee Empowerment Survey in five languages. Based on the results of this survey, we have refreshed our approach to measuring employee engagement and created a culture index that aggregates engagement, inclusion and manager effectiveness scores. In 2022, Albemarle’s culture index was above 70% and above industry benchmarks for all three of these factors. Given the rapid expansion of our workforce, including new roles in new locations and changing workforce demographics, we are focused on improving the onboarding experience and maintaining our strong culture as we continue to grow.



Community and Stakeholder Engagement

Community and Stakeholder Engagement

STAKEHOLDER ENGAGEMENT IS AT THE HEART OF HOW WE DO BUSINESS. OUR AIM IS TO ESTABLISH LONG-TERM RELATIONSHIPS WITH OUR STAKEHOLDERS AND THE COMMUNITIES IN WHICH WE OPERATE.

WE STRIVE FOR MEANINGFUL ENGAGEMENT BASED ON OUR CORE VALUES, AND OPEN AND HONEST DIALOGUE. WE REGULARLY ENGAGE WITH OUR STAKEHOLDERS TO SHARE INFORMATION AND GATHER FEEDBACK ON OUR BUSINESS PRACTICES.

EMPLOYEES	SHAREHOLDER/ INVESTMENT COMMUNITY	INDUSTRY AND TRADE ASSOCIATIONS	GOVERNMENT AND REGULATORS	NGOs
<ul style="list-style-type: none"> • Regular communication on company initiatives, news and performance through our: <ul style="list-style-type: none"> » Company intranet » Corporate website » Quarterly town hall meetings hosted by our CEO and GBU's » Written memos » In-person meetings » CONNECT groups • Dedicated email address for employee inquiries on business-related matters • In 2022, held first Sustainability Town Hall 	<ul style="list-style-type: none"> • Regular updates through our SEC filings, publicly available quarterly earnings calls and other presentations to industry and investor groups that are webcast and available on our website • In-person and virtual conference attendance and non-deal roadshows • Direct outreach to address investor concerns and questions • Site visits • In 2022, held second sustainability webcast for investors 	<ul style="list-style-type: none"> • Collaboration with global trade associations to conduct and publish peer-reviewed scientific research and make these studies available to government agencies and other interested parties. For a list of our associations, please see our website • Speaking and presenting at conferences 	<ul style="list-style-type: none"> • Consistent engagement via phone, email, or in-person meetings • The Albemarle Corporation Political Action Committee (Albemarle PAC) supports federal candidates who have demonstrated support for the principles to which the company is dedicated. Political contributions are funded by voluntary contributions from eligible employees. Our Political Contribution Policy was revised in 2022 and provides guidance on Albemarle's approach to political contributions 	<ul style="list-style-type: none"> • Regular and ongoing engagement with global, regional and national NGOs on environmental, social and governance issues to demonstrate the benefits of our products and the sustainable operation of our facilities

OUR APPROACH

ALBEMARLE'S EXTERNAL AFFAIRS TEAM IS RESPONSIBLE FOR THE STRATEGY AND EXECUTION OF EXTERNAL AFFAIRS INITIATIVES. IN 2022, WE WELCOMED OUR FIRST CHIEF EXTERNAL AFFAIRS OFFICER (CEAO), WHO REPORTS TO THE HS&E COMMITTEE OF THE BOARD QUARTERLY AND TO THE FULL BOARD AT LEAST ANNUALLY.

The global, matrixed External Affairs team includes members from key jurisdictions, such as Chile, Australia, China and Europe; the core business units, Energy Storage and Specialties; and cross-functional practices, such as Communications, Government and Regulatory Affairs, Community Relations, and Investor Relations and Sustainability. They set standards and share best practices and resources to provide regional teams the support needed to make decisions that impact local operations and stakeholders.

Our global [Community Relations and Indigenous Peoples Policy](#) provides direction and guidance for our community engagement activities.

The External Affairs leadership team is responsible for all external stakeholder engagement and for setting and executing our External Stakeholder strategy to establish long-term and sustainable relationships.

Our strategy includes:

- **Regulatory advocacy:** advocating for Albemarle's interests with legislative and regulatory agencies.
- **Community relationships:** partnering with the Albemarle Foundation and site leaders to maximize local, positive impact throughout the communities where we live and operate.
- **Leverage business growth:** collaborating with government and external organizations to support sustainable growth initiatives.
- **Sustainability:** educating government officials, communities and NGOs on our sustainable operations and generating dialogue to develop goodwill and shared understanding of our sustainability stewardship.
- **Risk mitigation:** proactively engaging with governments to develop strong relationships with policy and decision-makers and diplomatic officials; and engaging with local communities, including Indigenous communities, to develop strong and sustainable relationships and a positive legacy through shared value; partnering with corporate communications to build and protect the company brand globally and in regions across key stakeholder groups.



ACTIVITIES AND HIGHLIGHTS

Indigenous Relations and Engagement

In locations where Albemarle's operations are in areas with Indigenous populations, our External Affairs team works closely with community leaders to demonstrate respect for the human rights and culture of Indigenous peoples and collaborate on economic development. We support the principles of the UN Declaration on the Rights of Indigenous Peoples and the International Council on Mining & Metals Position Statement on Indigenous Peoples and Mining. We are committed to preventing human rights abuses consistent with the UN Guiding Principles on Business and Human Rights.

Chile

Albemarle was the first company in Chile to recognize the Indigenous Atacameñan groups living in Salar de Atacama as the first inhabitants of the territory. The Council of Atacameñan People (CPA), which represents 18 communities and 6,000 inhabitants in the area, receives 3.5% of Albemarle's Chilean revenue through a voluntary agreement between Albemarle, the CPA, and these 18 communities. Under this agreement, we meet with the CPA monthly to discuss and address community concerns and jointly monitor water levels in the Salar. We have funded projects such as housing, a sewage treatment plant, a community center and a museum highlighting the rich heritage and history of the people of Machuca.

Australia

In line with Albemarle's commitment to establishing respectful relationships between our company and the communities we work in, Albemarle has commenced development of our first Reconciliation Action Plan (RAP) in Australia. RAPs are accredited in Australia by Reconciliation Australia, and Albemarle has registered the development of our RAP with Reconciliation Australia.

The RAP will provide us with a framework to guide all aspects of the company's Indigenous engagement in Australia and will articulate transparently how we engage with Australia's First Nations people and what we are doing as a company to progress reconciliation in the areas in which we work. Many of our employees at the Kemerton Lithium Hydroxide Processing facility have undertaken a two-day cultural immersion program to increase their knowledge and understanding of First Nations people, cultural protocols and history. An online program is being developed for inclusion in our Australian induction program for all employees.

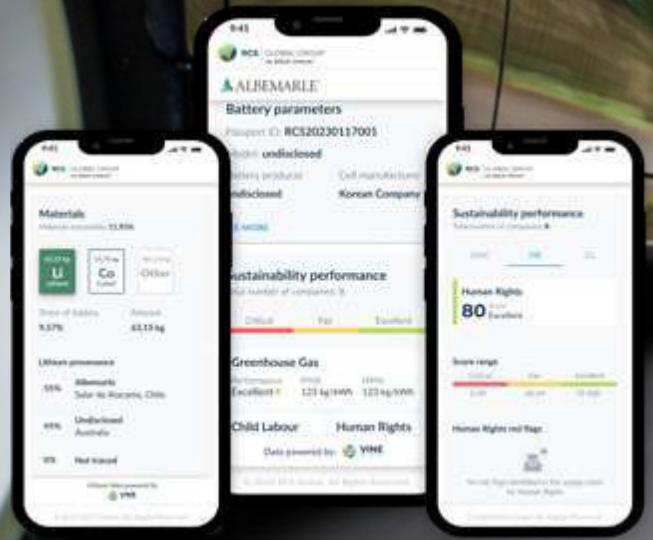
To further support employees' access to First Nations cultural development activities and educational programs, Albemarle has joined Reconciliation WA, which provides a range of opportunities that focus on the creation of social and economic positive outcomes for First Nations people.

United States

The Albemarle Kings Mountain Community Advisory Panel (CAP) offers Albemarle an opportunity to partner and engage with members of the community on a monthly basis on matters that involve and impact residents, local businesses and other organizations. Comprised of a cross-section of stakeholders from Kings Mountain and Cleveland County, CAP members represent various interest groups, including education, elected officials, environmental non-governmental organizations, faith-based groups, health and safety, impacted communities near the mine, public administration, small businesses, tourism, tribal nations and youth.

Albemarle town halls are forums for formal presentations on project updates that we share with the community. All town halls are open to the public and include subject matter expert presentations and the opportunity for community members to ask questions. In 2022, we held two well-attended town halls.

We endeavor to hire locally where possible. Approximately 35% of our employees at our Salar facility are from local Indigenous communities.



BATTERY PASSPORT INITIATIVE

WE COLLABORATED WITH RCSGLOBAL (WHO COORDINATED THE DATA COLLECTION AND ISSUED THE DIGITAL PASSPORT ON BASIS OF BLOCKCHAIN TECHNOLOGY) AND EV SUPPLY CHAIN PARTNERS UMICORE AND SAMSUNG SDI. THE PILOT ENTAILED REALISTIC SUSTAINABILITY DATA FROM 8 DIFFERENT COMPANIES IN THE LITHIUM AND COBALT SUPPLY CHAINS WITH INITIAL FOCUS ON GHG-EMISSIONS, HUMAN RIGHTS AND CHILD LABOR.

INDUSTRY ASSOCIATIONS

AS PART OF OUR EXTERNAL AFFAIRS ENGAGEMENT, WE WORK WITH GOVERNMENTS AND INDUSTRY ASSOCIATIONS TO ADVOCATE ON BEHALF OF ALBEMARLE’S BUSINESS INTERESTS. OUR EU DIRECTOR FOR EXTERNAL AFFAIRS CHAIRS THE SUSTAINABILITY COMMITTEE OF EUROMETAUX, THE EU NON-FERROUS METALS ASSOCIATION. ALBEMARLE IS ALSO A FOUNDING CORE MEMBER OF THE INTERNATIONAL LITHIUM ASSOCIATION (ILiA), A NONPROFIT TRADE BODY THAT REPRESENTS THE GLOBAL LITHIUM INDUSTRY.

Our Vice President of Sustainability, chairs the ILiA Sustainable Lithium Subcommittee that works on standardization of the carbon footprint calculation and freshwater use in the lithium industry. These environmental footprints will play an important role in regulations such as the carbon border tax (CBAM), ecodesign, battery passport and EU taxonomy, a classification system that identifies environmentally sustainable economic activities to correctly inform investors and policymakers and guide investment and regulatory decisions. Lithium production is currently not part of the EU taxonomy, even though it is a critical element in the transition to a carbon-free world.

In 2022, Albemarle participated in the world’s largest multistakeholder pilot to establish a sustainable battery value chain by 2030. The **Battery Passport Initiative**, which was presented by the Global Battery Alliance at the World Economic Forum, delivers real-time monitoring of electric batteries and reporting of problems affecting performance and battery life. It facilitates traceability and transparency of the EV battery supply chain and represents a major advance toward improving transparency of the automotive and energy battery industries in support of the global energy transition.

A representative list of Albemarle’s industry associations is available on our [website](#).

In 2022, Albemarle participated in the Battery Passport Initiative, which champions transparency in the EV battery supply chain by providing vehicle owners with data regarding the source of the materials used in the production of their EV battery.

Community Engagement Around the World

THE FOLLOWING REPRESENTS A SAMPLING OF THE ENGAGEMENT INITIATIVES OF THE ALBEMARLE FOUNDATION AND THE GOVERNMENT AND COMMUNITY AFFAIRS TEAM AROUND THE WORLD IN 2022.



We funded the renovation of a gym and installation of a scoreboard as part of our commitment to the Boys & Girls Club in Magnolia, Arkansas.



We hosted the Kings Mountain Community Advisory Panel for a mine site tour and explained our plans for reopening the mine.



We planted 500 tree saplings to help restore forest area in the Harz Mountains region near our site in Langelsheim, Germany.



We sponsored the 2023 Albemarle-South West Academy of Sport Community Fun Run in Bunbury, Australia.



We helped renovate the campus of the Sunflower Community Children's Center, a community center in Shanghai, China.



We packed over 1,000 backpacks and built 90 literacy kits for students in Charlotte, North Carolina.



We hosted a group of interested local residents for a site tour during neighbor days at Albemarle Amsterdam.



We participated in the graduation ceremony of the only student from a rural school in the Indigenous community of Rio Grande in Chile.

FOUNDATION 2022 HIGHLIGHTS

\$5.7M

Grants Distributed

\$685,600

Employee Contributions
(U.S. only)

\$60,000

Scholarships Distributed

12,500+

Employee Volunteer Hours

Increased our employee match program threshold from

\$2,500 to \$3,000

Albemarle Foundation

WE GROW THE GOOD FOR A MORE RESILIENT WORLD



AT ALBEMARLE, WE BELIEVE THAT PROMOTING AND SUPPORTING THE CHARITABLE AND VOLUNTEERING ENGAGEMENT OF OUR EMPLOYEES IS AN IMPORTANT COMMITMENT THAT CONTRIBUTES TO STRONG, HEALTHY AND RESILIENT COMMUNITIES AROUND THE WORLD. FOUNDED IN 2007, ALBEMARLE FOUNDATION IS A U.S.-BASED, PRIVATE, ENDOWED 501(C)3 ENTITY WITH A MISSION TO MAKE A POSITIVE, SUSTAINABLE DIFFERENCE IN THE COMMUNITIES WHERE ALBEMARLE EMPLOYEES LIVE AND OPERATE.

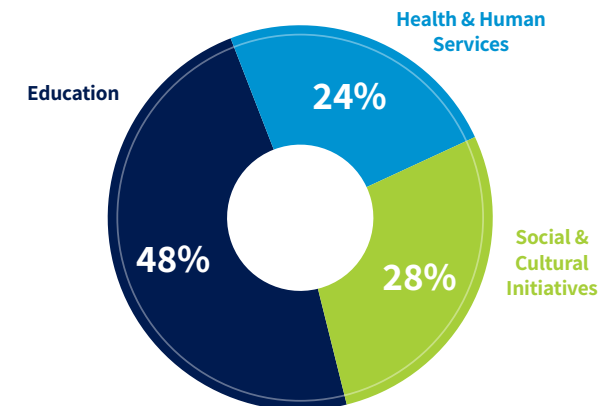
Albemarle Foundation is governed by a Board of Directors and collaborates with advisory groups at Albemarle locations. The advisory groups are comprised of Albemarle employees and retirees who serve as the local stewards of the Foundation. They assist in identifying needs in their communities, research and screen opportunities for employee engagement and collaborate with the Foundation through the community giving process.

The Foundation is aligned with Albemarle's commitment to building a diverse, equitable and inclusive workplace where everyone feels valued. In 2022, we continued our partnership with community partners and Albemarle CONNECT groups. The groups worked with several organizations through employee engagement and volunteerism, and for each volunteer engagement, the Foundation awarded grants to the benefiting organizations. In 2022, Albemarle's Latinx CONNECT selected five organizations to receive scholarship

and program funding from the Foundation towards the advancement in education and workforce development in the Latin community.

For additional information on the work of Albemarle Foundation, see our [Foundation webpage](#).

GRANT DISTRIBUTIONS



Sustainable Value Creation



Business and Financial Resilience

INTEGRATING SUSTAINABILITY WITH PROFITABILITY

OUR APPROACH

AS A GLOBAL MARKET LEADER WITH DURABLE COMPETITIVE ADVANTAGES, ALBEMARLE HAS A TRACK RECORD OF STRONG FINANCIAL AND OPERATIONAL PERFORMANCE THAT CREATES VALUE FOR ALL OUR STAKEHOLDERS.

ACTIVITIES AND HIGHLIGHTS

In 2022, Albemarle reported strong financial results. We delivered net sales of approximately \$7.3 billion, more than double 2021 figures, and adjusted EBITDA of approximately \$3.5 billion, nearly four times that of 2021. In 2022, we continued to build on our strengths and developed additional areas of competitive advantage, including expertise in capital projects, enhanced sustainability performance and a comprehensive operating model to drive operational excellence. To maximize value, we increased our focus on customer-centric collaboration, expertise in next-generation materials and investments in innovative technology, all of which contribute to creating a more resilient and sustainable world.

ENTERPRISE RISK MANAGEMENT

Our Approach

In 2022, we prioritized risk management to help ensure the resiliency of our company. We created the role of Chief Risk Officer, who is responsible for our Enterprise Risk Management (ERM) program.

The ERM program identifies and defines risks that could significantly impact company shareholder value on a sustained or permanent basis. The ERM program helps to assess key risks, identify gaps, and develop and implement risk mitigation efforts. This information is integrated into our annual and long-range planning processes. Quantitative and qualitative factors are considered for rating each identified risk regarding severity and likelihood to determine which risks should be prioritized. The ERM program involves extensive engagement with senior company leaders worldwide, and risk mitigation and management activities are tested with a broad group of relevant stakeholders. The Chief Risk Officer regularly reports to the Audit & Finance Committee, generally highlighting those risks identified as the most significant and reviewing the company's methods of risk assessment and risk mitigation strategies. In addition, each GBU addresses its most significant risks in its periodic strategy updates to the Board.

