



2021 SUSTAINABILITY REPORT

# PEOPLE. DRIVE. SUSTAINABILITY.

 ALBEMARLE®



## ABOUT THIS REPORT

The title of this year's report, People. Drive. Sustainability, reflects the path we are on to advance sustainability in our businesses and in the communities in which we operate. The report highlights accomplishments that are driving progress towards our financial, social, and environmental commitments and performance, and underlines Albemarle's contributions to creating a more sustainable future.

This report covers information for the 2021 calendar year, 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).<sup>1</sup>

Our report content and disclosures reference the Global Reporting Initiative (GRI) Standards and the Sustainability Accounting Standards Board (SASB). Please see our [GRI](#) and [SASB](#) Content Indices and [Performance Data](#) for more information.

Throughout the report, we identify how we are advancing progress on the nine United Nations Sustainable Development Goals (SDGs) that are aligned to our strategy and where we believe we can have a meaningful impact. For more information on how Albemarle is aligned with the SDGs, see page 28.

<sup>1</sup>The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard, Revised Edition.





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# Q&A WITH THE CEO





# Q&A

With J. Kent Masters, Chairman, President and Chief Executive Officer

## The world now finds itself more than two years into the pandemic. What impact did the ongoing challenges of COVID-19 have on Albemarle in 2021?

We did not anticipate that the pandemic would be with us for as long as it has, but I'm proud to say that, as an organization, we've shown great agility and resilience in our ability to adapt. As a values-driven company focused on health and safety, our employees continued to stay vigilant in terms of safety protocols to protect themselves, their colleagues, and our communities. Despite the headwinds we faced in 2021 around remote working, labor shortages at some sites, and supply chain interruptions, we maintained business continuity and were able to serve our customers with minimal disruption. This is a testament to the dedication and commitment of our people and the strength of our values and purpose that make Albemarle a leader in our industry.

## What are some 2021 highlights?

In 2021, we rolled out the Albemarle Way of Excellence, our operating model for executing against our strategy and accelerating sustainability. It helps us balance our four strategic pillars to grow profitably, maximize productivity, invest with discipline, and advance sustainability with the goals of driving greater stakeholder value, delivering outstanding customer service, and raising the bar on excellence. Despite the pandemic, 2021 was very much a growth year for Albemarle. Our strong balance sheet, healthy margins, and increased equity from the ~\$1.5 billion equity raise we completed early in the year, gave us the capital to execute on our growth strategy and to make significant investments in sustainability. We completed construction of a thermal evaporator at our La Negra site in Chile, which allows us to double our lithium production without a corresponding increase in freshwater use. Working closely with partners in the electric vehicle (EV) supply chain, we continued to invest in technology for lithium-ion battery recycling, which will be key as we progress towards a more circular economy. We also enhanced our organizational structure to best serve our business interests and needs globally. We created key, senior level positions including Albemarle's first Vice President of Global Government and

Community Affairs and Chief Supply Chain Officer. Both positions speak to the importance we're placing on ensuring our license to operate around the world and the significance of driving business and sustainability excellence throughout our value chain. We also continued to engage in sustainability on the global stage by becoming a participant in the United Nations Global Compact (UNGC), a 15,000 strong network of peers that spans 165 countries and which aims to align corporate strategies and operations with universal principles on human rights, labor, environment, and anti-corruption.

## Why is sustainability important to Albemarle's business success?

Our business plays an important role in combating climate change and helping the world transition to a green economy. Our products and services make the world safer and more sustainable, and we pride ourselves on doing the right things, the right way, with the right resources. With sustainability firmly embedded in our strategy, we continue to add value for all stakeholders. Our customers want to work with a partner who is aligned with their values and is producing products in a sustainable way. In an increasingly competitive marketplace for talent, our sustainability commitments are a clear differentiator, and we know that current



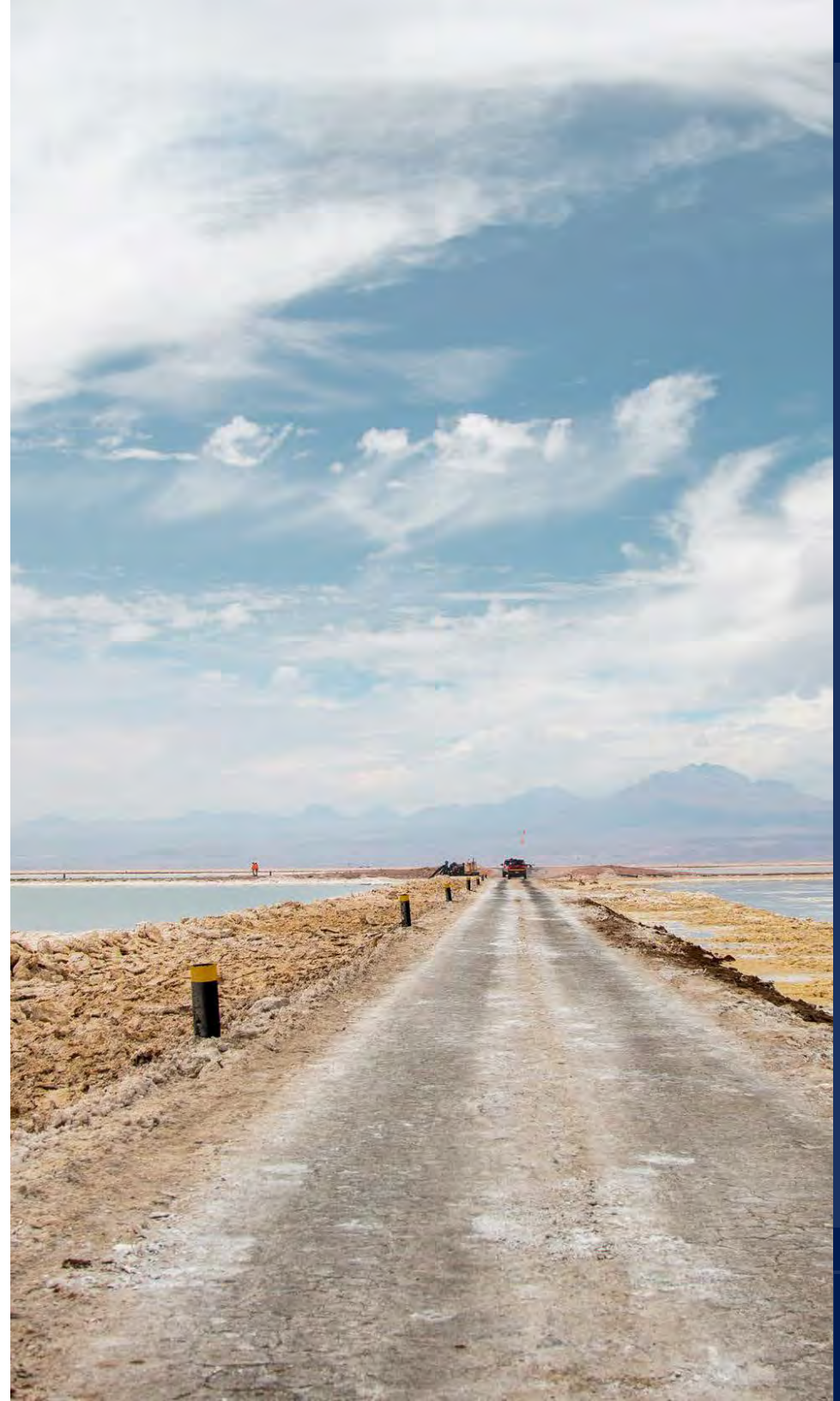
**J. Kent Masters**  
Chairman, President and  
Chief Executive Officer

and prospective employees want to work for a company that is demonstrating leadership in this area. Our shareholders are also increasingly incorporating sustainability into their investment decisions. We continue to see our efforts paying off. For the sixth consecutive year, EcoVadis, a leading sustainability ratings agency, has awarded Albemarle gold medal status. This recognition places us in the top six percent of more than 75,000 companies worldwide.