Activities and Highlights

In 2022, we updated our ERM framework, which requires risk owners to specifically consider sustainability factors when assessing the impact, likelihood and severity of a risk. GBUs and functions were required to apply the framework to reaffirm existing risks while identifying emerging ones. These risks, and associated remediation, are explicitly incorporated into their long-term strategy planning, annual operating and business continuity plans. In 2023, we will migrate our risk register to a new ERM platform hosted by AuditBoard, which will enhance our ability to track changes in our residual risk profile and progress with mitigating actions.



CYBER RISK

AT ALBEMARLE, WE UNDERSTAND THAT CYBER RISK IS BUSINESS RISK. INCREASED RELIANCE ON TECHNOLOGY, AMPLIFIED DATA INFLOWS, THE DIGITIZATION OF BUSINESS PROCESSES, AS WELL AS WORKFORCE REMOTEABILITY HAVE ALL CONTRIBUTED TO AN INCREASE IN CYBER RISK. WE BUILD RESILIENCY AGAINST POTENTIAL CYBER THREATS BY INVESTING IN THE SECURITY PROGRAMS, PERSONNEL AND TECHNOLOGIES NECESSARY TO IDENTIFY, PRIORITIZE AND REDUCE OUR CYBER RISK EXPOSURE.

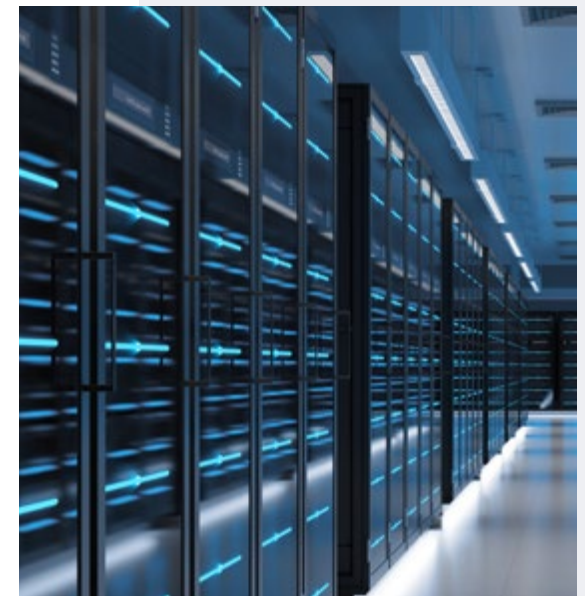
OUR APPROACH

Our Chief Information Security Officer (CISO) holds the executive responsibility for Albemarle's information and data security. A deep bench of cybersecurity professionals is responsible for maintaining a zero-trust global information systems environment that focuses on least privilege, least functionality, and network segmentation and segregation throughout the landscape using a layered approach (defense-in-depth strategy). Albemarle's leadership receives monthly updates on security operations and governance functions as part of monthly Information Security Council (ISC) meetings briefed by our CISO.

Cybersecurity risks and potential costs are evaluated as a part of business operations. All business-requested technologies must complete a thorough security and contract review before being approved for use. All Albemarle manufacturing sites have formalized business continuity plans prioritized by site-specific business impact analysis that integrate within the corporate crisis management response plan and enterprise risk management program.

Albemarle's cybersecurity program is aligned to the National Institute of Standards and Technology (NIST) cybersecurity framework (CSF), under which all applicable legal, regulatory and leading industry security practices are identified and standardized into policy and practice throughout the information technology life cycle processes. An annual security assessment is performed independently to evaluate security maturity against the NIST CSF and identify any potential gaps or key risks. In 2022, we improved our performance on 20 of the 23 NIST CSF subcategories versus 2021. Albemarle has defined policies and procedures aligned with NIST and ISA/IEC Standards, which govern the classification, protection and use of sensitive company data within the Albemarle environment. All information assets are inventoried, classified, prioritized and protected based on the respective risk, with appropriate cybersecurity controls placed on those assets.

Albemarle has implemented technology and infrastructure to more securely support our remote workers, which includes mandatory multifactor authentication (MFA) and virtual private network (VPN) technologies for all external users. All Albemarle employees receive quarterly security training and routine phishing tests to improve awareness and response actions. We also conduct frequent cyber response drills and ransomware risk exercises.



GEOPOLITICAL RISK

ALBEMARLE AND OUR PARTNERS CURRENTLY OPERATE MORE THAN 25 PRODUCTION AND RESEARCH AND DEVELOPMENT (R&D) FACILITIES, IN ADDITION TO ADMINISTRATIVE AND SALES OFFICES, AROUND THE WORLD.

As of December 31, 2022, we served approximately 1,900 customers in around 70 countries and derived over 75% of our profits from outside North America. As a result, our global presence exposes us to geopolitical events that can have significant effects on our business operations. These risks can include changes in host country access to natural resources, proximity to countries in turmoil, developments in government policy decisions, changes ahead of elections and regime changes, operating in environments where corruption is present, and understanding and managing local perceptions of foreign operators.

OUR APPROACH

Our Risk and External Affairs teams help to identify and manage our geopolitical risk to help us address the increasingly global nature and complexity of our business by proactively engaging with governments to establish long-term and sustainable relationships. When considering entering a new market, our Risk team directs country-level risk assessments and due diligence.

We are also faced with asymmetric tax and regulatory regimes around the world, which add a layer of complexity to the management of our risks. We proactively monitor regulatory and legislative initiatives and changes that have an impact on our business by engaging governments, key stakeholders and communities. A key aspect of our mitigation strategy is the diversification of our resources and conversion capacity through the acquisition of resources and the building and acquisition of plants in different jurisdictions, spread across several continents.

The war in Ukraine has had far-reaching implications for the global business community. Albemarle does not have employees or operations in Ukraine, and we have closed our sales office in Moscow. In response to Russia's actions, Albemarle suspended shipment of products and technologies to Russia.



TAX RISK

ALBEMARLE STRIVES TO COMPLY WITH ALL APPLICABLE TAX LAWS AND REGULATIONS. WE ACTIVELY WORK TO MANAGE AND MINIMIZE TAX RISKS, IMPLEMENT APPROPRIATE TAX PLANNING STRATEGIES TO MAXIMIZE CASH FLOWS, REDUCE BUSINESS COSTS AND ENHANCE SHAREHOLDER VALUE.

The key objectives for Albemarle's tax functions are as follows:

- To ensure compliance with reporting obligations.
- To manage Albemarle's tax risk and reputation.
- To maintain a stable and sustainable effective tax rate.
- To support Albemarle's business with relevant and timely tax advice.

OUR APPROACH

Accountability for [Albemarle's Global Tax Strategy](#) and management of our tax risk ultimately rests with the Chief Financial Officer (CFO), with delegation from the Board. Significant tax developments and updates regarding Albemarle's tax position and risks are regularly communicated to the Board by the CFO, and Board approval is sought for updates to tax policies and other material matters where appropriate.

HUMAN RIGHTS RISK

AS A COMPANY WITH OPERATIONS AROUND THE WORLD, WE UNDERSTAND THE RESPONSIBILITY ALBEMARLE HAS TO RESPECT AND UPHOLD THE HUMAN RIGHTS OF OUR EMPLOYEES, WORKERS IN OUR SUPPLY CHAIN, MEMBERS OF OUR COMMUNITIES AND OTHER STAKEHOLDERS. WE BELIEVE THAT BUSINESSES CAN ONLY FLOURISH IN SOCIETIES WHERE HUMAN RIGHTS ARE PROTECTED AND RESPECTED. AS SUCH, WE RECOGNIZE THE HUMAN RIGHTS OF OUR STAKEHOLDERS AS EXPRESSED IN THE INTERNATIONAL BILL OF HUMAN RIGHTS AND THE INTERNATIONAL LABOR ORGANIZATION'S DECLARATION ON FUNDAMENTAL PRINCIPLES AND RIGHTS AT WORK. OUR COMMITMENT AND RESPONSIBILITY TO UPHOLD HUMAN RIGHTS THROUGHOUT OUR VALUE CHAIN ARE EXPRESSED WITHIN OUR HUMAN RIGHTS POLICY.

OUR APPROACH

Our [Code of Conduct](#) articulates our overarching commitment to respect our colleagues, customers, suppliers and other stakeholders. This is supplemented by Albemarle's [Human Rights Policy](#), [Community Relations and Indigenous Peoples Policy](#), [Global Labor Policy](#) and [Health, Safety, Security and Environmental Policy](#), which provide direction and guidance to help ensure that the human rights of such stakeholders are respected.

Albemarle's Chief Risk Officer is responsible for the management of our human rights risk program. In 2022, our risk assessment framework was updated to specifically address potential human rights-related impacts of any risk event.

We recognize the human rights of Indigenous peoples in culturally sensitive locations, such as Chile and Western Australia, where our sites are located on Indigenous peoples' lands. We respect those rights through clear policy commitments, due diligence initiatives, formal community

agreements and accessible grievance mechanisms for reporting concerns. For additional information on our Indigenous relations and engagement, see [page 67](#).

In 2022, Albemarle engaged an external legal firm to conduct human rights risk assessment at our La Negra site in Chile and at our JBC joint venture in Safi, Jordan, including desktop research and engagement with external stakeholders through interviews, focus groups and participation in meetings with community members and other stakeholders. Consistent with the UN Guiding Principles on Business and Human Rights framework, these assessments focused on identifying risks from the perspectives of rights-holders and also sought to identify opportunities for Albemarle to further improve its compliance with prominent international frameworks, such as the Voluntary Principles on Security and Human Rights. In 2023, we plan to undertake a similar risk assessment at our newly acquired lithium conversion facility in Qinzhou, China.

These assessments, and those previously conducted in Chile and China in 2021, identified that our most salient human rights risks related to: natural resource management; workplace safety and labor; diversity, equity and inclusion; engagement with Indigenous communities; and responsible sourcing. Our approach and key initiatives to mitigate these risks are described in relevant sections of this report. In addition, the assessments identified improvement opportunities, including steps to further mitigate risks in security arrangements, enhance grievance mechanisms and strengthen ongoing engagement with local communities regarding cultural heritage and other matters. We continue to refine and implement action plans to effectively address these risks and enhance our due diligence processes.

We also conduct appropriate due diligence on our direct vendors and, in higher-risk jurisdictions, on other indirect vendors in our supply chain to help ensure that prospective and existing vendors comply with applicable laws, supply with integrity, minimize their adverse impact on the environment and local communities, and provide a safe and healthy workplace while respecting basic human rights of employees and other stakeholders.

CLIMATE RISK

ALBEMARLE SUPPORTS THE GOALS OF THE [PARIS AGREEMENT](#) TO AVOID CLIMATE CHANGE BY LIMITING GLOBAL WARMING TO WELL BELOW 2 DEGREES CELSIUS AND IS PURSUING EFFORTS TO LIMIT IT TO 1.5 DEGREES CELSIUS. OUR AMBITION IS TO ACHIEVE NET-ZERO CARBON EMISSIONS BY 2050 AND TO GROW OUR ENERGY STORAGE BUSINESS IN A CARBON-INTENSITY NEUTRAL MANNER THROUGH 2030. WE BELIEVE THAT ADDRESSING CLIMATE CHANGE STRENGTHENS OUR COMPETITIVE POSITION, IMPROVES OUR OPERATIONAL EFFICIENCY AND CREATES VALUE FOR OUR STAKEHOLDERS.

OUR APPROACH

In 2021, we issued the [Albemarle Climate Strategy](#), which outlines our approach and responsibility to address the impact of our operations on the environment. We are committed to achieving science-based aligned climate targets for our Specialties business and Ketjen subsidiary. We recognize that reducing our carbon footprint is a multidecade, continuous improvement journey, which requires investment in technology, infrastructure and people, as well as partnerships with suppliers and customers. We are currently building out our net-zero roadmap.

We file disclosure under CDP to help manage our climate impacts. Details of our approach to emissions reductions can be found in the [Natural Resource Management](#) section of this report. Albemarle's executive leadership

and our Board review progress on our climate strategy on an ongoing basis, and the Health, Safety & Environment Committee of our Board reviews targets, quarterly. The Audit & Finance Committee of our Board reviews climate change as it relates to ERM.

We support the recommendations published by the TCFD. Also, in 2022, we worked with third-party consultants to identify climate hot spots in key Albemarle geographic areas. We then conducted an analysis using different climate scenarios for 2030 and 2050 to help further inform our enterprise risk management work and to identify key transition and physical climate-related risks and opportunities in alignment with TCFD guidance. To learn more, see our TCFD report on [page 90](#).



Business Ethics and Regulatory Compliance

AT ALBEMARLE, WE BELIEVE THAT REGULATORY COMPLIANCE AND BUSINESS ETHICS ARE THE FOUNDATIONS FOR GOOD BUSINESS PRACTICE. WE WORK TOWARD UPHOLDING THE HIGHEST LEVELS OF ETHICS AND INTEGRITY IN COMPLYING WITH THE LAWS AND REGULATIONS OF THE JURISDICTIONS IN WHICH WE OPERATE. OUR STAKEHOLDER RELATIONSHIPS ARE BUILT ON THE BASIS OF TRANSPARENCY, HONESTY AND TRUST.

OUR APPROACH

Albemarle's Chief Risk Officer is responsible for our ethics & compliance program. The cornerstone of our compliance program is Albemarle's [Code of Conduct](#) (Code). The Code, which is available in English, Dutch, German, Chinese and Spanish, outlines the ethical expectation we have for our employees, officers and directors for the way they conduct their day-to-day business.

We also expect suppliers, contractors, agents, distributors and any others acting on our behalf to be familiar with our Code and to comply with Albemarle's Code of Conduct for Business Partners ([Business Partner Code](#)) and applicable policies. We seek to influence our non-controlled joint ventures and our partners in those joint ventures to help ensure that the joint venture adopts requirements similar to those in the Code and our policies.

Our interactive eCode is accessible to all Albemarle employees on their computers, tablets and smartphones. In 2022, Albemarle employees consulted the eCode over 3,000 times, with many referring to it on multiple

occasions. We track this data to allow us to identify locations where targeted campaigns to raise awareness of the Code may be deployed.

ACTIVITIES AND HIGHLIGHTS

In 2022, we provided the following training:

- Holistic, scenario-based "core values in action" training for those employees involved in capital projects.
- Similarly comprehensive training for those employees engaging with government officials (which included anti-bribery and corruption compliance).
- Training for new joining members of the GBU sales teams and ad hoc training events for regional sales teams.

Detailed training completion statistics, including those specifically related to anti-corruption, are addressed in our [Performance Data](#).



RISK ASSESSMENT

We conduct periodic assessments of specific ethics and compliance risks of importance to our stakeholders, such as anti-corruption. These assessments also involve an assessment of the effectiveness of our existing controls and are reported in a manner consistent with our ERM framework. Through day-to-day support of Albemarle's global business units and functions and associated analytics, the compliance team maintains a real-time risk profile in areas such as third-party risk management and employee expenses. The cultural health of our organization is assessed through a combination of objective data (e.g., use of our Integrity Helpline) and feedback from employees (e.g., pulse surveys).

BUSINESS ETHICS GOVERNANCE

Albemarle has developed and maintains several policies that underpin our sustainability framework and underline our commitment to ethical business practices:

- Code of Conduct
- Business Partner Code of Conduct
- Anti-Corruption Policy
- Antitrust Policy
- Gifts and Hospitality Policy
- Global Community Relations and Indigenous Peoples Policy
- Global Labor Policy
- Health, Safety, Security and Environmental Policy
- Human Rights Policy
- Political Contribution Policy

Please visit [Albemarle Policies](#) for the full text of many of our policies.



IN 2022, 100% OF OUR WORKFORCE COMPLETED THEIR ASSIGNED CODE OF CONDUCT TRAINING. THIS TRAINING INCLUDED CONTENT ON GIFTS, HOSPITALITY, CONFLICTS OF INTEREST, BUSINESS TRAVEL AND EXPENSES, BULLYING AND HARASSMENT, AND SPEAKING UP. WE ALSO PROVIDE IN-DEPTH COMPLIANCE TRAINING TO EMPLOYEES ACCORDING TO POTENTIAL ETHICS AND COMPLIANCE RISKS THEY MIGHT FACE.

IN LATE 2022, ALBEMARLE JOINED THE INTEGRITY DISTRIBUTED CONSORTIUM, A NOT-FOR-PROFIT INITIATIVE THAT ALLOWS COMPANIES TO CONTRIBUTE THEIR ANTI-FRAUD AND ANTI-CORRUPTION INTELLIGENCE IN A SECURE, ANONYMOUS PLATFORM. THE PLATFORM ALLOWS ORGANIZATIONS TO USE ALGORITHMS AND MACHINE LEARNING TO DETECT POTENTIAL FRAUD AND CORRUPTION.

ANALYTICS AND MONITORING

Real-time analytics provides us with insight into our ethics and compliance program and helps us to direct resources where they are needed. This monitoring program leverages a publicly recognized analytics solution that our ethics and compliance team developed in coordination with our IT Department. Our monitoring program is supplemented by periodic ethics and compliance audits of Albemarle sites, non-controlled joint ventures and third parties.

SPEAK UP

When employees or other stakeholders recognize or suspect activity that is potentially in violation of our Code of Conduct or an applicable law, they are encouraged to speak up. Employees may do so anonymously and without fear of retaliation. Concerns can be raised with employees' supervisors, the Chief Risk Officer or members of his team, the General Counsel or members of the Legal Department, the Chair of the Audit and Finance Committee of the Board, the Human Resources Department, or via our Integrity Helpline. The Helpline, which is operated by an independent third party in a manner consistent with the laws of the countries in which we do business, is available 24 hours a day, seven days a week, and in multiple languages.



We measure our company's speak-up culture by the number of employee reports per 100 employees. This includes unique contacts (incident reports, allegations and specific policy inquiry questions) from all reporting channels received during the course of a calendar year. In their 2022 Ethics & Compliance Hotline and Incident Management Benchmark Report, Navex reported an industry median of 1.3 reports per 100 employees. In 2022, Albemarle received 1.7 reports per 100 employees, up from 1.4 in 2021. Unlike the Navex Benchmark, the Albemarle figures exclude policy inquiry questions.

BRIBERY AND ANTI-CORRUPTION

Albemarle takes a multifaceted approach to managing anti-corruption risk, which is not limited to snapshot site-based assessments and includes:

- Due diligence and pre-approval for use of compliance-sensitive third parties such as distributors and government-facing suppliers and continuous monitoring of such third parties.
- Due diligence and pre-approval of compliance payments such as charitable donations, community project contributions and commercial sponsorships.
- Pre-approval for gifts and hospitality above a specified threshold and monitoring of employee expenses.
- Global anti-corruption risk assessment as part of the company's broader ERM program. This is supplemented by periodic site audits, which include anti-corruption. In 2022, four site audits were conducted by Internal Audit.



PRODUCT STEWARDSHIP

We seek to help ensure that our products comply with international, national and local regulatory requirements and that they are safe when used for their intended purpose. Albemarle's Global Product Stewardship (GPS) team is responsible for preparing safety data sheets (SDS) which are required by law in most jurisdictions where our products are sold. Safety data sheets provide and communicate information on our testing results, product details and information on the safe handling and disposal of our products throughout the value chain. Our GPS team also manages regulatory activities, including product registrations. We use computer modeling to conduct testing on our products, wherever possible, to avoid animal testing where the law permits, and we have an internal policy that governs our testing procedures.

We know that our sustainability practices are a key differentiator for us in the marketplace. Customers look to us to create products and services that support their business success and help them achieve their own sustainability goals. Our dedicated business development team engages with our customers on a continual basis. Through a collaborative and embedded product innovation model, we obtain real-time feedback on Albemarle's business practices and deep insights into our customers' businesses. This helps us accelerate the development of innovative and differentiated materials that meet our customers' evolving needs.

REGULATORY COMPLIANCE

Albemarle's GPS Team is also responsible for product regulatory activities and supports key HS&E initiatives. We strive to help ensure that Albemarle products are safe and compliant with all regulatory requirements throughout their life cycle. The global regulatory landscape for the specialty chemicals industry is complex and constantly evolving. Albemarle employees responsible for managing regulatory affairs regularly engage with governments and regulators and monitor evolving regulations not only to maintain compliance but also to prepare for emerging regulations in support of our GBU expansion plans and to bring next-generation products to the market. We also help ensure that our products have been rigorously tested and evaluated to help identify any product safety hazards or risks to human health and the environment.



Value Chain Excellence

IN LINE WITH OUR CORE VALUE OF COLLABORATION, WE PRIDE OURSELVES ON BUILDING RELATIONSHIPS WITH BOTH OUR UPSTREAM AND DOWNSTREAM PARTNERS TO CREATE A WORLD-CLASS VALUE CHAIN, FROM RAW MATERIALS SOURCING TO PRODUCT DELIVERY AND USE. OUR ABILITY TO SUPPLY MARKET-LEADING PRODUCTS AND SERVICES TO OUR CUSTOMERS, DELIVERED TO THEIR SATISFACTION AND MANUFACTURED SUSTAINABLY, DEPENDS ON HAVING IN PLACE A RELIABLE AND APPROPRIATELY TRANSPARENT SUPPLY CHAIN. WE ALSO WORK WITH OUR CUSTOMERS TO DEVELOP NEW AND INNOVATIVE, NEXT-GENERATION PRODUCTS THAT DRIVE TRANSFORMATION IN THE MARKETPLACE.

OUR APPROACH

Our Chief Supply Chain Officer has cross-functional oversight and mobilization capabilities across the entire Albemarle organization to enable end-to-end supply chain optimization and traceability. The Chief Supply Chain Officer's responsibilities also involve anticipating, mitigating and managing disruptions, including improving exception-based processes that require the mobilization of cross-functional teams to meet short-term deliverables and increase supply chain resilience. We are building the supply chain of the future, and in 2022, we developed a procurement playbook that positions us for growth over the next decade. We invested in technology to enable data-driven decision-making in our enterprise-wide procurement activities, and we rolled out the first phase of our sustainable procurement strategy built into our supplier relationship management process. This includes renewable energy procurement, more information on which can be found on [page 33](#).

ACTIVITIES AND HIGHLIGHTS

Our Supply Chain Development & Excellence function within the Enterprise Supply Chain organization was established for the purpose of driving efficiency and effectiveness in our procurement processes. Through the group, we have strengthened our supplier relationships and managed risks associated with our supply chain. Our One Procurement policy

framework is designed to help ensure alignment across the company for high-quality decision-making around sustainable supply, suppliers and life cycle costs and embeds functional, ethics and compliance requirements into our source-to-pay processes. One Procurement centralizes and standardizes essential procurement functions and capabilities and drives unified procurement behavior across the entire Albemarle organization while still enabling GBU ownership over key supply chain activities. We continue to collaborate daily with suppliers for alignment with Albemarle's core values.

SUSTAINABLE SUPPLY CHAIN AND RESPONSIBLE SOURCING

In accordance with our Code of Conduct, we require all Albemarle employees to:

- Source responsibly from producers and suppliers that meet our core values expectations.
- Conduct tender processes with transparency, treat vendor bids as confidential, and not provide any current or prospective vendor with an unfair or improper advantage.
- Avoid actual or potential conflicts of interest arising from the selection or use of a vendor.
- Treat our suppliers with respect, communicate our requirements with clarity and transparency, and pay valid invoices on time.

We work to help ensure that our suppliers are socially, legally and ethically responsible – and treat the people who work for them fairly and with dignity. We conduct due diligence to mitigate against risks related to human rights, health and safety, the environment, corruption, fraud and antitrust. Albemarle suppliers must comply with Albemarle's Business Partner Code, available in eight languages. We further expect our direct suppliers to communicate our expectations for responsible sourcing with their suppliers.

To further mitigate supply chain risks, we:

- Take prompt steps to investigate and remediate any indicators of Business Partner Code violations, including terminating supplier relationships where appropriate.
- Pay only for goods and services provided and monitor our suppliers for evidence of fraud or bribery.
- Provide appropriate ethics, compliance and/or sustainability-related training to Albemarle employees and suppliers.
- Conduct periodic audits of business partners.

For more information about supplier diversity, please see our [Diversity, Equity & Inclusion](#) section.

IN 2022, WE WORKED TO FURTHER ENHANCE OUR SUPPLIER QUALIFICATION PROCESSES, AND WE CONTINUED AN IN-DEPTH ASSESSMENT OF FORCED LABOR, CHILD LABOR AND OTHER HUMAN RIGHTS RISKS IN OUR EXTENDED SUPPLY CHAINS.

To mitigate potential exposure under new and proposed legislation relating to responsible sourcing and to support compliance with international standards such as the UN Guiding Principles on Business and Human Rights, OECD Guidance, IRMA Standards, and standards issued by the Responsible Minerals Initiative (RMI), we conducted risk-based supply chain mapping of production inputs in the three Global Business Units.

In 2022, we piloted this enhanced due diligence process in our China operations, and we are using the results to inform enhancements to our global processes to mitigate modern slavery and other human rights risks. Our cross-functional team is developing a dedicated modern slavery due diligence procedure. This procedure is designed to facilitate ongoing supply chain mapping and due diligence aligned with key principles of OECD Guidance and related industry standards. In 2023, we also expect to enhance our governance of supply chain risks by developing an overarching responsible sourcing policy that brings together our existing standards for sourcing practices, sustainability in supplier relationships, conflict minerals compliance, supplier diversity and grievance mechanisms, among other relevant topics.

CONFLICT MINERALS

In our Business Partner Code, we articulate our expectation that suppliers shall:

- Undertake appropriate due diligence on raw materials in their supply chain and abide by all applicable laws and regulations related to conflict minerals.
- Undertake appropriate measures to prevent any conflict minerals from entering their supply chains, and notify Albemarle, in writing, if any minerals supplied to Albemarle are not conflict-free.
- Provide all necessary information to enable Albemarle to complete its own inquiries and due diligence on the origin of raw materials.

Albemarle undertakes the following measures to provide assurance in relation to conflict minerals:

- All third parties in Albemarle's SAP system are screened against multiple denied party lists.
- The procurement of raw materials by Albemarle is exclusively managed by procurement teams within Albemarle who are familiar with conflict minerals-related requirements imposed by U.S. and – more recently – EU legislation.
- The raw materials procurement teams are required to periodically certify whether Albemarle sources any raw materials containing tungsten, tantalum, tin, gold, mica, cobalt or related materials. These certifications are independently validated by Albemarle's Ethics and Compliance team utilizing ERP data analytics.

- Relevant raw materials suppliers are required to complete the Responsible Mining Initiative Conflict Minerals Reporting Template. If an existing/prospective supplier's response or our own diligence revealed cause for concern, Albemarle would undertake further inquiries with the supplier to assess the need and urgency of corrective action management.
- Any smelters/refiners in Albemarle's supply chain that source 3TG as direct materials for manufacturing of our products must be on the RMI Conformant Smelters and Refiners List.



ENTERPRISE LOGISTICS SOLUTIONS

Logistics play a central role in Albemarle's success. We depend on smooth and efficient logistics to have the right amount of resources at the right time and in the right location for the production of our products and services. Over the past years, we have grown our Enterprise Logistics Solutions team and invested in technology to drive continuous improvement.

The global supply chain challenges we experienced during the pandemic accelerated the consolidation of our suppliers to allow us to leverage our volume and spend and reduce our risk. We understand that tracking is essential to having visibility of our shipments at all times. As such, the transportation management shipment track and trace system we deployed on our marine logistics in 2021 was rolled out to our road and rail activities in 2022. We have also adapted the just-in-time delivery model we had in place pre-pandemic to accommodate a safety stock of key sole-sourced raw materials, and we now have contingency shipping route planning in place to help mitigate any potential future supply chain disruptions.

REDUCING CARBON EMISSIONS IN OUR LOGISTICS

As part of our GHG emissions reduction strategy, we are continuously looking at ways to reduce the emissions generated through our logistics activities. Our Distribution Safety Department manages HS&E for our logistics suppliers and uses a transportation management tool to measure and monitor the carbon footprint of suppliers. We introduced this tool for our marine transportation in 2021 and rolled it out globally throughout 2022 for all transportation modes. We apply data analytics to help us determine where we can take trucks off the road and switch to means of transport, such as intermodal, that reduce our carbon footprint. We try to shorten route distances where possible, as well as the number of delivery visits per vendor to our sites. In addition, we introduced a fuel surcharge program to encourage our suppliers to reduce their environmental impact.





Albemarle and Ford participated in a panel discussion called “Future-Proofing Critical Mineral Supplies” at Greenbiz 2023.

ENGAGING OUR CUSTOMERS

Albemarle is an industry leader in transforming essential resources that shape our ability to balance the needs for people and planet across mobility, energy, connectivity and health. We are becoming increasingly visible across the value chains in which we operate. This visibility creates opportunity and responsibility for us to be more public in our industry leadership and to be accountable to downstream demands for products with lower emissions and higher social standards.

Recognizing the role that our customers play in deploying sustainable end-solutions, we are committed to look beyond the transactional aspect of selling product. We emphasize strategic partnerships and joint developments. We do this by directly involving our customers in our R&D processes, and we obtain regular feedback on how we can deliver greater value to our customers and anticipate their future needs. This helps us accelerate the development of differentiated solutions that give our customers distinct products in their respective markets.

At Albemarle we have focused on the customer experience by enhancing communications, transparency and accountability in line with our corporate values. We seek feedback from our customers through our Voice of the Customer Annual Relationship Survey to better evaluate our performance and confirm that our strategic priorities are aligned with the needs

of our customers. We involve our functional teams to analyze the survey data and set strategic goals for better serving our customers. Through the Voice of Customer Relationship Survey, we have identified common themes where we can improve, as well as distinct focus areas based on the markets and product portfolios of our customers.

Many of our customers have asked us to provide them with LCAs for our products in order that they may better understand the sustainability attributes of their supply chain. As noted in the [Life Cycle Assessments](#) section of this report, we are working on expanding our work on LCAs, which will assist us in responding to our customers’ needs. Additionally, we dedicated our time to meeting face-to-face with many of our most strategic customers in 2022. Meeting with them gives us the opportunity to share not only the results from our Voice of the Customer survey, but also our values, our approach to sustainability and our future strategic priorities as they relate to our entire portfolio.



Product and Process Innovation

INNOVATING FROM MINE TO MARKET

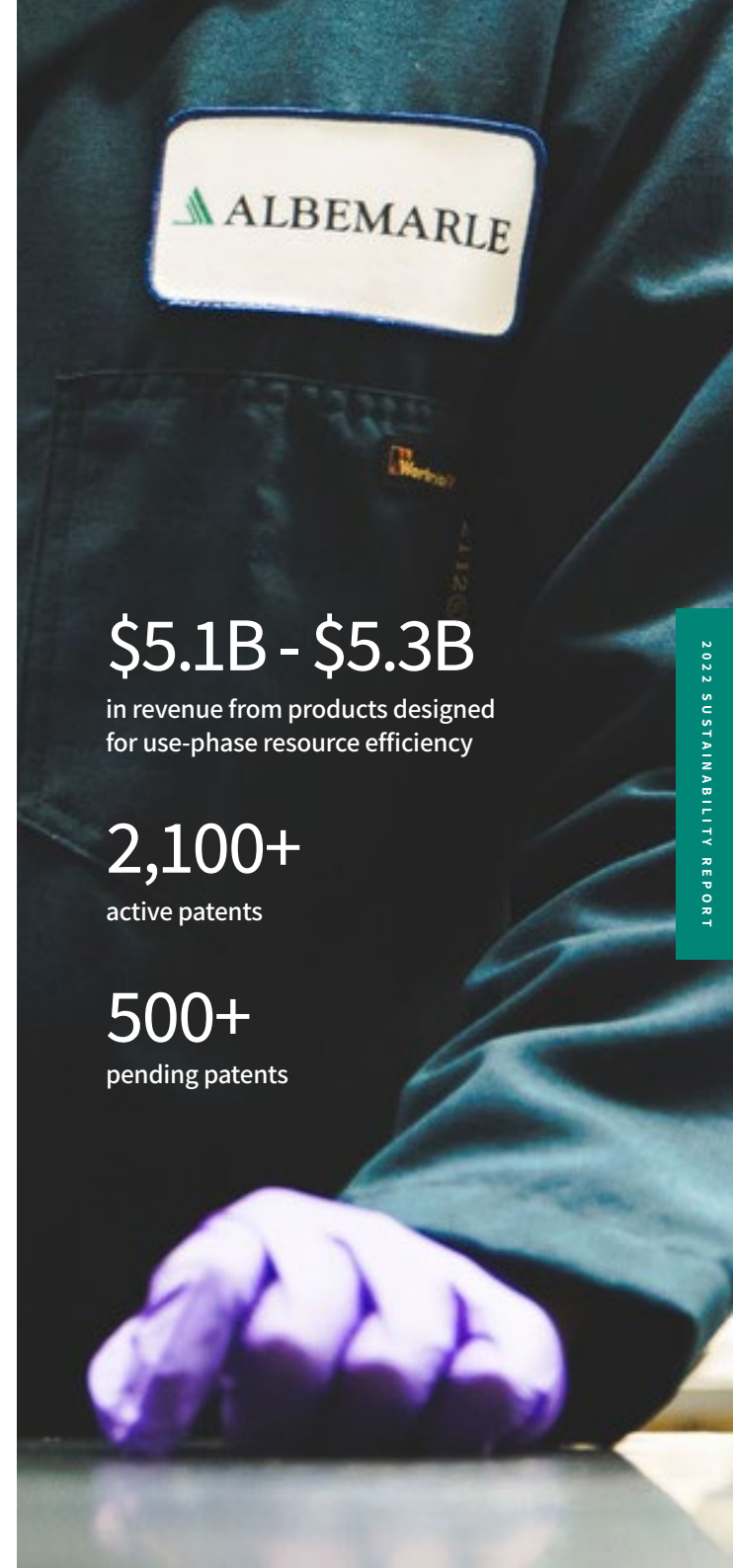
AT ALBEMARLE, WE ARE IN THE BUSINESS OF DEVELOPING INDUSTRY-LEADING INNOVATIONS FROM MINE TO MARKET THAT IMPROVE EFFICIENCY, SAFETY AND SUSTAINABILITY. WE WORK IN CLOSE COLLABORATION WITH OUR PARTNERS AND CUSTOMERS TO ACCELERATE THE TIME IT TAKES TO GO TO MARKET.