### Finally, what can we expect from Albemarle in 2022?

We're now firmly grounded in our approach to sustainability investments and activities that generate long-term value for all our stakeholders, and we're making substantial progress towards our sustainability goals. In 2022, we set additional ambitious sustainability targets for diversity. We plan on completing life cycle assessments (LCAs) for more of our products to account for their full impact on the environment. Also, beginning in 2022, we plan to report against the Task Force on Climate-Related Financial Disclosures (TCFD) recommendations to provide our investors with comprehensive information about the impacts of climate change on our business.

We continue to work closely with our customers to contribute to a sustainable supply chain that supports them in creating a competitive advantage, and we look forward to bringing new and innovative products to the market that contribute to a better world. In 2022, we will drive forward our investment in our people through enhanced training and development opportunities and by continuing to foster a diverse workforce, an equitable workplace, and an inclusive culture where everyone can reach their full potential. There is still work to be done, but I am confident that we have the right strategy, the right people, and the right tools in place to succeed. We have charted our sustainability course, and we're ready to execute on our commitments.







# ABOUT ALBEMARLE



# WHO WE ARE

Albemarle Corporation (NYSE: ALB), headquartered in Charlotte, North Carolina, is a leading global developer, manufacturer, and marketer of highly engineered specialty chemicals. We combine world-class resource assets with talent, technological know-how, and strong customer partnerships to improve essential aspects of life such as clean energy, food and fire safety, and sustainable transportation. Albemarle operates under three global business units (GBUs) – Lithium, Bromine, and Catalysts. At Albemarle, we create products that enable a safer, cleaner, and more sustainable world.

## BY THE NUMBERS<sup>1</sup>

**\$3.3B**

Net Sales

**\$871M**

Adjusted EBITDA<sup>2</sup>

**26%**

Adjusted EBITDA Margin<sup>2</sup>

**~5,600**

Employees<sup>3</sup>

**~2,100**

Customers

Customers in

**~70**

Countries

**>2,000**

Active Patents

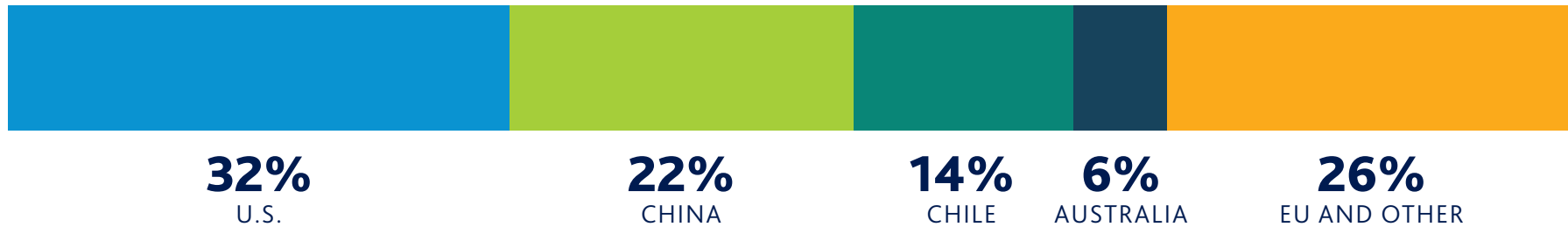
<sup>1</sup> All data is as of 12/31/2021.

<sup>2</sup> Non-GAAP measure. See Non-GAAP Reconciliations in Exhibit 99.1 of the Current Report on Form 8-K filed on February 16, 2022 for reconciliations to the most directly comparable financial measure calculated and reported in accordance with U.S. GAAP.

<sup>3</sup> Includes permanent and temporary workers, but excludes our JV.



## Global Workforce



## Financial Summary

|  | 2019         | 2020          | 2021         |
|--|--------------|---------------|--------------|
| Net sales  | \$3.589B     | \$3.129B      | \$3.328B     |
| Net income attributable to ALB                   | \$533M       | \$376M        | \$124M       |
| Adjusted EBITDA <sup>1</sup>                     | \$1,037M     | \$819M        | \$871M       |
| Adjusted EBITDA margin <sup>1</sup>              | 29%          | 26%           | 26%          |
| Diluted earnings per share                       | \$5.02       | \$3.52        | \$1.06       |
| Adjusted diluted earnings per share <sup>1</sup> | \$6.04       | \$4.12        | \$4.04       |
| 3-year weighted average ROIC <sup>2</sup>        | 10.70%       | 9.30%         | 10.67%       |
| Net debt to adjusted EBITDA                      | 3.2x         | 3.4x          | 2.3x         |
| Year-end credit ratings (S&P/Moodys/Fitch)       | BBB/Baa2/BBB | BBB-/Baa3/BBB | BBB/Baa3/BBB |
| Dividends paid per share                         | \$1.47       | \$1.54        | \$1.56       |
| Dividend yield                                   | 1.9%         | 1.8%          | 0.8%         |

<sup>1</sup> Non-GAAP measure. See Non-GAAP Reconciliations in Exhibit 99.1 of the Current Report on Form 8-K filed on February 16, 2022 and Exhibit 99.1 of the Current Report on Form 8-K filed on February 17, 2021 for reconciliations to the most directly comparable financial measure calculated and reported in accordance with U.S. GAAP.

<sup>2</sup> Return on Invested Capital (ROIC), as defined in the 2022 proxy statement.

For more financial information, please see our annual reports, proxy statements, quarterly reports, and other filings with the Securities and Exchange Commission available on our [website](#).



# HOW WE CREATE VALUE

## Accelerating Sustainability to Generate Long-Term Value

At Albemarle, we pride ourselves on creating value for all our stakeholders. We realize economic value for our shareholders through strong financial performance, dividend payments, and a positive return on investment. We strive to be stewards of the natural environment in and around our operating sites, and with approximately 50% of our revenue derived from products that improve resource efficiency, lower GHG emissions, and lower water usage, we support our customers in achieving their business and sustainability goals.<sup>1</sup>

We deliver value to the communities in which we operate by offering employment that includes competitive compensation, benefits, and personal and professional growth opportunities. Through our philanthropic and volunteering efforts, we strengthen the communities in which we live and operate, and we work to uphold the human rights and the culture of indigenous peoples living near our operations. We make significant investments in our facilities, and with our market-leading research and development efforts, we drive innovation, which creates lasting value and benefits for society.



<sup>1</sup> Calculated in accordance with SASB definition of product design for use-phase efficiency. Only direct impacts of our products in their use-phase were used in the calculation. Calculation excludes smaller or secondary impacts on resource efficiencies.





# HOW WE CREATE VALUE<sup>1</sup>



<sup>1</sup> All data is as of 12/31/2021.

<sup>2</sup> Includes net payments in 2021 for income, sales and use, and property taxes, as well as commission payments to Chile.

<sup>3</sup> Includes permanent and temporary workers, but excludes our JV.

<sup>4</sup> Includes salaries paid in 2021, but excludes incentive pay.

<sup>5</sup> Source: IEA Global EV Outlook, 2020 and Albemarle estimates. Represents CO<sub>2</sub> emissions avoided in 2021 based on Albemarle's historic value of lithium sold into electric vehicle (EV) batteries and the annual well-to-wheel avoidance of CO<sub>2</sub> emissions due to substitution of internal combustion engines by EVs.

<sup>6</sup> Estimated sulfur emissions avoided in 2021 by the use of HPC catalysts sold in 2021.



# OUR PURPOSE AND VALUES

Albemarle’s purpose is to make the world safe and sustainable by powering the potential of people. Our values – curiosity, care, courage, humility, integrity and transparency, and collaboration – are the foundation of our beliefs. They reflect our organization’s culture and guide our work as we strive for excellence in all that we do. Together, our purpose and values instill meaning to our work and continually inspire us to do better. We are committed to doing the right things, the right way, with the right resources, to uncover new opportunities for the future to help our customers reach their sustainability goals.



## CURIOSITY

We encourage questions and wonder. We seek continuous learning, improvement and innovation.



## CARE

We value safety and the wellbeing of each other. We help make our communities better. We are stewards of the environment.



## HUMILITY

We share the credit and value the ideas of others – it’s not about me. We value diversity of thoughts, experiences and cultures.



## COURAGE

We are comfortable being vulnerable. We are willing to take informed and shared risks, but not shortcuts.



## INTEGRITY AND TRANSPARENCY

We are our word. We do what we say. We communicate and act transparently. What you see is what you get.



## COLLABORATION

We believe two are better than one when two act as one. We are empowered to perform our jobs and are accountable for the result.



## The Albemarle Way of Excellence

In 2020, we embedded sustainability as one of the pillars of our strategy. In 2021, we rolled out the Albemarle Way of Excellence (AWE), our operating model designed to ensure enterprise-wide alignment on our business priorities, and which serves as a blueprint for the way we execute and accelerate our strategy. Our operating model includes four key pillars – Sustainable Approach, High-Performance Culture, Operational Discipline, and Competitive Capabilities – that are critical to achieving our company’s performance priorities of raising the bar on excellence, delivering outstanding customer experience, and driving greater stakeholder value. Our Sustainable Approach is fully embedded in our AWE operating model, which aligns directly with the materiality assessment that underlies this report.





# STRATEGIC EXECUTION AND THE ALBEMARLE WAY OF EXCELLENCE

## PURPOSE

Making the world safe and sustainable by powering potential

## VALUES

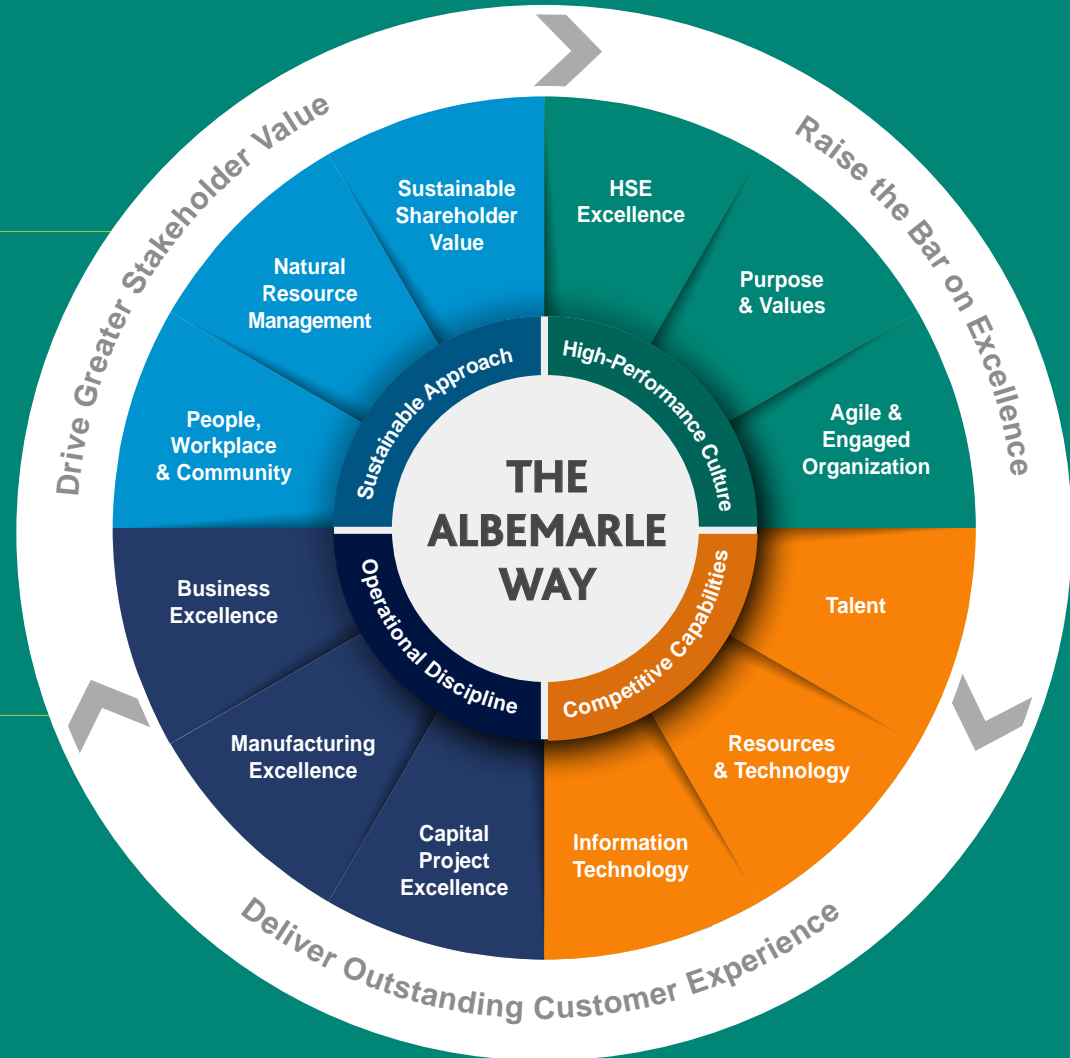
- Care
- Curiosity
- Courage
- Collaboration
- Humility
- Integrity
- Transparency