OUR APPROACH

We employ a team of over 350 world-class R&D scientists and engineers who collaborate with external experts such as academics, professional institutes and start-ups to provide Albemarle with access to leading-edge knowledge in specialized areas. We collaborate directly with our customers to focus our innovation on areas that can unlock the greatest market value. We also leverage our JVs and government funding to make strategic investments in R&D, and we prioritize investment in projects to accelerate our growth strategy and drive Albemarle's sustainability forward.

Albemarle, we connect the technically possible to the commercially viable.

Product portfolios for each GBU are reviewed by cross-functional teams at the GBU leadership level on a quarterly basis to cultivate a balanced mix between new-to-market technology, next-generation products and incremental innovation of existing products. Cross-functional business innovation teams that own exploration and development of new product targets are deployed for projects deemed to be of critical importance. Our GPS team actively participates in GBU product portfolio reviews with the respective R&D team when new raw materials are under consideration. This allows us to identify potential risks and conduct computer modeling prior to the greenlighting of new product formulations. As part of our commitment to continuous improvement, the GPS team also regularly reviews Albemarle's product portfolio to identify opportunities for improved formulations from a safety and sustainability perspective. We invest in infrastructure, expertise and training for our people to better position Albemarle to act on emerging opportunities.



\$5.1B - \$5.3B

in revenue from products designed for use-phase resource efficiency

2,100+

active patents

500+

pending patents

ACTIVITIES AND HIGHLIGHTS

Innovation in Our Energy Storage Business

Applying Advanced Data Analytics

Our data science team analyzes big data coming into our organization to support faster and more accurate decision-making in the identification of promising product development opportunities for our Energy Storage GBU. The team conducts demand and supply forecasting specific to each business region, resource, application and product chemistry. The team is also involved in our site acquisition process to support our resource and mining experts in better understanding the viability of a potential investment by Albemarle. Our data scientists, together with our R&D scientists and engineers, deploy physics-based performance models to help us anticipate the value of novel lithium materials, often before we have developed them, thereby enabling prioritization of our research projects. These models also help our application engineers and new business development team position new products where they create the greatest market demand and value.

Battery Materials Innovation Center

In 2021, we opened Albemarle's Battery Materials Innovation Center (BMIC). This state-of-the-art technology lab at our Kings Mountain site in North Carolina is accelerating our development of advanced forms of lithium to make next-generation batteries more energy dense, safer and more cost-efficient.

The BMIC includes cell build and test capabilities that allow us to emulate how our customers evaluate and utilize our materials. It is equipped for new material synthesis and scale-up, analytical property characterization, and material integration into battery cells for performance testing. The facility includes a dry room with a multilayer pouch cell line where cell-phone-sized batteries are built to demonstrate critical aspects of battery performance and accelerate the transition of new products to customers. We are also working on advanced lithium metal anode technologies, including lithium foils less than 20 microns in thickness (about one-fifth of the diameter of a human hair) that will enable increased battery energy density.

Toward a Circular Economy

One of the most critical environmental opportunities we have is to recover and reuse precious resources. To this end, our innovation team is working on chemistries that will enable us to recover lithium from end-of-life batteries and use this lithium as a feedstock in conversion facilities to produce battery-grade quality lithium. As part of our U.S. expansion plans, we are planning the construction of a mega-flex conversion facility in Richburg, South Carolina. Flex refers to the facility being designed to accommodate multiple feedstocks, including recycled lithium materials from existing batteries. We are working with strategic customers and industry partners to develop these technologies and to build this pipeline for recycling.



Resource Conversion

We understand that the current EV industry demand for lithium outpaces current supply, and we are focused on increasing our production to meet this demand using new and existing resources and technologies. We are focusing on maximizing lithium recovery at the wellhead, pond and the conversion stages of our current operations to get the highest yields possible from our resources. In addition, we are exploring accessing non-conventional resources using new technologies, such as direct lithium extraction (DLE). Each new resource that we evaluate has a different profile, meaning that we must evolve in the technologies we explore for lithium extraction. Additionally, new resources present us with opportunities to improve our natural resource management – including emissions, energy and water management – from the outset of project development.



I am so proud to be part of a team of employees dedicated to innovating sustainable solutions for our lithium co-products. Albemarle and our synergistic partners help balance the environment, equity, and economy to enable the rapid transition to electric vehicles.”

Jeff Mueller

Senior Director, External Affairs, Energy Storage

We continuously seek ways to apply innovative technology toward more efficient and sustainable extraction, purification and conversion to high-performance products.

Albemarle Technology Park

In 2022, we acquired a site in Charlotte, N.C., that will become the future location of the Albemarle Technology Park (ATP). As part of our mine-to-market innovation strategy, we are investing over \$180 million in the ATP to establish a world-class facility designed for novel materials research, advances in process development and acceleration of next-generation lithium products in partnership with strategic customers. By co-locating these critical activities and collaborations, we anticipate that enhanced process technologies developed at the ATP will unlock new lithium resources, enhance lithium recovery, improve production methods and introduce new forms of lithium to enable higher levels of battery performance. Sustainability benefits from innovations can contribute to the reduction of energy and water use and enable lithium recovery at end-of-life through cost-effective recycling. The project is enabled through a \$13 million incentive package from the State of North Carolina.



ACTIVITIES AND HIGHLIGHTS

Innovation in Our Specialties Business

Albemarle's Specialties business conducts some of the most technically complex chemical processing, and we are committed to creating a more resilient world through innovations in our Specialties product portfolio. To achieve this, we pool knowledge and talent across our company. For example, process improvements piloted in the Specialties business can be shared across the organization. In 2022, we launched two new innovative products through our Specialties GBU.

We have deployed Advanced Process Controls (APC) coupled with online process analytical technology at our West Plant bromine production facility in Magnolia. APC leverages empirical and physics-based models to automatically drive the facility to its optimum level of production in real time. APC is delivering material capacity increases, cost reduction and sustainability benefits. Following further deployments on selected processes at our Magnolia facility, the APC approach will be deployed at our JBC site in 2024.

Our fire safety solutions contribute to a more resilient world. Many of our modern-day conveniences, such as electronics, appliances, vehicles, wiring, textiles, building materials and more, are made of combustible materials. As the energy transition accelerates and the world moves toward electrification, fire safety solutions are increasingly in demand. Fire prevention additives, such as our SAYTEX® bromine flame retardants, in everyday products help meet fire safety standards and can have significant life-saving impacts. SAYTEX® fire safety solutions additives prevent and slow the spread of fires in a variety of materials allowing for more escape time and more time for first responders in the event of a fire.

In 2022, we introduced SAYTEX®ALERO®, our next-generation, large-molecule fire safety solution, to the market. This polymeric flame retardant features greater versatility, enabling the highest level of fire

safety performance in a wide range of polymers and applications with higher-level environmental performance. In addition, ALERO® provides enhanced stability which supports excellent recyclability of flame-retardant plastics, adding to its sustainability profile.

In 2022, we also introduced MercLok™, designed for the rapid stabilization of mercury found in a range of soils and industrial wastes. Mercury is a naturally occurring element; however, even small amounts of mercury released into the environment can lead to adverse ecological and health impacts. MercLok™ stabilizes mercury contamination from industrial use and can prevent mercury's ability to spread by more than 99%. With high efficacy and low loading requirements, MercLok™ offers a compelling and innovative solution for the remediation of soil contamination.



ACTIVITIES AND HIGHLIGHTS

Innovation in Our Ketjen Subsidiary

Ketjen – A Frontrunner in Renewables Processing

As early as 15 years ago, Ketjen was enabling our customers to produce renewable fuels by co-processing vegetable oils in hydrotreaters. Together with the Finnish oil refiner, Neste, we co-developed the catalyst that powers the first dedicated process for the production of 100% renewable diesel and sustainable aviation fuel. Since then, Ketjen's ReNewFine catalysts have enabled the production of billions of liters of advanced bio-fuels, and today, Ketjen continues to provide catalyst solutions to help our customers achieve their sustainability goals and maximize their profits. Our ReNewFCC line, the latest suite of dedicated catalysts, is specifically designed to enable our customers to process more renewable feedstocks, such as oils obtained from waste and biomass streams, to help decrease GHG emissions and produce renewable fuels and chemicals.

Quasar – Maximizing Material Efficiency

Ketjen recently launched Quasar, our newest catalyst technology that was developed using a combination of high-throughput experimentation and artificial intelligence. This novel approach to catalyst development delivers a line of catalysts that make the most efficient use of material resources. By identifying the relationships between catalyst preparation, metal active phase and performance, each metal atom can be utilized to its maximum potential. The technology was also designed with circularity in mind. The catalysts can be recovered for reuse.

Task Force on Climate- related Financial Disclosures Report



Introduction

Albemarle is committed to aligning with the Task Force on Climate-related Financial Disclosures (TCFD), an initiative established by the Financial Stability Board (FSB). The following report represents Albemarle's first disclosure in line with the TCFD recommendations and reflects our actions and processes as of June 5, 2023 to better understand our climate-related risks and opportunities and their potential impacts on our business.

Our disclosure demonstrates the governance, strategy, risk management, and metrics and targets that are in place to enable us to manage these risks and opportunities. We will update our disclosures as our business evolves and we progress on our assessment and management of relevant climate-related risks and opportunities.

Governance

At the executive management level, our CEO and Chairman of the Board of Directors takes ownership of our greenhouse gas (GHG) emission reduction goals and our progress towards those goals. Our Board of Directors (Board) oversees our sustainability programs. Committees of the Board take the lead in discrete areas of oversight within their areas of responsibility.

The Health, Safety & Environment (HS&E) Committee is responsible for overseeing (among other items) our climate strategy including energy consumption and our greenhouse gas emissions. The HS&E Committee meets quarterly and our VP, Sustainability and Investor Relations reviews progress on our climate-related work, which includes energy and GHG emissions reduction targets. The Audit & Finance Committee of our Board reviews our enterprise risk management (ERM) at least annually, including climate change risks as appropriate.

In 2021, the HS&E Committee discussed and approved initial GHG reduction targets for individual global business units (GBUs). After announcing the resegmentation of our GBUs in 2022, the Committee approved updated GHG reduction targets and a new scope 3-related goal, which can be found in the [Metrics and Targets](#) section of this report.

In February 2023, the HS&E Committee was updated on our TCFD progress, including discussing the hotspot climate scenario analysis. The presentation included the top risks identified in the hotspot analysis, ranked based on estimated future magnitude of change in a 2030- and 2050-time horizon, and potential business impact rating based on discussion with numerous internal stakeholders. In May 2023, the full Board reviewed and discussed the results of our first TCFD analysis and integration into Albemarle's ERM process.

Strategy

Assessing Climate-related Risks and Opportunities Using Scenario Analysis

We conducted a high-level review of potential climate-related risks and opportunities focusing on our two core business units: Energy Storage and Specialties. We worked together with climate consultancy South Pole and cross-functional internal stakeholders via a series of workshops and interviews to develop an initial list of climate-related physical and transition risks and opportunities that could impact our two core business units. Following further internal stakeholder consultation, we prioritized risks and opportunities based on their potential impact for further assessment via climate scenario analysis.

Our initial assessment of climate-related risks and opportunities was undertaken in two stages. For the first stage of the assessment, which took place from July to August 2022, we selected 29 risks and opportunities for a qualitative hotspot scenario analysis. The goal of this analysis was to understand the future dynamics that could increase or decrease potential impacts of these risks and opportunities for Albemarle. The results were further discussed with respective internal stakeholders, and nine risk and opportunities were chosen for a more in-depth assessment based on their potential impact to the business. The results from the in-depth analysis are currently being assessed with the appropriate function leads, as well as being integrated into our regular ERM process.

Phase 1: Hotspot Qualitative Scenario Analysis

In alignment with the TCFD recommendations, we used the following key concepts for our hotspot analysis.

Risk and opportunity categories:

- *Physical risks and opportunities*: linked to the impact of acute risks (event-driven) and chronic risks (longer-term shifts in climate patterns).
- *Transition risks and opportunities*: linked to the impact of a transition to a lower-carbon economy, covering the core categories defined by the TCFD: policy and legal, technology, market, and reputation.

Scenarios: We evaluated the projected change in the risks and opportunities under different potential future states of climate change, or ‘climate scenarios’. Climate scenarios describe possible future emission pathways and the associated rise in global temperature and changes to the climate system based on a series of assumptions regarding political, technological, socioeconomic, and physical changes to the environment. We evaluated physical risks against a ‘high physical impact scenario’ (high global warming, aligned with a 4°C temperature increase) and transition risks and opportunities against a ‘rapid low-carbon transition scenario’ (limited global warming, aligned with a 1.5°C temperature increase), which are described in the table at right:

Physical risks and opportunities

RCP (Representative Concentration Pathway) 8.5, a high-impact scenario

The RCP 8.5 scenario, provided by the Intergovernmental Panel on Climate Change (IPCC), represents the most ‘extreme’ scenario from a physical climate change perspective, assuming a future where almost no mitigation action is taken, emissions continue to rise at the current rate, and global mean temperature increases by 4°C by the end of the century relative to the pre-industrial period. Under this scenario, significant changes in the frequency and intensity of acute and chronic physical risks already occur by mid-century.

Transition risks and opportunities

Net Zero Emissions by 2050 Scenario (NZE), a 1.5°C-aligned scenario

The NZE scenario, provided by the International Energy Agency (IEA), presents a pathway to effective climate mitigation which sees global energy sector CO₂ emissions reach net zero by 2050, while also taking into consideration other sustainable development goals such as universal access to energy and air quality improvements. This scenario presents a potential path to net zero emissions that is achieved via greater international cooperation, governments significantly strengthening and successfully implementing energy and climate policies, rapid deployment of renewable and efficient energy technologies, and a progressive shift towards electrification as electricity generation becomes increasingly clean. By 2100, this scenario results in an increase in global temperatures limited to 1.5°C above pre-industrial levels with no or limited overshoot (with a 50% confidence level). While the NZE was used as the main scenario in this assessment, information from the IEA’s Sustainable Development Scenario (SDS) (which holds temperature rise to 1.6°C, with a 50% confidence level), as well as national / regional and sector-specific scenarios, projections, and plans, were also used.

Time horizon: Albemarle considered two-time horizons for this assessment:

- Medium term: We consider the medium-term in relation to climate-related risks and opportunities up to 2030.
- Long-term: We consider the long-term in relation to climate-related risks and opportunities up to 2050.

While changes in physical risks are projected to materialize more strongly in future decades, the analysis of transition topics is more relevant in the medium-term than in the long-term. This is because the evolution of business conditions beyond 2030 is subject to very high uncertainty.

Phase 2: In-Depth Scenario Analysis

After completing the hotspot scenario analysis, we undertook an in-depth scenario analysis from late 2022 to early 2023. To identify the most material topics for an in-depth assessment, we considered the estimated future magnitude of change in the risks and opportunities from the hotspot analysis, internal stakeholders' perception of their potential impact on the business, and the existing internal measures in place or planned to manage the risks and opportunities. Albemarle's internal ERM impact matrix framework was used as a foundation to score and weigh the relative potential impact of each risk and opportunity. More information on our ERM processes can be found in the [Enterprise Risk Management](#) section of our 2022 Sustainability Report.

Physical Risks

Physical risks including freezing events, heatwaves, tropical cyclones, water scarcity, wildfires, thunderstorms, heavy precipitation, and riverine and coastal flooding were rated on qualitative scale from low to very high based on the projected future magnitude of change in these topics compared to the current baseline, covering a range of key countries/regions from Albemarle's value chain (including the U.S., Jordan, Chile, China, Australia, and the West Pacific). Country- and site-specific risks were chosen based on their strategic importance and contribution to revenue and value chain continuity, as well as Albemarle's experience and feedback from key internal stakeholders.

The risks determined to have the highest potential material impact to Albemarle's operations and selected for further assessment via in-depth scenario analysis were water availability in Chile and Jordan, thunderstorms in the U.S., and heat extremes and impacts on power supplies in China. These risks are outlined in the following figure, along with a summary of the results of the hotspot analysis under the RCP 8.5 scenario. The climate risk ratings reflect the magnitude of change in the climate risk from the current baseline and do not consider the associated business impact or mitigation measures already in place.

Key physical risks identified based on hotspot analysis results

		Climate Risk Rating	
		2030	2050
5	Water scarcity, declining precipitation & drought: Jordan	Moderate	High
	<ul style="list-style-type: none"> Jordan River flow decreased ~90% since 1960s; rainfall has declined over the past century By 2050, dry periods¹ are projected to increase in duration and annual precipitation to decrease by 2050 Projections indicate increasing water scarcity, declining precipitation, and drought related risk in Jordan 		
4	Water scarcity / drought: Chile	Moderate	Uncertain
	<ul style="list-style-type: none"> By mid-century, the duration of dry periods¹ is projected to remain approximately the same at the Salar de Atacama and La Negra Mean annual precipitation is expected to remain low at La Negra, and decrease in the Salar de Atacama Potential annual evapotranspiration² is also expected to increase at both sites, by ~7% 		
4	Heat & extreme temperatures: China	Moderate	High
	<ul style="list-style-type: none"> Increase in heat waves projected by mid-century, especially in Central and Northeast China Heat waves expected to become longer-lasting, more frequent and more extreme Increase cooling demand and power restrictions, with potential impact on Albemarle's operations 		
4	Thunderstorms: U.S.	Moderate	High
	<ul style="list-style-type: none"> Before mid-century, days with severe thunderstorm environments is projected to increase in the southeastern U.S. For 2041-2060, thunderstorms are projected to increase in frequency and duration in the southeastern U.S. In 2085-2100, Albemarle's Magnolia site is projected to be impacted by increasing thunderstorm activity 		

Albemarle business impact:



(Albemarle business impact ratings were estimated based on review of Albemarle's existing ERM and discussions with internal working team)

- Dry periods are measured in maximum number of consecutive dry days (CDDs)
- Evapotranspiration is a process by which water is transferred from the land to the atmosphere via evaporation and transpiration

Transition Risks and Opportunities

Transition risks and opportunities across four main areas - policy and legal, technology, market, and reputation - were rated on qualitative scale from low to very high based on the projected future magnitude of change in these topics compared to the current baseline, covering a range of key countries from Albemarle's value chain (the U.S., Chile, China, Australia and Europe), with some cross-cutting risks and opportunities evaluated at a global level.

We further assessed via in-depth scenario analysis for the most relevant opportunities (growth of the electric vehicle market and expansion of battery recycling) and risks (greater regulation of lithium-ion batteries in Europe, potential loss of customers linked to climate performance, and carbon pricing). These risks and opportunities are outlined in the following figure, along with a summary of the results of the hotspot analysis under a 1.5°C scenario. Again, the climate risk ratings reflect the magnitude of change in the climate risk from the current baseline and do not consider the associated business impact or mitigation measures already in place.

Key transition risks and opportunities identified based on hotspot analysis results

		Climate Risk Rating	
		2030	2050
3	Carbon pricing	High ¹	Very High ¹
5	Loss of customers linked to climate performance²	Low	Moderate
4	Regulation of Li-ion batteries	Moderate	High
5	Expansion of low-carbon mobility	Very High	Very High
4	Expansion of battery recycling	Low	High ³

RISKS

OPPORTUNITIES

Albemarle business impact:



(Albemarle business impact ratings were estimated based on review of Albemarle's existing ERM and discussions with internal working team)

1. This score reflects highest ratings of countries investigated: the U.S., China, Chile and Australia.
2. This analysis took into account Albemarle's direct customers only and is not reflective of customers in the wider value chain. The wider value chain will be taken into consideration in the in-depth assessment.
3. Projections to 2050 were not available in the scenarios, therefore this rating is reflective of a 2040 time horizon.

In-depth scenario analysis of the nine physical and transition risks and opportunities highlighted above is expected to be completed in 2023. We plan to consolidate the TCFD-related analysis into our corporate ERM process, further develop and deploy mitigation plans for our identified climate risks and integrate results into our long-range business plans and strategy.

Business Resilience

Climate change has been identified as one of the most pressing issues of our time. In 2021, we issued the [Albemarle Climate Strategy](#) in which we outline our approach and responsibility to address the impact of our operations on the environment. We support the goals of the Paris Agreement to reduce climate change by limiting global warming to well below 2°C and pursue efforts to limit global warming to 1.5°C. Reducing our carbon footprint is not only the right thing to do, but also strengthens our competitive position, improves our operational efficiency and creates value for our stakeholders.

The analysis above highlights the most likely severe climate change-related risks to our business, and accordingly the areas where risk mitigation is the most important. We plan to use the results of this scenario analysis to collaborate with function leads across Albemarle to develop specific risk mitigation strategies. For example, we are already developing water preservation strategies in Chile and Jordan, as well as a renewable energy strategy. We are also staying up to date on emerging EU battery regulation and building our lithium recycling capabilities. Climate risk mitigation is an important component of our Climate Strategy, and understanding those risks now allows us to plan and prepare for the future impacts of climate change on our business.

In addition to risk mitigation strategies, we also plan to align our business strategy to address key the climate-related opportunities identified. We recognize that the energy transition is crucial for mitigating climate change, and our company is one of the key suppliers of materials required for this process. The lithium we produce is used for electric vehicle batteries and bromine is an element for safe electrification. We resegmented our business units effective January 1, 2023, to reflect our commitment to supporting energy transition and to recognize our role as one of its suppliers. By orienting our business towards the growth opportunity that the energy transition can provide, we recognize the importance of operating in a safer and more sustainable manner. We are incorporating projects and incentives to reduce our carbon footprint into our near- and long-term planning, since our business results inherently depend on the rapid decarbonization of the global economy.

Risk Management

Risk management is essential to continuing to build the resilience of our company. To reflect the importance of risk management in Albemarle, we introduced the role of Chief Risk Officer in 2022. Our Chief Risk Officer has worked closely with members of our corporate sustainability function on our TCFD scenario analysis, and the results will be integrated into our company's ERM program.

The Chief Risk Officer role also takes responsibility for our ERM program. Albemarle's ERM program identifies and defines risks, including climate risks, that could significantly impact shareholder value on a sustained or permanent basis. Our ERM program helps us to assess key risks, identify gaps, and develop and implement risk mitigation efforts. This information is then integrated into our annual and long-range planning processes.

We prioritize risks using quantitative and qualitative factors that assess risk likelihood and risk severity. We also test our risk mitigation and management activities with a broad group of relevant internal stakeholders. For more information on risk management at Albemarle, see the [Business and Financial Resilience](#) section of our 2022 Sustainability Report.

Metrics and Targets

In line with TCFD recommendations, we are disclosing below our scope 1, 2 and 3 GHG emissions from our 2019 target baseline to our most recent reporting year, 2022. We also have listed below our recently restated GHG emissions reduction targets. For more information on our metrics, see the [Performance Data](#) section of our 2022 Sustainability Report.

THOUSAND METRIC TON CO ₂ e	2022	2021	2020	2019
Scope 1 GHG emissions	618	605	585	607
Scope 2 GHG emissions, market-based	292	294	350	358
Scope 2 GHG emissions, location-based	334	348	--	--
Scope 3 GHG emissions	1,994	1,675	--	--

'--' denotes the corresponding data was not collected during the respective year.

Targets:

- Grow our Energy Storage business in a scope 1 + 2 carbon-intensity neutral manner through 2030
- Reduce the scope 1 + 2 carbon-intensity of Specialties by 35% by 2030 in alignment with science-based targets
- Reduce the scope 1 + 2 carbon-intensity of Ketjen by 35% by 2030 in line with science-based targets
- Engage with suppliers to collect 75% (by 2023) and 90% (by 2024) primary data of our raw material carbon footprint

For more information on our target setting, see the [Letter from the Sustainability Steering Committee](#) section of our 2022 Sustainability Report.

Performance Data



Performance Data¹

ENVIRONMENT

TOPIC	METRIC	2022	2021	2020	
Energy	Total energy consumed, million gigajoule (GJ)	13.9	13.8	13.5	
	Percentage grid electricity	21%	21%	21%	
	Percentage renewable energy from primary energy sources	3.6%	3.2%	1.70%	
	Total self-generated energy, million GJ	0.3	0.2	0.3	
Emissions	Scope 1 GHG emissions, thousand metric tons CO ₂ e (kt CO ₂ e)	618	605	585	
	Percentage covered under emissions-limiting regulations	17%	13%	16%	
	Scope 2 GHG emissions, market-based, kt CO ₂ e	292	294	350	
	Scope 2 GHG emissions, location-based, kt CO ₂ e	334	348	-- ¹	
	Total scope 1 + 2 GHG emissions, kt CO ₂ e ²	909	899	935	
	Breakdown by Global Business Unit (GBU)				
	Lithium	320	294	288	
	Bromine	280	306	303	
	Catalysts	306	284	315	
	Other (offices, FCS - 2020 and 2021 only)	4	15	29	
	Scope 3 GHG emissions, kt CO ₂ e	1,994	1,675	--	

1. '--' indicates the representative data was not collected or the disclosure was not available.

2. Total emissions data calculated using market-based scope 2 methodology.

TOPIC	METRIC	2022	2021	2020
	Breakdown by Category¹			
	Category 1 - Purchased goods and services, kt CO ₂ e	1,181	1,037	--
	Category 2 - Capital goods, kt CO ₂ e	55	35	--
	Category 3 - Fuel and energy related activities, kt CO ₂ e	125	127	--
	Category 4 - Upstream transportation and distribution, kt CO ₂ e	324	213	--
	Category 5 - Waste generated in operations, kt CO ₂ e	15	15	--
	Category 6 - Business travel, kt CO ₂ e	3	2	--
	Category 7 - Employee commuting, kt CO ₂ e	5	4	--
	Category 8 - Upstream leased assets, kt CO ₂ e	--	--	--
	Category 9 - Downstream transportation and distribution, kt CO ₂ e	18	21	--
	Category 10 - Processing of sold products, kt CO ₂ e	35	28	--
	Category 11 - Use of sold products, kt CO ₂ e	--	--	--
	Category 12 - End-of-life treatment of sold products, kt CO ₂ e	75	70	--
	Category 13 - Downstream leased assets, kt CO ₂ e	--	--	--
	Category 14 - Franchises, kt CO ₂ e	--	--	--
	Category 15 - Investments, kt CO ₂ e	159	123	--
	Total scope 1 + 2 + 3 GHG emissions, kt CO₂e²	2,904	2,574	--

1. Scope 3 categories 8, 11, 13, and 14 are deemed zero, in line with the GHG Protocol.

2. Total emissions data calculated using market-based scope 2 methodology.

TOPIC	METRIC	2022	2021	2020
Air Quality	NO _x emissions, metric tons (t) (excluding N ₂ O)	692	753	647
	SO _x emissions, t	1,361	1,447	1,402
	VOCs, t	917	866	973
	HAPs, t	153	164	182
Water	Total water withdrawal, million cubic meters (m ³)	22.6	23.0	24.4
	Total water consumed, million cubic meters (m ³)	11.4	11.5	12.7
	Percentage of freshwater consumed in regions with high or extremely high overall water risk	22.7%	21.6%	20.2%
	Percentage of freshwater consumed in regions with high overall water risk (category 3 - 4)	10.5%	9.9%	9.6%
	Percentage of freshwater consumed in regions with extremely high overall water risk (category 4 - 5)	12.2%	11.7%	10.7%
	Number of incidents of non-compliance associated with water quality permits, standards and regulations	0	0	0
Waste	Amount of hazardous waste generated, kt	9	13	21
	Percentage of hazardous waste recycled	13%	8%	7%

HEALTH AND SAFETY

TOPIC	METRIC	2022		2021		2020	
		#	Rate	#	Rate	#	Rate
Health & Safety	Total Recordable Incident Rate						
	Employees	10	0.14	12	0.19	18	0.29
	Contractors ¹	2	0.11	5	0.31	2	0.14
	Lost Time Incident (LTI) Rate						
	Employees	8	0.09	5	0.06	6	0.08
	Lost Time Incident (LTI) Severity Rate						
	Employees		2.86		7.01		4.07
	Fatalities						
	Employees	0	0	0	0	0	0
Contractors ³	0	0	0	0	0	0	

TOPIC	METRIC	2022		2021		2020	
		#	Rate	#	Rate	#	Rate
Health & Safety	Employee occupational diseases		0		0		0
	Employee hours worked		14,112,802		12,816,721		12,529,648
	Contractor hours worked		3,621,621		3,256,553		2,781,531
	Employee types of injury		Struck by/against; slips, trips or fall; caught between		Slip, trip, or falls; struck by or against; burns (chemical and temperature)		Overexertion; contact with chemicals; slip, trip, or fall; struck by or against; caught between
	Percentage of workers covered by health and safety management system		100%		100%		100%

1. For HSE Data, 'Contractors' refers to nested contractors only.

TOPIC	METRIC	2022		2021		2020	
		#	Rate	#	Rate	#	Rate
Process Safety	Process Safety Incidents Count (PSIC)	4	0.05	4	0.05	3	0.04
	Process Safety Incident Severity Rate (PSISR)	4	0.05	6	0.08	3	0.04
	Number of transport incidents	4		1		3	

EMPLOYEES

TOPIC	METRIC	2022			2021			2020		
		Permanent	Temporary	Contractors	Permanent	Temporary	Contractors	Permanent	Temporary	Contractors
Employees by Employment Contract ¹	Total	6,644	297	1,646	5,385	233	1,289	5,365	189	1,137
	Breakdown by Gender									
	Male	4,990	225	68	4,159	154	52	4,201	106	36
	Female	1,597	66	22	1,193	40	32	1,127	35	15
	Non-binary ²	2	0	0	--	--	--	--	--	--
	Not disclosed	55	6	1,556	33	39	1,205	37	48	1,086
	Breakdown by Country									
	United States of America	2,050	1	1,055	1,749	1	847	2,014	1	765
	China	1,701	11	56	1,161	0	41	1,094	0	25
	Chile	967	76	124	766	62	89	742	57	88
	Germany	582	130	100	563	127	102	574	95	104
Netherlands	388	56	53	402	24	39	430	9	46	
Australia	457	14	123	308	12	76	83	15	38	
Hungary	295	4	46	256	3	22	226	10	24	
Other countries	204	5	89	180	4	73	202	2	47	

1. For Employee Demographic data, 'contractors' refers only to the contractors listed in the company's online HR portal.

2. Non-Binary reporting option was added in April 2022. Self-reporting as non-binary was a voluntary action employees had to take.

TOPIC	METRIC	2022		2021		2020	
		Full-Time	Part-Time	Full-Time	Part-Time	Full-Time	Part-Time
Employees by Employment Type	Male	5,171	44	4,281	32	4,267	40
	Female	1,592	71	1,169	64	1,099	63
	Non-binary	2	0	--	--	--	--
	Not disclosed	58	3	71	1	84	1

DIVERSITY, EQUITY AND INCLUSION

TOPIC	METRIC	2022			2021			2020		
		Total	M	NM	Total	M	NM	Total	M	NM
Diversity, Equity and Inclusion	Employees by Gender, Manufacturing (M) vs. Non-Manufacturing (NM)									
	Male	75%	89%	60%	77%	89%	62%	78%	90%	62%
	Female	24%	10%	39%	22%	9%	38%	21%	8%	37%
	Non-binary	<1%	<1%	0%	--	--	--	--	--	--
	Not disclosed	1%	1%	1%	1%	2%	1%	2%	2%	1%
	Employees by Age, Manufacturing (M) vs. Non-Manufacturing (NM)									
	Under 30	15%	18%	11%	11%	13%	10%	11%	12%	10%
	30-50	59%	55%	63%	58%	56%	61%	57%	54%	60%
	Over 50	26%	27%	25%	29%	30%	28%	30%	31%	29%
	Not disclosed	1%	1%	1%	1%	2%	1%	2%	2%	1%
	Employees by Race (U.S. Only), Manufacturing (M) vs. Non-Manufacturing (NM)									
	White	67%	75%	62%	71%	77%	66%	77%	82%	72%
	American Indian or Alaska Native	1%	1%	<1%	1%	2%	<1%	1%	1%	<1%
Asian	6%	1%	10%	6%	<1%	10%	4%	1%	8%	
Black or African American	10%	10%	10%	9%	10%	9%	8%	8%	8%	
Hispanic or Latino	6%	6%	6%	6%	6%	6%	5%	5%	6%	
Native Hawaiian or other Pacific Islander	<1%	<1%	<1%	<1%	0%	<1%	<1%	<1%	<1%	
Two or more races	2%	2%	3%	2%	2%	3%	2%	1%	2%	
Not disclosed	6%	4%	8%	5%	3%	6%	3%	2%	4%	