## OPERATING MODEL

How We Execute & Accelerate Our Strategy

## STRATEGY

- Grow
- Maximize
- Invest
- Sustain



# OUR STRATEGY

To create sustainable value for our shareholders, Albemarle has a clear strategy that includes four key tenets:

## Grow Profitably:

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

## Maximize Productivity:

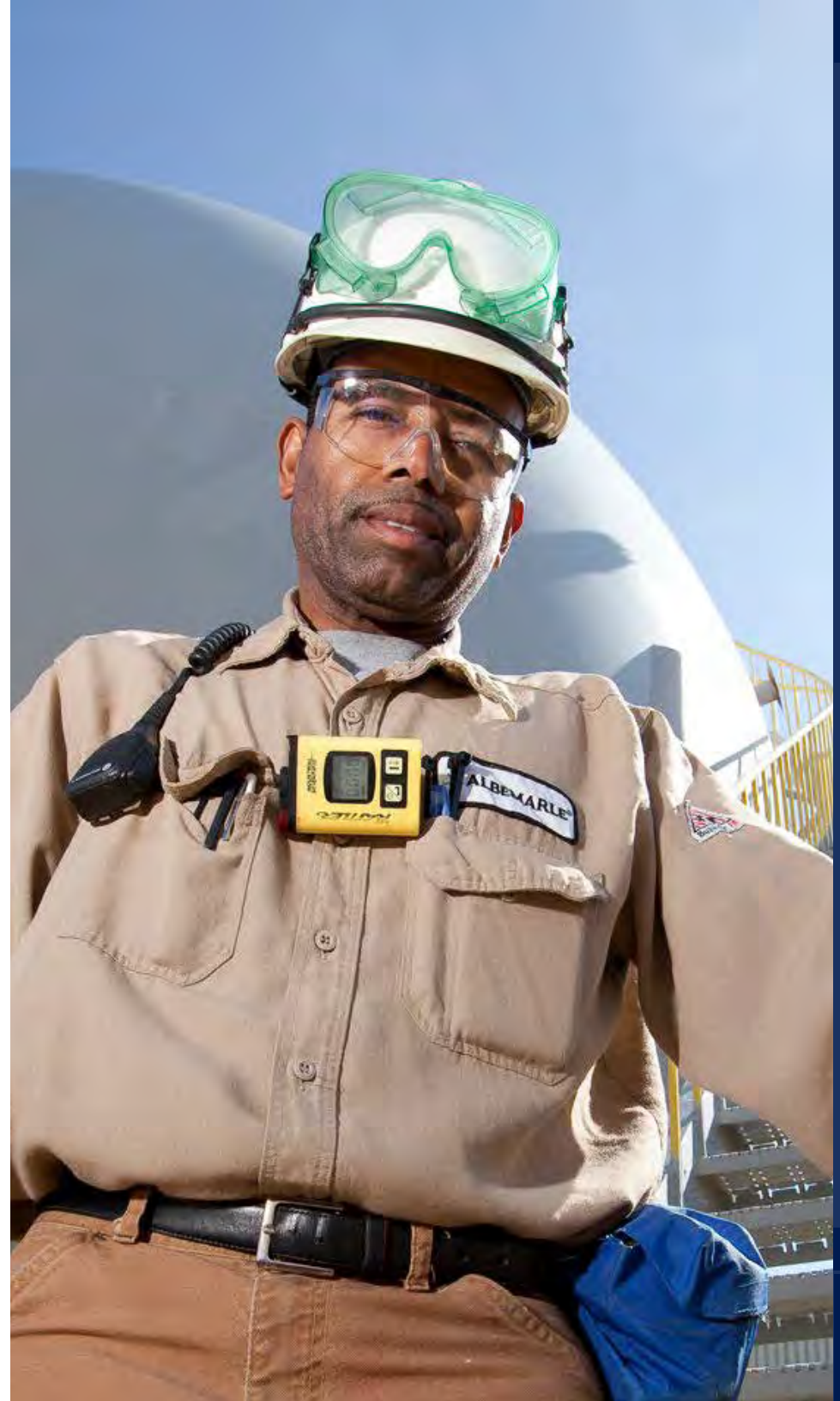
- Optimize earnings, cash flow, and cost structure across our businesses
- Deploy operating model to build strong platform for growth

## 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 ESG performance across our businesses
- Accelerate our customers' sustainability ambitions





# WHAT WE DO – OUR BUSINESS SEGMENTS

As a leader in the specialty chemicals industry, we serve our customers through our three GBUs.

## LITHIUM – ENABLING THE EV REVOLUTION

Albemarle is an industry leader in battery, industrial, and specialty grade, high-quality lithium production. We operate across a diverse range of hard rock and brine lithium resources and conversion facilities in Europe, North and South America, Asia, and Australia, to develop and manufacture a broad range of lithium compounds, including lithium carbonate, lithium hydroxide, lithium chloride, and value-added lithium specialties and reagents.

In 2021, we accelerated our Lithium growth strategy. We reached mechanical completion of La Negra III/IV and Kemerton I, in Chile and Australia, respectively. We also announced the signing of agreements in China to acquire all the outstanding equity of Tianyuan, a company whose operations include a recently constructed lithium conversion plant in Qinzhou, and investment agreements to build greenfield lithium conversion plants.

Our lithium production is focused on minimizing environmental and social impact and maximizing stakeholder benefit. We do this in a myriad of ways, including managing our carbon footprint and reducing GHG emissions:

- Passive solar energy is the most sustainable and cost-effective way to concentrate brine and makes up about 80% of Albemarle’s total energy consumption
- Our Kemerton plant in Australia is expected to use ~35% green electricity by 2023, with plans in place to reach net-zero 2050 for energy use
- La Negra and Salar de Atacama plan to move to solar powered electricity by 2025
- Electric forklifts are used in operations at Langelsheim, Germany

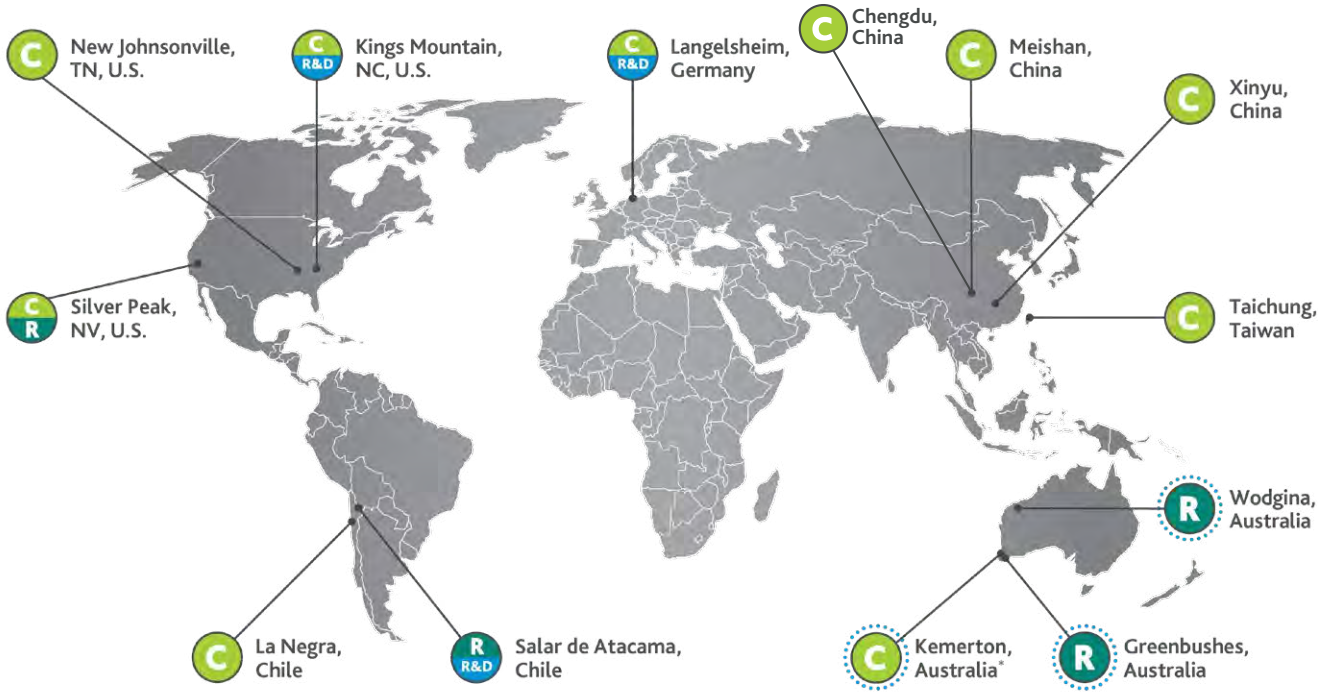


**“The lithium market is expected to see significant demand growth in the coming years. As an industry leader, we will drive sustainability forward by continuing to lead by example, helping to define the standards of sustainable lithium production, and by maintaining focus on the wellbeing of the communities where we live and operate. At Albemarle, how we produce lithium is as important as how much we produce.”**

– Eric Norris, President, Lithium



# LITHIUM GLOBAL SNAPSHOT



## Lithium Financials

# \$1.4B

Net Sales

# \$480M

Adjusted EBITDA<sup>1</sup>

# 35%

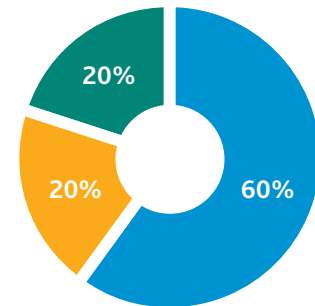
Adjusted EBITDA Margin<sup>1</sup>

Note: Financials for the 12 months ended December 31, 2021.

<sup>1</sup> Non-GAAP measure. See Non-GAAP Reconciliations in Exhibit 99.1 of the Current Report on Form 8-K filed on February 16, 2022 for reconciliations to the most directly comparable financial measure calculated and reported in accordance with U.S. GAAP.

<sup>2</sup> Based on approximate average of 2019, 2020, and 2021 net sales splits.

## Net Sales by Applications<sup>2</sup>



- Energy Storage**  
eMobility, Grid Storage, Electronics
- Industrial**  
Specialty Glass, Lubricants, Health
- Specialties**  
Tires, Pharma, Agriculture





# BROMINE – PROVIDING CRITICAL MATERIALS FOR ELECTRIFICATION AND DIGITALIZATION

Our Bromine business creates products that play an important role in keeping people and property safe. Our fire safety technology enables the use of plastics in high-heat applications by enhancing their flame-resistant properties. We have a diverse portfolio of brominated fire safety solutions that are used in a breadth of consumer and industrial products and processes, including 5G infrastructure, home electronics, appliances, computers, smartphones, building insulation, and automobiles, including EVs.

With a focus on improving productivity and sustainability, our Bromine business boasts several important programs including:

- Waste heat integration projects at Jordan Bromine Company (JBC)
- Waste evaporation pond elimination at JBC
- Recycling of water from artificial marsh outfall with a 20% reduction in aquifer loading
- Process integration program converting waste stream containing significant water into a value-added feedstock with 11% water intensity reduction and 6% energy intensity reduction

During 2021, our Bromine business successfully completed a resource expansion in Arkansas and a debottlenecking project in Jordan, both on budget and on, or ahead of schedule.



**“The Bromine business is a global market leader and the markets we are serving are growing rapidly. We have the capability and track record to deliver against our goals, increase efficiencies, and provide superior products to our customers all while minimizing the environmental impact of bromine production.”**

– Netha Johnson, President, Bromine



# BROMINE GLOBAL SNAPSHOT



- C**  
Conversion
- R**  
Resources
- R&D**  
R&D
- JV**  
Joint Venture

## Bromine Financials

**\$1.1B**  
Net Sales

**\$361M**  
Adjusted EBITDA<sup>1</sup>

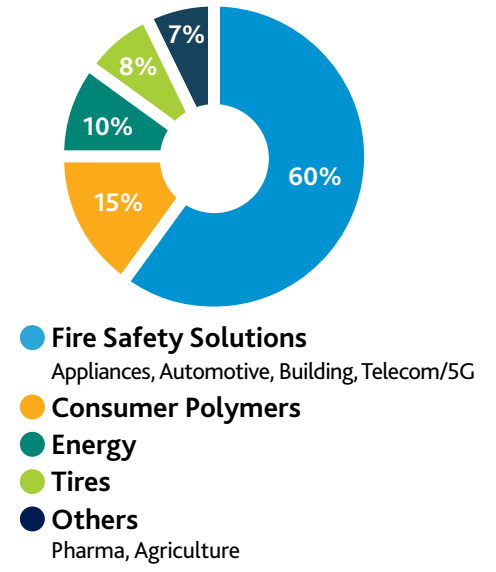
**32%**  
Adjusted EBITDA Margin<sup>1</sup>

Note: Financials for the 12 months ended December 31, 2021.

<sup>1</sup> Non-GAAP measure. See Non-GAAP Reconciliations in Exhibit 99.1 of the Current Report on Form 8-K filed on February 16, 2022 for reconciliations to the most directly comparable financial measure calculated and reported in accordance with U.S. GAAP.

<sup>2</sup> Based on approximate average of 2019, 2020, and 2021 net sales splits.

## Net Sales by Applications<sup>2</sup>



# CATALYSTS – DEDICATED TO A SUSTAINABLE FUTURE IN REFINING

We supply flexible, performance-based catalysts, technologies, and related services to the petroleum refining and chemical industries through our three main 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 composed of organometallics and curatives.