TOPIC	METRIC	2022				2021				2020			
		Total	Senior	Mid	Other	Total	Senior	Mid	Other	Total	Senior	Mid	Other
Diversity, Equity and Inclusion	Employees by Gender, by Management Level												
	Male	75%	78%	74%	75%	77%	81%	76%	77%	78%	83%	76%	78%
	Female	24%	21%	25%	24%	22%	18%	23%	22%	21%	17%	23%	20%
	Non-binary	<1%	0%	0%	<1%	--	--	--	--	--	--	--	--
	Not disclosed	1%	1%	<1%	1%	1%	0%	1%	2%	2%	1%	1%	2%
	Employees by Age, by Management Level												
	Under 30	15%	0%	5%	20%	11%	0%	4%	15%	11%	0%	4%	15%
	30-50	59%	46%	67%	56%	58%	45%	62%	58%	57%	47%	60%	57%
	Over 50	26%	53%	27%	23%	29%	55%	33%	25%	30%	52%	36%	26%
	Not disclosed	1%	1%	<1%	1%	1%	<1%	<1%	1%	2%	1%	1%	2%
	Employees by Race (U.S. Only), by Management Level												
	White	67%	72%	65%	68%	71%	79%	68%	71%	77%	81%	76%	76%
	American Indian or Alaska Native	1%	0%	1%	1%	1%	0%	1%	1%	1%	0%	<1%	1%
Asian	6%	8%	11%	1%	6%	7%	11%	1%	4%	7%	8%	1%	
Black or African American	10%	5%	9%	13%	9%	5%	8%	12%	8%	5%	6%	10%	
Hispanic or Latino	6%	5%	6%	7%	6%	3%	6%	7%	5%	3%	5%	6%	
Native Hawaiian or other Pacific Islander	<1%	1%	<1%	0%	<1%	<1%	<1%	0%	<1%	<1%	<1%	0%	
Two or more races	2%	2%	2%	2%	2%	2%	2%	3%	2%	1%	1%	2%	
Not disclosed	6%	7%	6%	7%	5%	4%	5%	5%	3%	3%	3%	3%	

TOPIC	METRIC	2022			2021			2020		
		Total	M	NM	Total	M	NM	Total	M	NM
Diversity and Equal Opportunity	Ratio of Basic Salary and Remuneration of Women to Men by Country, by Manufacturing vs. Non-Manufacturing¹									
	United States of America	93%	101%	77%	95%	95%	77%	96%	97%	77%
	China	110%	78%	60%	113%	76%	54%	132%	85%	63%
	Chile	116%	110%	82%	115%	117%	77%	118%	118%	76%
	Germany	89%	83%	67%	84%	84%	60%	87%	84%	63%
	Netherlands	91%	100%	75%	89%	96%	73%	89%	94%	73%
	Australia	85%	83%	70%	88%	91%	71%	77%	101%	66%
	Hungary	82%	N/A	82%	80%	N/A	80%	79%	N/A	79%

TOPIC	METRIC	2022				2021				2020			
		Total	Senior	Mid	Other	Total	Senior	Mid	Other	Total	Senior	Mid	Other
Diversity and Equal Opportunity	Ratio of Basic Salary and Remuneration of Women to Men by Country, by Management Level												
	United States of America	93%	98%	94%	90%	95%	101%	96%	89%	96%	98%	94%	90%
	China	110%	128%	95%	125%	113%	113%	88%	152%	132%	98%	85%	151%
	Chile	116%	89%	88%	136%	115%	N/A	86%	147%	118%	N/A	93%	149%
	Germany	89%	N/A	89%	96%	84%	N/A	84%	89%	87%	N/A	84%	96%
	Netherlands	91%	93%	91%	98%	89%	84%	88%	96%	89%	N/A	89%	95%
	Australia	85%	124%	84%	92%	88%	N/A	97%	96%	77%	N/A	102%	89%
	Hungary	82%	81%	86%	93%	80%	69%	86%	93%	79%	65%	85%	92%

1. Non-binary employees were not included in the calculation of this metric.

INVESTMENT IN TALENT

TOPIC	METRIC	2022	2021	2020
Training and Development	Average Training Hours per Employee/Year	11.1	16.4	19.3
	Breakdown by Gender			
	Male	12.1	16.2	19
	Female	7.7	17.7	19.4
	Non-binary	14.5	--	--
	Not disclosed	8.7	8.1	32.7
	Breakdown by Management Level			
	Senior management	7.5	7	13.7
	Mid management	11.4	10.4	27.7
	Other	11.3	19.4	16.1
	Breakdown by Manufacturing vs. Non-Manufacturing			
	Manufacturing	13.0	20.6	16.9
Non-manufacturing	8.5	11.4	22.2	

TOPIC	METRIC	2022	2021	2020
Training and Development	% of Employees Receiving Regular Performance/Career Development Reviews	95%	86%	86%
	Breakdown by Gender			
	Male	95%	85%	84%
	Female	96%	93%	94%
	Non-binary	100%	--	--
	Not disclosed	92%	63%	80%
	Breakdown by Management Level			
	Senior management	100%	100%	100%
	Mid management	98%	100%	99%
	Other	94%	83%	82%
	Breakdown by Manufacturing vs. Non-Manufacturing			
	Manufacturing	93%	79%	77%
	Non-manufacturing	98%	96%	97%

TOPIC	METRIC	2022		2021		2020	
		#	Rate	#	Rate	#	Rate
Employee Hires	Total	1,993	32%	1,028	18%	558	10%
	Breakdown by Gender						
	Male	1,360	29%	740	18%	396	9%
	Female	574	40%	271	23%	129	11%
	Non-binary	0	0%	--	--	--	--
	Not disclosed	59	89%	17	22%	33	17%
	Breakdown by Age						
	Under 30	605	73%	287	46%	151	24%
	30-50	1,101	30%	578	18%	296	10%
	Over 50	231	13%	150	9%	68	4%
	Not disclosed	56	101%	13	17%	43	25%
	Breakdown by Country						
	United States of America	532	28%	282	16%	223	11%
	China	634	44%	156	14%	67	6%
	Chile	352	38%	147	18%	125	16%
	Germany	75	11%	62	9%	11	2%
	Netherlands	49	11%	20	5%	13	3%
	Australia	226	57%	265	127%	44	56%
	Hungary	73	26%	67	27%	44	20%
Others	52	7%	29	4%	31	4%	

TOPIC	METRIC	2022		2021		2020	
		#	Rate	#	Rate	#	Rate
Employee Turnover	Total	655	10%	631	11%	555	10%
	Breakdown by Gender						
	Male	486	10%	453	11%	383	9%
	Female	146	10%	164	14%	141	12%
	Non-binary	0	0%	--	--	--	--
	Not disclosed	23	35%	14	18%	31	16%
	Breakdown by Age						
	Under 30	137	16%	112	18%	60	10%
	30-50	304	8%	325	10%	269	9%
	Over 50	193	11%	183	12%	200	12%
	Not disclosed	21	38%	11	14%	26	15%
	Breakdown by Country						
	United States of America	233	12%	243	14%	230	11%
	China	81	6%	86	8%	83	8%
	Chile	128	14%	94	12%	90	12%
	Germany	49	7%	42	6%	64	9%
	Netherlands	33	8%	32	7%	27	6%
Australia	74	19%	43	21%	7	9%	
Hungary	33	12%	44	18%	25	11%	
Others	24	3%	47	6%	29	4%	

TOPIC	METRIC	2022		2021		2020	
		#	Rate	#	Rate	#	Rate
Employee Turnover - Voluntary ¹	Total	330	5.3%	326	5.9%	218	4%
	Breakdown by Gender						
	Male	235	5.0%	221	5.2%	147	3.5%
	Female	82	5.8%	96	8.0%	62	5.3%
	Non-binary	0	0%	--	--	--	--
	Not disclosed	13	16.7%	9	12.6%	9	11.6%
	Breakdown by Age						
	Under 30	45	7.5%	26	6.6%	14	5.1%
	30-50	204	5.6%	231	7.3%	150	5.0%
	Over 50	81	4.1%	69	3.5%	54	2.5%
	Breakdown by Country						
	United States of America	122	6.4%	125	6.9%	85	4.3%
	China	47	3.6%	66	6.0%	48	4.5%
	Chile	39	4.2%	31	3.9%	22	2.7%
	Germany	11	1.6%	8	1.2%	17	2.5%
Netherlands	11	2.5%	9	2.1%	10	2.3%	
Australia	54	13.5%	32	11.3%	1	1.4%	
Hungary	31	11.1%	38	15.3%	22	9.6%	
Others	15	7.6%	17	8.9%	13	6.4%	

1. Voluntary turnover is defined as the employee making the decision to leave the organization, rather than the employer. This metric does not include retirement, move to an internal role, or a contract ending.

LABOR RELATIONS

TOPIC	METRIC	2022		2021		2020	
		#	%	#	%	#	%
Labor Relations ¹	Employees Entitled to Parental Leave - Total	6,941	100%	5,618	100%	5,554	100%
	Breakdown by Gender						
	Male	5,215	100%	4,313	100%	4,307	100%
	Female	1,663	100%	1,233	100%	1,162	100%
	Non-binary	2	100%	--	--	--	--
	Not disclosed	61	100%	72	100%	85	100%
	Employees That Took Parental Leave - Total	167	2%	146	3%	129	2%
	Breakdown by Gender						
	Male	84	2%	80	2%	72	2%
	Female	83	5%	66	5%	57	5%
	Non-binary	0	0%	--	--	--	--
	Not disclosed	0	0%	0	0%	0	0%
	Employees that Returned to Work After Parental Leave Ended, or Still on Leave - Total	167	100%	145	99%	128	99%
	Breakdown by Gender						
	Male	84	100%	80	100%	72	100%
Female	83	100%	<i>65</i>	<i>98%</i>	56	98%	
Non-binary	0	0%	--	--	--	--	
Not disclosed	0	0%	N/A	N/A	N/A	N/A	

1. Numbers in *italics* are restated to reflect updates made after the previous year's report was published.

TOPIC	METRIC	2022		2021		2020	
		#	%	#	%	#	%
Labor Relations ¹	Employees Still Employed 12 Months After Return to Work - Total	163	98%	135	93%	118	92%
	Breakdown by Gender						
	Male	82	98%	75	94%	67	93%
	Female	81	98%	60	92%	51	91%
	Non-binary	0	0%	--	--	--	--
	Not disclosed	0	0%	N/A	N/A	N/A	N/A

TOPIC	METRIC	2022		2021		2020	
		#	%	#	%	#	%
Labor Relations	% of Employees Covered by Collective Bargaining Agreements		29%		32%		32%
	Breakdown by Country						
	United States of America		7%		8%		7%
	Chile		79%		79%		83%
	Netherlands		92%		93%		93%
	Germany		89%		86%		83%
	China		0%		0%		0%
	Australia		0%		0%		0%
	Hungary		0%		0%		0%
	Other Countries		0%		0%		0%
	Number of strikes and lockouts		0		1		0
Duration of strikes and lockouts (in days)		0		35		0	

1. Numbers in *italics* are restated to reflect updates made after the previous year's report was published.

MARKET AND COMMUNITY PRESENCE

TOPIC	METRIC	2022	2021	2020
Market Presence	Ratio of Standard Entry Level Wage Compared to Local Minimum Wage by Country			
	United States of America	384%	327%	314%
	China	429%	397%	382%
	Chile	223%	212%	204%
	Germany	149%	117%	106%
	Netherlands	166%	169%	164%
	Australia	166%	166%	221%
	Hungary	129%	144%	144%
	Top 7 Countries Total¹	332%	297%	274%

TOPIC	METRIC	2022	2021	2020
Community Presence	Proportion of Senior Management Hired from Local Community - Breakdown by Country			
	United States of America	97%	98%	95%
	China	100%	100%	100%
	Chile	80%	100%	100%
	Germany	100%	100%	100%
	Netherlands	93%	86%	92%
	Australia	100%	100%	100%
	Hungary	100%	100%	N/A
	Top 7 Countries Total¹	97%	97%	95%

1. 'Top 7' refers to the 7 countries above. The countries included are those where we have significant operations.

ALBEMARLE FOUNDATION

TOPIC	METRIC	2022	2021	2020
Albemarle Foundation¹	Total grants awarded to Albemarle Foundation programs ²	\$5,700,000	<i>\$6,059,334</i>	<i>\$5,665,655</i>
	Employee contributions to Albemarle Foundation (U.S. only)	\$685,600	\$735,741	\$799,307
	Albemarle Foundation scholarship awards	\$60,000	\$75,000	\$81,250
	Employee matching grant program awards ³	\$510,000	\$540,000	\$1,040,000
	Employee volunteer grant program awards	\$116,600	\$78,100	\$150,142
	Employee volunteer hours	12,780	8,199	9,810
	Albemarle Care Fund employee grants	\$33,200	\$86,869	\$58,381

1. Numbers in *italics* are restated to reflect updates made after the previous year's report was published.
2. 2020 and 2021 numbers are restated to include previous year's rollover payments.
3. The employee match limit was temporarily increased to \$25,000 in 2020 to further support COVID outreach efforts.

GOVERNANCE

TOPIC	METRIC	2022	2021	2020
Financial	Net sales	\$7.320 B	\$3.328 B	\$3.129 B
	Financial assistance received from the government	\$8,696,852	\$23,658,935	\$11,736,425
Public Policy	Political contributions Albemarle Corporation (USD)	\$0	\$0	\$2,500
	Political contributions PAC (USD)	\$18,500	\$0	\$29,300
Board Diversity	By Gender			
	Male	6	6	7
	Female	3	3	3
	Non-binary	0	--	--
	By Race			
	White	6	6	7
	Black or African American	2	2	2
	Hispanic or Latino	1	1	1
	American Indian or Alaska Native	0	0	0
	Asian	0	0	0
	Native Hawaiian or other Pacific Islander	0	0	0
	Two or more races	0	0	0
	By Age			
	Under 30	0	0	0
	30-50	0	0	0
Over 50	9	9	10	

TOPIC	METRIC	2022	2021	2020
Supplier Diversity	Total diversity spend percentage	11.1%	9.8%	--
	Total qualified diversity spend	\$292 M	\$212 M	--
	Total potential diversity spend	\$26 M	\$59 M	--
	Total diversity spend (qualified and potential)	\$318 M	\$271 M	--

ETHICS AND COMPLIANCE

TOPIC	METRIC	2022	2021	2020
Ethics and Compliance - Training ¹	Number of Employees Completing Code of Conduct Training ²	6,318	5,239	5,275
	Percentage of Employees Completing Code of Conduct Training	100%	99%	99%
	Breakdown by Employee Category			
	Manufacturing	3,252	2,883	--
	Non-manufacturing	3,066	2,356	--
	Breakdown by Country			
	United States	1,929	1,641	--
	China	1,392	1,116	--
	Chile	993	736	--
	Germany	677	637	--
Netherlands	431	414	--	
Australia	427	292	--	
Hungary	266	224	--	
Others	203	179	--	

1. Numbers in *italics* are restated to reflect updates made after the previous year's report was published.

2. This number only includes employees hired before November 1 of the reporting year.

TOPIC	METRIC	2022	2021	2020
Ethics and Compliance - Training ¹	Number of Employees Completing Anti-corruption Training ²	453	<i>1,116</i>	--
	Percentage of Employees Completing Anti-corruption Training	92%	<i>89%</i>	--
	Breakdown by Employee Category			
	Manufacturing	12	<i>238</i>	--
	Non-manufacturing	441	<i>878</i>	--
	Breakdown by Country			
	United States	155	<i>413</i>	--
	China	164	<i>178</i>	--
	Chile	34	<i>140</i>	--
	Germany	7	<i>88</i>	--
Netherlands	14	<i>89</i>	--	
Australia	34	<i>55</i>	--	
Hungary	8	<i>101</i>	--	
Others	37	<i>52</i>	--	

1. Numbers in *italics* are restated to reflect updates made after the previous year's report was published.

2. In 2022, we updated the guidelines for which functions in the organization had to take this training.

TOPIC	METRIC	2022	2021	2020
Ethics and Compliance¹⁰	Number of governance body members that anti-corruption policies and procedures have been communicated to	18	16	--
	Percentage of governance body members that anti-corruption policies and procedures have been communicated to	100%	100%	--
	Number of operations assessed for risks related to corruption	4	3	6
	Production in countries that have the 20 lowest rankings in Transparency International's Corruption Perception Index	0%	0%	0%
	Total number of confirmed incidents of corruption ¹	1	1	0
	Total number of confirmed incidents in which employees were dismissed or disciplined for corruption ¹	1	1	--
	Total number of confirmed incidents when contracts with business partners were terminated or not renewed due to violations related to corruption	0	0	--
	Public legal cases regarding corruption brought against the organization or its employees	0	0	--
	Number of legal actions pending or completed for anti-competitive behavior, anti-trust, and monopoly practices	0	0	0
	Total number of incidents of discrimination ²	3	2	1
Total number of identified incidents of violations involving the rights of Indigenous peoples	0	0	--	
Information Security	Number of confirmed information security incidents	0	--	--
	Percentage of operational sites with an information security management system	100%	--	--

1. In 2021 we originally reported 0 cases of confirmed corruption. This has been updated to 1 confirmed case. The conduct took place in 2018 but was reported and investigated in 2021.

2. 2021 number restated to reflect a broader scope for the definition of discrimination adopted internally in 2022 to be in line with the GHG protocol.

PRODUCTS AND INNOVATION

TOPIC	METRIC	2022	2021	2020
Innovation	Revenue from products designed for use-phase resource efficiency	\$5.1 - \$5.3 B	\$1.7 - 2.0 B	\$1.4 - 1.6 B
	Active patents	2,100	2,100	2,100
	Pending patents	550	500	550
Safety & Environmental Stewardship of Chemicals	Percentage of products that contain Globally Harmonized System of Classification and Labeling of Chemicals (GHS) category 1 and 2 health and environmental hazardous substances	85.6%	85.6%	N/A
	Percentage of such products that have undergone a hazard assessment	100%	100%	N/A

Content Indices



GRI Content Index

GRI STANDARD	DISCLOSURE	RESPONSE	PAGE #(S)
GRI 2: General Disclosures			
2-1	Organizational Details		
	Legal name	2022 Annual Report Form 10k	3
	Nature of ownership and legal form	2022 Annual Report Form 10k	3
	Location of headquarters	2022 Annual Report Form 10k	3
	Countries of operation	2022 Annual Report Form 10k	26 – 27
2-2	Entities Included in the Organization's Sustainability Reporting	2022 Sustainability Report – About this Report	2
2-3	Reporting period, frequency and contact point	<p>January 1 – December 31, 2022.</p> <p>Since the 2007 calendar year, Albemarle Corporation has produced a Sustainability Report annually. The 2022 Sustainability Report was published on June 5, 2023.</p> <p>Contact information can be found on the back cover of the 2022 Sustainability Report PDF.</p>	
2-4	Restatements of information	Relevant restatements are footnoted in the 2022 Sustainability Report and Performance Data.	
2-5	External assurance	<p>This entire Sustainability Report is not subjected to a comprehensive external assurance process, however, PwC performed a limited assurance engagement over our energy consumed, water withdrawal, water consumed, percentage of freshwater consumed in regions with high and extremely high overall water risk areas, and scope 1 and scope 2 GHG emissions metrics.</p> <p>Financial, safety and environmental information is subject to both national regulatory requirements as well as international and external audit such as ISO 14001 and similar systems. The 2022 Sustainability Report contains a consolidation of this information.</p> <p>2022 Sustainability Report – Management Assertion Letter</p>	141 – 142
2-6	Activities, value chain and other business relationships	2022 Annual Report Form 10k	3 – 5
2-7	Employees	Performance Data - Employees	106 – 107
2-8	Workers who are not employees	Performance Data - Employees	106 – 107

GRI STANDARD	DISCLOSURE	RESPONSE	PAGE #(S)
2-9	Governance structure and composition	2022 Sustainability Report – Corporate Governance 2023 Proxy Statement	19 – 21 14 – 21
2-10	Nomination and selection of the highest governance body	Corporate Governance Guidelines Nominating & Governance Committee Charter	6 1 – 2
2-11	Chair of the highest governance body	2023 Proxy Statement Corporate Governance Guidelines	14 9 – 11
2-12	Role of the highest governance body in overseeing the management of impacts	Corporate Governance Guidelines Health, Safety & Environment Committee Charter	1 – 2 1 – 3
2-13	Delegation of responsibility for managing impacts	Corporate Governance Guidelines Health, Safety & Environment Committee Charter	1 – 2 1 – 3
2-14	Role of the highest governance body in sustainability reporting	Corporate Governance Guidelines Health, Safety & Environment Committee Charter	1 – 2 1 – 3
2-15	Conflicts of interest	Corporate Governance Guidelines 2023 Proxy Statement Audit & Finance Committee Charter	7 – 8 6 – 13, 22 6
2-16	Communication of critical concerns	Corporate Governance Guidelines 2023 Proxy Statement Audit & Finance Committee Charter	4 96 6 – 7
2-17	Collective knowledge of the highest governance body	Health, Safety & Environment Committee Charter	1 – 3
2-18	Evaluation of the performance of the highest governance body	Corporate Governance Guidelines	5, 8
2-19	Remuneration policies	2023 Proxy Statement	29 – 57
2-20	Process to determine remuneration	2023 Proxy Statement	29 – 57
2-21	Annual total compensation ratio	2023 Proxy Statement	73 – 74
2-22	Statement on sustainable development strategy	2022 Sustainability Report – Welcome Message	4 – 5

GRI STANDARD	DISCLOSURE	RESPONSE	PAGE #(S)
2-23	Policy commitments	Website – Sustainable Governance	
2-24	Embedding policy commitments	2022 Sustainability Report - Business Ethics and Regulatory Compliance	77 – 80
2-25	Process to remediate negative impacts	Website – Speaking Up	
2-26	Mechanisms for seeking advice and raising concerns	Website – Speaking Up	
2-27	Compliance with laws and regulations	Albemarle Corporation did not have any material monetary fines or non-monetary sanctions for non-compliance with laws and regulations during the reporting period.	
2-28	Membership associations	Website – People, Workplace and Community	
2-29	Approach to stakeholder engagement	2022 Sustainability Report – Community and Stakeholder Engagement	64 – 70
2-30	Collective bargaining agreements	Performance Data – Labor Relations	117
GRI 3: Material Topics			
3-1	Process to determine material topics	2022 Sustainability Report – Materiality	27
3-2	List of material topics	2022 Sustainability Report – Materiality	27
3-3	Management of material topics	2022 Sustainability Report	
GRI 201: Economic Performance			
201-1	Direct economic value generated and distributed	2022 Sustainability Report – How we Create Value	9
201-2	Financial implications and other risks and opportunities due to climate change	2022 Sustainability Report – Enterprise Risk Management 2022 Annual Report Form 10k	72 – 76 8, 25
		2022 Sustainability Report – TCFD Report	90 – 99
201-3	Defined benefit plan obligations and other retirement plans	2022 Annual Report Form 10k	66 – 67, 106 – 112
201-4	Financial assistance received from government	Performance Data – Governance	120

GRI STANDARD	DISCLOSURE	RESPONSE	PAGE #(S)
GRI 202: Market Presence			
202-1	Ratios of standard entry level wage by gender compared to local minimum wage	Performance Data – Market and Community Presence	118
202-2	Proportion of senior management hired from the local community	Performance Data – Market and Community Presence	118
GRI 205: Anti-Corruption			
205-1	Operations assessed for risks related to corruption	Performance Data – Ethics and Compliance In 2022, 5 (7%) site audits were conducted by Internal Audit (percentage calculated based on 34 site count). No significant risks related to corruption were identified through the company's risk assessments.	124
205-2	Communication and training about anti-corruption policies and procedures	Performance Data – Ethics and Compliance Anti-corruption policies and procedures are addressed in Albemarle's Code of Conduct, Business Partner Code of Conduct, and Anti-Corruption Policy, available on Albemarle's website. Compliance with anti-corruption laws is also addressed on a regular basis in annual Code of Conduct training and tailored ethics & compliance training for at-risk functions. In 2022, our focus was on the delivery of training to those involved in engaging with government officials and those involved in capital projects.	124
205-3	Confirmed incidents of corruption and actions taken	Performance Data – Ethics and Compliance There were no cases brought against the company in 2022. Albemarle Corporation voluntarily self-reported in 2018, disclosed in our 2022 Annual Report Form 10k under "Litigation".	124
GRI 206: Anti-Competitive Behavior			
206-1	Legal actions for anti-competitive behavior, antitrust, and monopoly practices	Performance Data – Ethics and Compliance	124
GRI 207: Tax			
207-1	Approach to tax	2022 Sustainability Report – Business and Financial Resilience	74

GRI STANDARD	DISCLOSURE	RESPONSE	PAGE #(S)
GRI 302: Energy			
302-1	Energy consumption within the organization	Performance Data – Environment	101
302-4	Reduction of energy consumption	2022 Sustainability Report – Energy and Emissions	30 – 34
GRI 303: Water and Effluents			
303-1	Interactions with water as a shared resource	2022 Sustainability Report – Water	42 – 45
303-3	Water withdrawal	Performance Data – Environment	103
303-5	Water consumption	Performance Data – Environment	103
GRI 304: Biodiversity			
304-1	Operational sites owned, leased, managed in, or adjacent to protected areas and areas of high biodiversity value outside protected areas	2022 Sustainability Report – Resource Stewardship	48 – 50
304-3	Habitats protected or restored	2022 Sustainability Report – Resource Stewardship	48 – 50
GRI 305: Emissions			
305-1	Direct (scope 1) GHG emissions	Performance Data – Environment	101
305-2	Energy indirect (scope 2) GHG emissions	Performance Data – Environment	101
305-3	Other indirect (scope 3) GHG emissions	Performance Data – Environment	101 – 102
305-4	GHG emissions intensity	2022 Sustainability Report – Energy and Emissions	35 – 41
305-5	Reduction of GHG emissions	2022 Sustainability Report – Energy and Emissions	35 – 41
305-7	Nitrogen oxides (NO _x), sulfur oxides (SO _x), and other significant air emissions	Performance Data – Environment	103

GRI STANDARD	DISCLOSURE	RESPONSE	PAGE #(S)
GRI 306: Waste			
306-1	Waste generation and significant waste-related impacts	2022 Sustainability Report – Waste	46 – 47
306-2	Management of significant waste-related impacts	2022 Sustainability Report – Waste	46 – 47
306-3	Waste generated	Performance Data – Environment	103
306-4	Waste diverted from disposal	Performance Data – Environment	103
GRI 308: Supplier Environmental Assessment			
308-1	New suppliers that were screened using environmental data	2022 Sustainability Report – Energy and Emissions	41
GRI 401: Employment			
401-1	New employee hires and employee turnover	Performance Data - Employees	113 – 115
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	<p>United States of America: part-time employees receive the same benefits as full-time employees unless they work less than 20 hours a week. Temporary employees are not eligible for benefits.</p> <p>China: part-time employees receive the same benefits as full-time employees, and temporary employees are only eligible for statutory social security benefits and supplemental insurance.</p> <p>Chile: we do not employ part-time workers, and temporary employees are only eligible for life insurance benefits.</p> <p>Germany: part-time employees receive the same benefits as full-time employees, and temporary employees are eligible for 90% of all benefits except for Albemarle’s additional pension plan.</p> <p>Netherlands: part-time employees receive the same benefits as full-time employees.</p> <p>Australia: part-time employees receive pro-rated benefits. Temporary employees receive medical reimbursement only.</p> <p>Hungary: part-time employees receive the same benefits as full-time employees, and temporary employees that are fixed term Albemarle employees are eligible for the same benefits as regular employees</p>	
401-3	Parental leave	Performance Data – Labor Relations	116 – 117

GRI STANDARD	DISCLOSURE	RESPONSE	PAGE #(S)
GRI 403: Occupational Health and Safety			
403-1	Occupational health and safety management system	2022 Sustainability Report – Safety	52 – 54
403-2	Hazard identification, risk assessment, and incident investigation	2022 Sustainability Report – Safety	52 – 54
403-3	Occupational health services	2022 Sustainability Report - Safety	52 – 54
403-4	Worker participation, consultation, and communication on occupational health and safety	<p>Almost all of Albemarle's U.S. sites are ISO/RC 14001 certified. As part of the certification process, each site must have a Responsible Care Steering Committee (RCSC), led by the plant manager for overseeing the site's Responsible Care Management System. The RCSC will include a cross-sectional representation of the site (salary, wage and any nested contractor organization). The RCSC will work with the site management to set the site HSSE policies and procedures consistent with the Corporate HSSE policies and procedures, to establish site specific significant HSSE aspects along with the operation controls for such aspects, to establish and monitor the HSSE objectives for the site, and to routinely evaluate HSSE programs for the site. The site RCSCs will meet at least four times per year (typically quarterly, but some sites changed to monthly meetings) and they report annually to the Corporate RCSC on the status of their site-specific significant HSSE aspects and objectives. Germany requires that there be a safety council (Arbeitsschutzausschuss – ASA) for the German sites, which meets at least four times a year. Representatives of the workforce in this safety council are members of the works council (Betriebsrat) and the speaker of the safety advocates (Sicherheitsbeauftragte). The ASA safety council represents the total workforce on the German sites. At the Amsterdam site, two special works council commissions (safety, health & environment commission and personnel commission) meet with management to discuss safety, health, environment and wellbeing, respectively, on a monthly basis. These commissions represent the total workforce on the site. The location in Louvain-la-Neuve in Belgium has a 'Comité de Prévention et de Protection au travail'. The committee meets on a regular basis to discuss health and safety issues. In Chile, both production sites have worker participation committees, which are required by the Chilean government.</p>	
403-5	Worker training on occupational health and safety	2022 Sustainability Report - Safety	52 – 54
403-6	Promotion of worker health	2022 Sustainability Report - Safety	52 – 54
403-8	Workers covered by an occupational health and safety management system	Performance Data – Health and Safety	104
403-9	Work-related injuries	Performance Data – Health and Safety	104

GRI STANDARD	DISCLOSURE	RESPONSE	PAGE #(S)
GRI 404: Training and Education			
404-1	Average hours of training per year per employee	Performance Data – Investment in Talent	111
404-2	Programs for upgrading employee skills and transition assistance programs	2022 Sustainability Report – Investment in Talent	60 – 63
404-3	Percentage of employees receiving regular performance and career development reviews	Performance Data – Investment in Talent	112
GRI 405: Diversity and Equal Opportunity			
405-1	Diversity of governance bodies and employees	Performance Data – Governance	120
405-2	Ratio of basic salary and remuneration of women to men	Performance Data – Diversity, Equity & Inclusion	110
GRI 406: Non-Discrimination			
406-1	Incidents of discrimination and corrective actions taken	Albemarle had three incidents of discrimination. Incident one, a manager asked a direct report personal relationship questions, raised his/her voice and used profane language. The investigation outcome was a written warning. Incident two, an HR hiring manager asked women personal questions during interviews and a promotion conversation. The investigation resulted in a written warning and coaching. Incident three, an employee was allegedly harassed by another employee. The employee was terminated [for poor performance] prior to the investigation.	
GRI 407: Freedom of Association and Collective Bargaining			
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	Performance Data – Ethics and Compliance	124
GRI 408: Child Labor			
408-1	Operations and suppliers at significant risk for incidents of child labor	2022 Sustainability Report – Value Chain Excellence	80 – 82
GRI 409: Forced or Compulsory Labor			
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	2022 Sustainability Report – Value Chain Excellence	80 – 82

GRI STANDARD	DISCLOSURE	RESPONSE	PAGE #(S)
GRI 411: Rights of Indigenous Peoples			
411-1	Incidents of violations involving rights of Indigenous peoples	<p>Performance Data – Ethics and Compliance</p> <p>The company has not identified incidents of violations involving the rights of Indigenous peoples – there have been no legal actions or complaints of such violations registered with the company or competent authorities through litigation, regulatory actions, or other governmental enforcement proceedings, and the company’s due diligence, monitoring, and grievance mechanisms have not identified violations involving the rights of Indigenous peoples.</p>	124
GRI 413: Local Communities			
413-1	Operations with local community engagement, impact assessments, and development programs	2022 Sustainability Report – Community and Stakeholder Engagement	64 – 70
GRI 415: Public Policy			
415-1	Political contributions	Performance Data – Governance	120
GRI 416: Customer Health and Safety			
416-1	Assessment of the health and safety impacts of product and service categories	Performance Data – Products	125

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RT-CH-110a.1 EM-MM-110a.1	Percentage covered under emissions-limiting regulations	Performance Data – Environment	101
EM-MM-110a.2	Discussion of long-term and short-term strategy or plan to manage scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	2022 Sustainability Report – Energy and Emissions	35 – 41
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RT-CH-120a.1 EM-MM-120a.1	NO _x (excluding N ₂ O) SO _x Volatile Organic Compounds (VOCs) Hazardous Air Pollutants (HAPs)	Performance Data – Environment	103
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EM-MM-140a.1 (2)	Percentage of freshwater consumed in regions with High or Extremely High Baseline Water Stress	Performance Data – Environment	103
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WASTE AND HAZARDOUS MATERIALS MANAGEMENT			
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EM-MM-150a.10	Description of waste and hazardous materials management policies and procedures for active and inactive operations	2022 Sustainability Report – Waste	46 – 47
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SECURITY, HUMAN RIGHTS AND RIGHTS OF INDIGENOUS PEOPLES			
EM-MM-210a.3	Discussion of engagement processes and due diligence practices with respect to human rights, Indigenous rights, and operation in areas of conflict	2022 Sustainability Report – Community and Stakeholder Engagement	64 – 70

SASB STANDARD	DISCLOSURE	RESPONSE	PAGE #(S)
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EM-MM-310a.1	Percentage of active workforce covered under collective bargaining agreements, broken down by U.S. and foreign employees	Performance Data – Labor Relations	117
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RT-CH-410b.1 (2)	Percentage of such products that have undergone a hazard assessment	Performance Data – Products	125
RT-CH-410b.2 (1)	Discussion of strategy to manage chemicals of concern	2022 Sustainability Report – Business Ethics and Regulatory Compliance	77 – 80
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SASB STANDARD	DISCLOSURE	RESPONSE	PAGE #(S)
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EM-MM-510a.2	Production in countries that have the 20 lowest rankings in Transparency International’s Corruption Perception Index	Performance Data – Ethics and Compliance	124
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RT-CH-540a.2	Number of transport incidents	Performance Data – Health and Safety	105



Report of Independent Accountants

To the Board of Directors of Albemarle Corporation

We have reviewed the accompanying management assertion of Albemarle Corporation (Albemarle) that the energy, emissions, and water metrics (together, the “sustainability metrics”) for the year ended December 31, 2022 in management’s assertion are presented in accordance with the assessment criteria set forth in management’s assertion. Albemarle’s management is responsible for its assertion and for the selection of the criteria, which management believes provide an objective basis for measuring and reporting on the sustainability metrics. Our responsibility is to express a conclusion on management’s assertion based on our review.