Albemarle's HPC products enable the upgrading of oil fractions to clean fuels and other usable oil feedstocks and products by removing sulfur, nitrogen, and other impurities from the feedstock. Our customized FCC catalysts systems assist in high yield cracking of refinery petroleum streams into derivative, higher-value products such as transportation fuels and petrochemical feedstocks like propylene.

Our HPC and FCC catalysts also allow refineries to run at lower temperatures, thereby saving costs and reducing GHG emissions.

We have two platforms focused on accelerating renewables for sustainability – Hydrotreated Vegetable Oil (HVO) and Pyrolysis Oils:

- HVO continues to see regulatory support and is expanding beyond early adopters to other potential refining customers, and we are working with several key partners in the renewable fuels space
- Pyrolysis, using thermal decomposition to take waste plastic and make it usable oil, is driven by large producers of consumer goods and the growing demand for recycled content and provides us an opportunity to participate in the use of a clean feedstock in refining or petrochemical feedstock

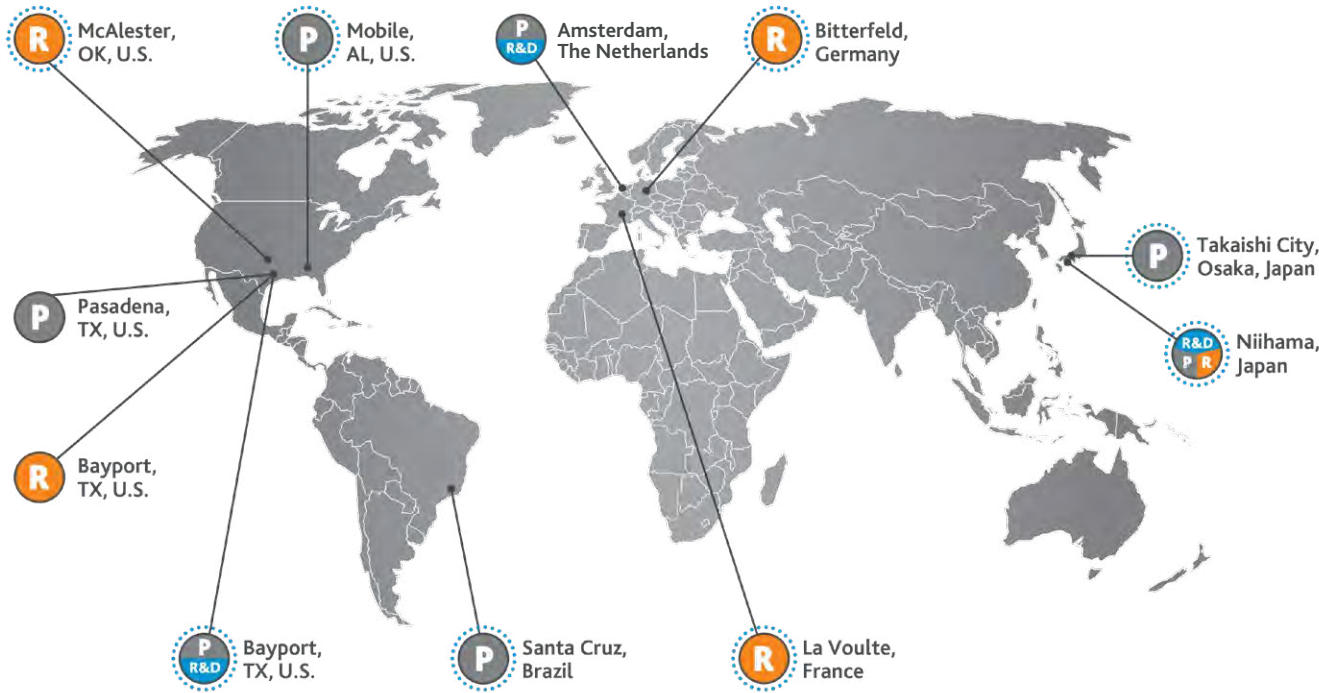


**“Our Catalysts business has a comprehensive strategy to take advantage of key growth opportunities in crude-to-chemicals, emerging markets, and renewables and recycling application. These areas for growth are firmly aligned with our technology strengths and with our customers. As previously announced, we are undertaking a strategic review of our Catalysts business to maximize value and ensure the ongoing success of the business.”**

– Raphael Crawford, President, Catalysts



# CATALYSTS GLOBAL SNAPSHOT



## Catalysts Financials

# \$761M

Net Sales

# \$107M

Adjusted EBITDA<sup>1</sup>

# 14%

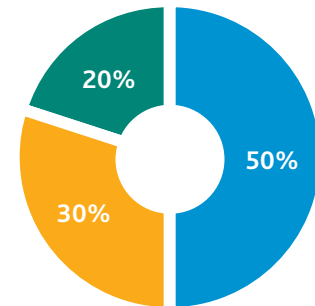
Adjusted EBITDA Margin<sup>1</sup>

Note: Financials for the 12 months ended December 31, 2021.

<sup>1</sup> Non-GAAP measure. See Non-GAAP Reconciliations in Exhibit 99.1 of the Current Report on Form 8-K filed on February 16, 2022 for reconciliations to the most directly comparable financial measure calculated and reported in accordance with U.S. GAAP.

<sup>2</sup> Based on approximate average of 2019, 2020, and 2021 net sales splits.

## Net Sales by Applications<sup>2</sup>



- FCC** Fluid Cracking Catalysts
- CFT (HPC)** Clean Fuel Technology
- PCS** Performance Catalysts Solutions





# CORPORATE GOVERNANCE



# CORPORATE GOVERNANCE

At Albemarle, we believe in the importance of good corporate governance and ethical business practices to ensure the successful management of our business in an honest, transparent, and accountable manner. 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 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

|                               |   | 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 2022 [proxy statement](#).





# LEADERSHIP AND BOARD<sup>1</sup>



**Kent Masters**  
Chairman of the Board



**James J. O'Brien**  
Lead Independent Director



**Laurie Brlas**



**Ralf H. Cramer**



**Glenda J. Minor**



**Diarmuid B. O'Connell**



**Dean L. Seavers**



**Gerald A. Steiner**



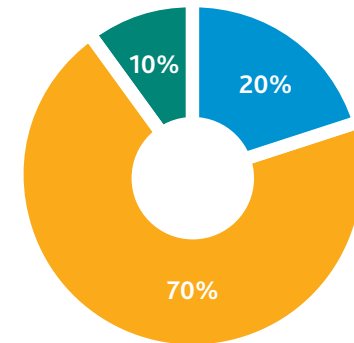
**Holly A. Van Deursen**



**Alejandro D. Wolff**

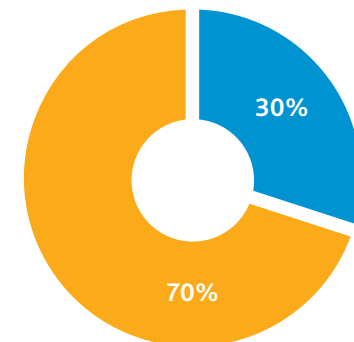
<sup>1</sup> As of March 2022.