Our review was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants (AICPA) in AT-C section 105, *Concepts Common to All Attestation Engagements*, and AT-C section 210, *Review Engagements*. Those standards require that we plan and perform the review to obtain limited assurance about whether any material modifications should be made to management’s assertion in order for it to be fairly stated. The procedures performed in a review vary in nature and timing from, and are substantially less in extent than, an examination, the objective of which is to obtain reasonable assurance about whether management’s assertion is fairly stated, in all material respects, in order to express an opinion. Accordingly, we do not express such an opinion. Because of the limited nature of the engagement, the level of assurance obtained in a review is substantially lower than the assurance that would have been obtained had an examination been performed. We believe that the review evidence obtained is sufficient and appropriate to provide a reasonable basis for our conclusion.

We are required to be independent and to meet our other ethical responsibilities in accordance with relevant ethical requirements related to the engagement.

The firm applies the Statements on Quality Control Standards established by the AICPA and, accordingly, maintains a comprehensive system of quality control.

The procedures we performed were based on our professional judgment. In performing our review, we performed inquiries, performed tests of mathematical accuracy of computations on a sample basis, read relevant policies, where available, to understand terms related to relevant information about the sustainability metrics, reviewed supporting documentation in regard to the completeness and accuracy of the data in the sustainability metrics on a sample basis, and performed analytical procedures.

Greenhouse gas (GHG) emissions quantification is subject to significant inherent measurement uncertainty because of such things as GHG emissions factors that are used in mathematical models to calculate GHG emissions, and the inability of these models, due to incomplete scientific knowledge and other factors, to accurately measure under all circumstances the relationship between various inputs and the resultant GHG emissions. Environmental and energy use data used in GHG emissions calculations are subject to inherent limitations, given the nature and the methods used for measuring such data. The selection by management of different but acceptable measurement techniques could have resulted in materially different amounts being reported.

The preparation of the energy and water metrics requires management to establish the criteria, make determinations as to the relevancy of information to be included, and make assumptions that affect reported information. The selection by management of different but acceptable measurement techniques could have resulted in materially different amounts being reported.

As discussed in management’s assertion, Albemarle has estimated GHG emissions for certain emissions sources and consumption data for certain energy and water sources for which no primary usage data is available.

Based on our review, we are not aware of any material modifications that should be made to Albemarle’s management assertion in order for it to be fairly stated.

Charlotte, North Carolina
June 1, 2023

Management Assertion Letter

WITH RESPECT TO THE ENERGY, EMISSIONS, AND WATER METRICS (TOGETHER, THE “SUSTAINABILITY METRICS”) PRESENTED BY ALBEMARLE CORPORATION (ALBEMARLE) IN THE TABLE BELOW FOR THE YEAR ENDED DECEMBER 31, 2022, MANAGEMENT OF ALBEMARLE ASSERTS THAT THE SUSTAINABILITY METRICS ARE PRESENTED IN ACCORDANCE WITH THE ASSESSMENT CRITERIA SET FORTH BELOW. MANAGEMENT IS RESPONSIBLE FOR THE SELECTION OF THE CRITERIA, WHICH MANAGEMENT BELIEVES PROVIDE AN OBJECTIVE BASIS FOR MEASURING AND REPORTING ON THE SUSTAINABILITY METRICS. MANAGEMENT IS RESPONSIBLE FOR THE COMPLETENESS, ACCURACY, AND VALIDITY OF THE SUSTAINABILITY METRICS.

ORGANIZATIONAL BOUNDARY

- The organizational boundary is applied consistently across the sustainability metrics included in this management assertion.
- In accordance with the GHG Protocol (as defined below), Albemarle uses the financial control approach for determination of the organizational boundary for reporting the sustainability metrics. This includes both leased and owned facilities engaged in both production and non-production activities as well as joint venture arrangements under certain conditions (as defined below) and leased/owned vehicles.
- Activity data related to acquired businesses are included in the sustainability metrics on a pro-rata basis. Therefore, activity data related to the Qinzhou business (Guangxi Tianyuan New Energy Materials Co., Ltd.), which was acquired on October 25, 2022, is incorporated based on the portion of 2022 when the business was under Albemarle’s ownership.
- New production facilities are included starting in the year and month in which it first produces saleable goods. The Wodgina facility was the only new production facility with saleable goods in 2022 (however, it is excluded from the sustainability metrics; see joint venture discussion below).
- Under the financial control approach, joint ventures are included in the organizational boundary according to the equity share approach. The JBC (Safi, Jordan) joint venture is deemed to be within Albemarle’s financial control, and in turn, activity data is included based on Albemarle’s respective share of equity in the operation. The facilities under the MARBL joint venture (Kemerton, Wodgina) are excluded from the sustainability metrics because no saleable goods were produced in 2022 (Kemerton) or activity data was not available yet due to ongoing contract negotiations (Wodgina). All remaining joint ventures are not within Albemarle’s financial control, and therefore, are excluded from measurement.
- The emissions from joint ventures not within Albemarle’s financial control are included under Scope 3, Category 15: Investments. Scope 3 greenhouse gas (GHG) emissions are not within the scope of this management assertion.

TOPIC	METRIC	DEFINITION OF THE METRIC	METRIC QUANTITY
Energy	Total energy consumed	Direct and indirect energy consumed related to Scope 1 and Scope 2 activities as well as photovoltaic energy capture.	13.9 million gigajoules (GJ)
Emissions	Scope 1 GHG emissions	Direct emissions from stationary and mobile combustion of fossil fuels, releases during chemical processes, and fugitive emissions.	618 thousand metric tons of carbon dioxide equivalent (kt CO ₂ e)
	Scope 2 GHG emissions	Indirect emissions from the use of purchased grid electricity and steam.	Location-based: 334 thousand metric tons of carbon dioxide equivalent (kt CO ₂ e) Market-based: 292 thousand metric tons of carbon dioxide equivalent (kt CO ₂ e)
Water	Total water withdrawal	Total freshwater withdrawn from surface water, well (ground) water, rainwater captured, and water obtained from municipal water supplies.	22.6 million cubic meters (m ³)
	Total water consumed	Total freshwater withdrawn less the volume of water returned to the same catchment from which it was originally sourced.	11.4 million cubic meters (m ³)
	Percentage of freshwater consumed in regions with high or extremely high overall water risk	Freshwater consumed in regions with high or extremely high overall water risk as a percent of total water consumed.	22.7% of the total water consumed
	Percentage of freshwater consumed in regions with high overall water risk (category 3–4)	Freshwater consumed in regions with high overall water risk as a percent of total water consumed.	10.5% of the total water consumed
	Percentage of freshwater consumed in regions with extremely high overall water risk (category 4–5)	Freshwater consumed in regions with extremely high overall water risk as a percent of total water consumed.	12.2% of the total water consumed

ENERGY METRICS

- Albemarle considers the principles and guidance of the Sustainability Accounting Standards Board (SASB) Chemicals Industry Standard Accounting Metric RT-CH-130a.1 to guide the criteria to assess, calculate, and report total energy consumed.
- Total energy consumed (in million gigajoules) is the sum of direct energy from purchased fuels (natural gas, liquid petroleum gas (LPG), gasoline, distillates, and fuel oil), photovoltaic energy capture, and indirect energy from purchased grid electricity and steam.
- Energy is calculated by conversion to a gigajoule of direct and indirect energy usage from Scope 1 and Scope 2 consumption data as further discussed in the Scope 1 and Scope 2 GHG Emissions Metric sections below. Consumption data is then converted to gigajoules.
- Photovoltaic energy capture is directly metered.
- The preparation of the energy metric requires management to establish the criteria, make determinations as to the relevancy of information to be included, and make assumptions that affect reported information. The selection by management of different but acceptable measurement techniques could have resulted in a materially different amount being reported.
- Estimation accounted for less than 1% of the reported total energy consumed.

EMISSIONS METRICS, OVERALL CONSIDERATIONS

- Albemarle considers the principles and guidance of the World Resources Institute (WRI) and the World Business Council for Sustainable Development's (WBCSD) The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard, Revised Edition and GHG Protocol Scope 2 Guidance: An Amendment to the GHG Protocol Corporate Standard (together, the "GHG Protocol") to guide the criteria to assess, calculate, and report GHG emissions.
- GHG emissions quantification is subject to significant inherent measurement uncertainty because of such things as GHG emissions factors that are used in mathematical models to calculate GHG emissions, and the inability of these models, due to incomplete scientific knowledge and other factors, to accurately measure under all circumstances the relationship between various inputs and the resultant GHG emissions. Environmental and energy use data used in GHG emissions calculations are subject to inherent limitations, given the nature and the methods used for measuring such data. The selection by management of different but acceptable measurement techniques could have resulted in materially different amounts being reported.
- GHG emissions are expressed in carbon dioxide equivalent (CO₂e) emissions and include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and industrial gases, such as hydrochlorofluorocarbons (HCFCs) and hydrofluorocarbons (HFCs). The other GHGs of sulfur hexafluoride (SF₆), perfluorocarbons (PFCs), and nitrogen trifluoride (NF₃) are not emitted by Albemarle's facilities or vehicles. Emissions data by individual GHG is not disclosed as a majority of CO₂e relates to CO₂. Carbon dioxide equivalent emissions are calculated by multiplying actual or estimated energy, fuel, or refrigerant usage by the relevant emission factors and Global Warming Potentials (GWPs) of the compounds as defined by the Intergovernmental Panel on Climate Change's (IPCC) Fifth Assessment Report (AR5 – 100 year). Where International Energy Agency (IEA) emission factors are applied, the GWP value is included in the provided emission factor and is based on the IPCC's Fourth Assessment Report (AR4 – 100 year). All emission factors are updated annually where applicable.

SCOPE 1 GHG EMISSIONS METRIC

- Albemarle tracks emissions from the stationary and mobile combustion of fossil fuels, the release of GHG emissions during chemical processes, and the release of fugitive emissions.
- Emissions from stationary and mobile combustion:
 - » Stationary combustion (production facilities):
 - Consumption is measured based on production facility-level monthly (or aggregate) third-party invoices of purchased fossil fuels (natural gas, LPG, gasoline, distillates, and fuel oil).
 - » Mobile combustion (Albemarle operated vehicle fleet):
 - Albemarle’s mobile fleet of leased/owned vehicles combust gasoline.
 - Estimated based on the total number of leased/owned vehicles obtained from the fleet management team and the estimated number of miles driven per year as obtained from the US Environmental Protection Agency (EPA) Office of Transportation and Air Quality, Greenhouse Gas Emissions from a Typical Passenger Vehicle, EPA-420-F-18-008, March 2018.
 - » Emission factors used to convert the consumption of fossil fuels into GHG emissions:
 - Stationary combustion:
 - Production facilities (excluding Amsterdam): Obtained from the US EPA Code of Federal Regulations, Title 40, Chapter I, Subchapter C, Part 98, Table C-1: Default CO₂ Emission Factors and High Heat Values for Various Types of Fuel (Last Modified: December 9, 2016).
 - Amsterdam production facility: Obtained from Vaststelling standaard CO₂-EF aardgas monitoring 2022 en ETS 2022 (rvo.nl).
 - Mobile combustion: Obtained from the US EPA Office of Transportation and Air Quality, Greenhouse Gas Emissions from a Typical Passenger Vehicle, EPA-420-F-18-008, March 2018.
- Emissions from chemical processes:
 - » Estimated based on actual quantity of chemicals consumed which are known to release GHG emissions during the chemical process and the estimated amount of dissolved CO₂ released from brine water. The GHG emissions are calculated using stoichiometry (chemical process) or measured content (CO₂ in brine). The calculation outputs the quantity of CO₂ generated by the process which is then converted to CO₂e using the relevant GWP.
- Emissions from fugitives:
 - » Hydrofluorocarbons (HFCs) and hydrochlorofluorocarbons (HCFCs) are related to replenishment of purchased refrigerants during 2022. Refrigerant consumption is calculated based on third-party invoices of purchased quantities of refrigerants. The GWP of the individual refrigerants is then used to convert the fugitives into CO₂e.
- Estimation accounted for approximately 7% of the reported Scope 1 GHG emissions due to the estimation of emissions from the operated vehicle fleet and chemical processes.
- Albemarle excluded emissions resulting from stationary combustion of fossil fuels at its non-production (i.e., offices) facilities as the associated emissions are estimated to represent less than 1% of reported Scope 1 GHG emissions.

SCOPE 2 GHG EMISSIONS METRICS

- Albemarle tracks indirect emissions from the use of purchased grid electricity at its production and non-production facilities and steam at its production facilities.
- Production facilities:
 - » Consumption of purchased grid electricity and steam is measured based on production facility-level monthly utility invoices from third-party suppliers.
- Non-production facilities (i.e., offices):
 - » Consumption of purchased grid electricity is estimated based on the actual square meters of office space as reported by office managers. The average energy consumed per square meter of office space is based on the US Energy Information Administration's (EIA) 2012 Commercial Buildings Energy Consumption Survey (CBECS) Table PBA4, Electricity consumption totals and conditional intensities by building activity subcategories, for offices.
- Emission factors - Location-based (purchased grid electricity and steam):
 - » US based production and non-production facilities: Obtained from the U.S. EPA Emissions & Generation Resource Integrated Database (eGRID) factors by subregion (released January 27, 2022).
 - » Non-US based production and non-production facilities: Obtained from the IEA Emission Factors 2022 (released in September 2022).
- Emission factors - Market-based (purchased grid electricity):
 - » Emission factors were applied based on the GHG Protocol hierarchy and availability of data including the factors below listed from highest to lowest precision:
 - Utility-specific market-based fuel mix (proportionate amounts of fuels driving electricity consumption) for the most recent reporting year were provided by the utility provider. Albemarle surveys the utility providers supplying electricity to its facilities each year to request the utility-specific data.
 - Other grid-average emission factors - Same as location-based.
- Estimation accounted for approximately 1% of the reported Scope 2 GHG emissions (both location-based and market-based) due to the estimation of non-production facility emissions.

WATER METRICS

- Albemarle considers the principles and guidance of the Sustainability Accounting Standards Board (SASB) Chemicals Industry Standard Accounting Metric RT-CH-140a.1 to guide the criteria to assess, calculate, and report total water withdrawal and total water consumed.
- Albemarle excludes water withdrawal and water consumed by non-production facilities (i.e., offices) as the associated volumes are estimated to be less than 1% of the total reported amounts.
- Total water withdrawal:
 - » Represents the total freshwater withdrawn from the following sources in the current year:
 - Surface water, including from lakes and rivers
 - Well (ground) water
 - Rainwater captured (collected and stored)
 - Municipal water
 - » Neither brine water (from which our processes can extract bromides and lithium) nor water included in purchased raw materials are included as the water is not deemed freshwater.
 - » Surface water, well (ground) water, and municipal water are measured at the facility level through usage data collected from third-party invoices or direct volumetric meter readings where available.
 - » Rainwater captured is estimated at the facility level based on third-party rainfall data and the measured surface area in which the water is captured.
 - » Total water withdrawal excludes water that was withdrawn by Albemarle and transferred to third parties (i.e., the withdrawn amount does not pertain to activities of Albemarle). However, the volume is included in Albemarle's metric where current water metering tools do not enable measurement of the transferred amount.
 - » Estimation accounted for less than 1% of the reported total water withdrawal.

- Total water consumed
 - » Total water consumed is equal to total water withdrawal less the volume of water returned to the same catchment from which it was originally sourced as measured through direct volumetric meter readings.
 - » Neither brine water nor water included in purchased raw materials are included as the water is not deemed freshwater.
 - » Estimation accounted for less than 1% of the reported total water consumed.
- Percentage of freshwater consumed in relation to the region's overall water risk
 - » Albemarle considers the overall water risk framework of the World Resources Institute (WRI) Water Risk Atlas tool (Aqueduct 3.0 - WRI Aqueduct 2019) to guide the criteria to assess, calculate, and report the percentage of freshwater consumed in relation to the region's overall water risk metrics.
 - » Albemarle reports the water consumed in the two highest categories (high and extremely high overall water risk) as a percent of total water consumed as well as the combined value. The facilities that are classified into the two categories are as follows:
 - High Water Risk
 - Chilean production facilities (Salar de Atacama and La Negra)
 - Extremely High Water Risk
 - Jordanian production facility (Jordan Bromine Company)
- The preparation of the water metrics requires management to establish the criteria, make determinations as to the relevancy of information to be included, and make assumptions that affect reported information. The selection by management of different but acceptable measurement techniques could have resulted in materially different amounts being reported.



CONTACT US

sustainability@albemarle.com

+1-980-299-5700

www.albemarle.com