## RACIAL DIVERSITY<sup>2</sup>



● Black ● White ● Hispanic

## GENDER DIVERSITY<sup>2</sup>



● Women ● Men

# ~5 Years

Average Tenure

<sup>2</sup> Statistics are based on Board self-identified characteristics. Albemarle has not independently verified the information.



# AWARDS AND RECOGNITION



## Albemarle Was Awarded 2021 “Open-to-Public” Day Best Practice by the Association of International Chemical Manufacturers (AICM)

The AICM Open-to-Public program 2021 was officially launched on June 3. With the theme of “continue to drive sustainability, together to realize carbon neutrality,” the activity aims to explore the sustainable development path of the chemical industry and help the industry establish a good image and reputation. More than 20 AICM member companies have organized a variety of public open-day activities in dozens of cities across China to enhance the links between international chemical enterprises, government departments and local communities. Albemarle’s Open-to-Public event in Xinyu was selected one of the Best Practice.



FTSE4Good



## 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.

- Silver Peak, Nevada: Improved Soda Ash Usage and Control Initiative (Waste Minimization Category)

## The Responsible Care Energy Efficiency Awards

Recognize ACC member companies for initiatives to improve energy efficiency in facility operations.

- Silver Peak, Nevada: Energy Efficiency Gain Through Improved Level Control and Instrumentation

## Six 2022 Facility Safety Awards

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







# SUSTAINABILITY AT ALBEMARLE



# MESSAGE FROM THE SUSTAINABILITY STEERING COMMITTEE

The Albemarle Sustainability Steering Committee is pleased to present our 2021 Sustainability Report.

We are proud of how our company has accelerated sustainability initiatives and results over the past year, and we continue to drive our strategy forward with bold ambitions and new targets. In our 2021 report, we are introducing new targets for diversity, equity and inclusion (DE&I). For DE&I, our first goal is to increase global gender diversity by 1% per year with a particular focus on our manufacturing workforce; our second goal is to increase U.S. racial diversity by 1% per year in senior-level management roles. In both cases, our aim is to increase diversity steadily and consistently with the long-term goal of meeting or exceeding global manufacturing benchmarks.

In last year's report, we introduced our initial sustainability targets as seen in the table to the right. In 2021, our work focused on designing and executing a portfolio of projects to achieve these goals and building the infrastructure necessary to track our progress. In 2022, we are building these targets into the Objectives and Key Results (OKRs) for our Executive Leadership Team (ELT) and cascading them through the organization. We are also building internal capabilities to track greenhouse gas emissions and freshwater use based on preliminary monthly data to ensure greater transparency and coordination across our operations and corporate functions.

This report details several important organizational changes designed to strengthen our sustainability performance and capabilities. In 2021, we clarified Board oversight of sustainability and updated committee charters to reflect these changes. We also created the role of Chief Supply Chain Officer (CSCO) to enable end-to-end supply chain optimization and traceability. Finally, we created a Global Government and Community Affairs team to be more consistent in our approach to community engagement across all geographies.

We also continue to improve sustainability reporting and transparency. For example, this report includes our initial scope 3 greenhouse gas assessment. This year we engaged PricewaterhouseCoopers (PwC) to perform an attest review engagement over certain of our total energy consumption and scope 1 and 2 greenhouse gas emissions metrics. See PwC's Report of Independent Accountants on page 105. In coming years, we plan to obtain assurance over additional sustainability data.

We hope that as you read this report you will see that Albemarle continues to accelerate our sustainability efforts and that we remain committed to industry leading sustainability practices and performance. Thank you for following our sustainability journey, and we look forward to sharing our progress now and in the future.

**Meredith Bandy** – VP, Investor Relations & Sustainability (Chair)

**Bo Brantley** – VP, HSSE & Operational Excellence

**Raphael Crawford** – President, Catalysts

**Mark de Boer** – VP, Sustainability

**Mark Mummert** – Chief Operating Officer, Lithium

**Karen Narwold** – EVP, Chief Administrative Officer & General Counsel

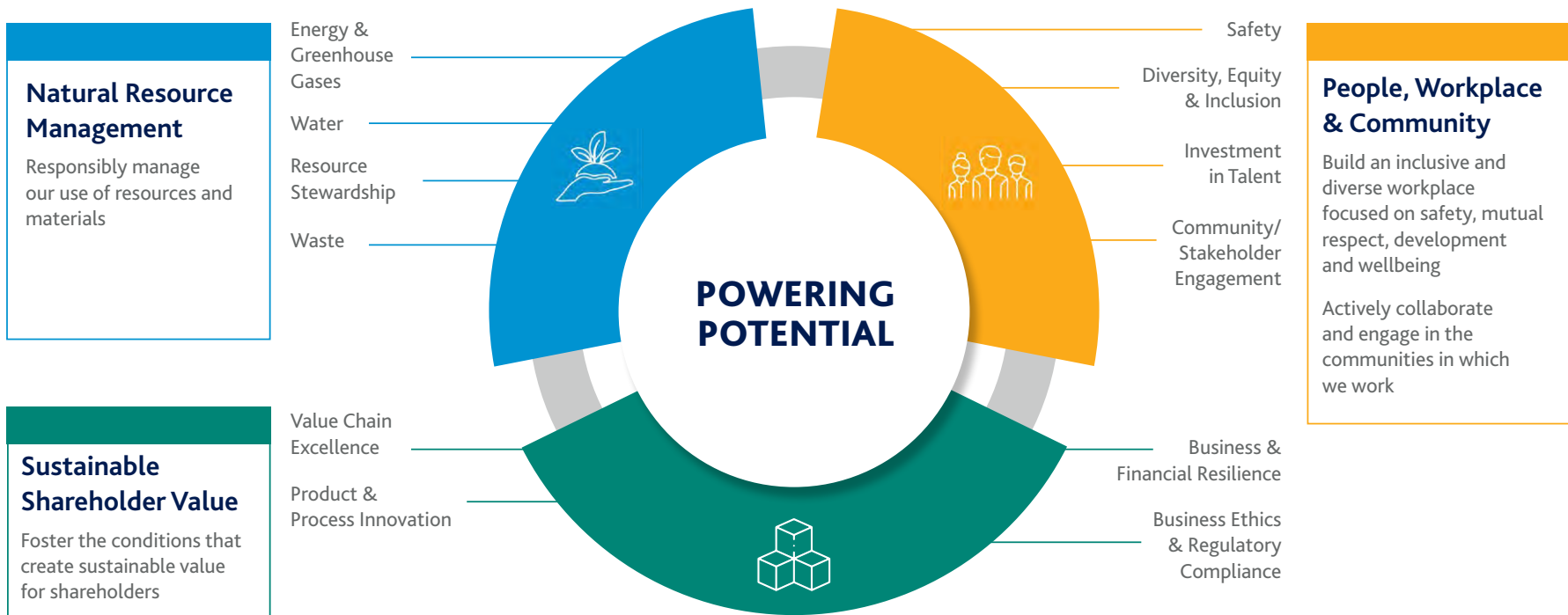
| Goal  | Status   | 2021 Actions  | 2022 Objectives  |
|---|----------|---|--|
| Reducing the carbon intensity of our Catalysts and Bromine businesses by a combined 35% by 2030 | On Track | <ul style="list-style-type: none"> <li>Amsterdam site bought certificates for 100% renewable hydroelectricity from Norway</li> <li>Improved grid mix at Magnolia</li> </ul> | <ul style="list-style-type: none"> <li>Assess alternative electricity options for JBC (solar or co-generation)</li> <li>Complete planned JBC efficiency projects</li> </ul>  |
| Growing our Lithium business in a carbon-intensity neutral manner through 2030                  | On Track | <ul style="list-style-type: none"> <li>Xinyu plant purchased 12,000 MWh of solar power</li> </ul>   | <ul style="list-style-type: none"> <li>Chile 50% renewable energy</li> <li>Connect Salar plant to electric grid</li> <li>Close Kemerton renewable energy contract</li> <li>Evaluate additional PPAs (power purchase agreement) at Silver Peak, Kings Mountain</li> </ul> |
| Reducing the intensity of freshwater usage by 25% by 2030 in Chile and Jordan                   | On Track | <ul style="list-style-type: none"> <li>Completed construction of \$100M thermal evaporator at La Negra</li> <li>Completed the HBr Clean-up project at JBC</li> </ul>        | <ul style="list-style-type: none"> <li>Ramp up production at La Negra III/IV, including the thermal evaporator</li> <li>Progress NEBO project at JBC (expected completion 2023)</li> </ul>   |



# MATERIALITY

In 2019, we conducted a third-party assessment of our material topics to ensure the alignment between our corporate strategy and our sustainability management and reporting practices.

As a result of this work, we incorporated Advancing Sustainability as one of our four strategic objectives and aligned our reporting to our updated sustainability framework topics: People, Workplace & Community, Natural Resource Management, and Sustainable Shareholder Value.



# COMMITMENT TO THE UNITED NATIONS GLOBAL COMPACT AND THE SUSTAINABLE DEVELOPMENT GOALS

The United Nations Sustainable Development Goals (UNSDGs) are a blueprint to achieve a better and more sustainable future.

They address global environmental and social challenges, including poverty, inequality, climate change, and environmental degradation. Companies around the world are encouraged to align their strategies and business activities with the UNSDGs. In 2020, we mapped our corporate and sustainability priorities, core values, material topics, and strategic focus areas within Albemarle to nine SDG goals. We also identified opportunities for the way in which our products, services, and community engagement work contribute to the advancement of the goals and where the opportunities for the greatest sustainability impact lie for Albemarle.

In 2021, we became a signatory to the United Nations Global Compact ([UNGC](#)). With over 15,000 member companies around the globe, the UNGC is the world's largest sustainability initiative and network. 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. This year's sustainability report serves as our annual Communication on Progress (COP), a key commitment of our UNGC membership.



### 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.

**“We are pleased to continue our support of the UN Global Compact and to report our progress in this year’s sustainability report. The UN Global Compact principles align well with Albemarle’s core values, culture, and the way we do business.”**

– Kent Masters, Albemarle Chairman, President and CEO





# STAKEHOLDER ENGAGEMENT

At Albemarle, we recognize that our license to operate is dependent upon effective and ongoing stakeholder engagement. We pride ourselves on developing and maintaining relationships built on trust, transparency, and open communication.

## Employees

Albemarle regularly communicates with our employees regarding company initiatives, news, goals, and performance. We do this through daily updates to Albert, our company intranet, and frequent updates to our corporate website, quarterly town hall meetings hosted by our CEO and GBUs that are recorded and posted to Albert, written memos, and in-person meetings (where possible). Throughout the COVID-19 pandemic, we increased communications with our employees through Albert while many people were working remotely. We established a dedicated webpage to our pandemic response, dispensing information on safety protocols for on-site employees, case counts, information on vaccinations, and other relevant information.

Our Employee Resource Groups (ERGs), called CONNECT groups, also play a key role in sharing important information with our global workforce. Additionally, employees can ask business-related questions any time via a dedicated email address.

## Shareholder/Investment Community

Regular updates are provided primarily through our SEC filings, publicly available quarterly earnings calls, and other presentations to industry and investor groups that are webcast and available for viewing on our website. We also co-host analyst events, attend conferences, and conduct direct outreach to address investor concerns and answer questions.

## Industry and Trade Associations

Albemarle participates in trade and industry associations globally, such as the American Chemistry Council. We collaborate with global trade associations to conduct and publish peer-reviewed, scientific research, and we make these studies available to government agencies and other interested parties. We regularly review new and existing association memberships to ensure they align with our strategy and values. In 2021, we became a founding member of the International Lithium Association. For a list of our associations please see our [website](#).

## Government and Regulators

Albemarle employees responsible for managing government and regulatory affairs consistently engage with governments and regulators via phone, email, or in-person meetings (when possible). 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.

Following the violence at the U.S. Capitol on Jan. 6, 2021, we suspended contributions pending a review of our political contribution policy. Based on the outcome of this review, we expect to amend our policy in 2022. First, we will consider character, ethics, reputation, and voting record in support of democratic processes. We also plan to enhance our diligence to ensure candidates to whom we contribute are aligned with our values and interests. Finally, we plan to monitor our industry associations' political contributions to ensure they are aligned with our policies and relevant regulations. For more information on our political contributions, please see our [website](#).

## NGOs

We engage 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.

## Media

Albemarle routinely distributes press releases and conducts interviews with relevant media to ensure accurate and consistent external messaging and to further engage with trade associations, regulators, customers, and other key stakeholder groups.



# NATURAL RESOURCE MANAGEMENT





# ENERGY AND EMISSIONS

At Albemarle, our goal is to be as efficient as possible in managing our natural resources to support our growth in a sustainable manner. We pride ourselves on producing products that play a critical role in the reduction of GHG emissions; however, we are also keenly aware of the impact that our energy-intensive operations have on the environment. In 2021, we established and began executing our Climate Strategy with an ambition to be net-zero in our operations by 2050. We aim to achieve this through a reduction in our overall energy consumption by working towards optimal energy efficiency in our operations and by purchasing energy from renewable sources where possible.

## Measuring Our Energy Use and Emissions

We identify, measure, and calculate the GHG emissions of our manufacturing operations, including production, non-production, joint ventures and leased/ owned vehicles, by considering the principles and guidance of the GHG Protocol Corporate Standard. We implemented a corporate-wide scope 1 and 2 GHG data collection system in 2020. In 2021, we engaged PwC to perform an attest review engagement over certain of our 2021 total energy consumption and scope 1 and scope 2 GHG emissions metrics. See PwC's Report of Independent Accountants on page 105. The organizational boundaries, emission factors, and additional information on our methodology are detailed in the [management assertion letter](#).

In late 2021, we also began our initial assessment of our scope 3 GHG emissions. Albemarle has identified 12 relevant scope 3 categories with purchased goods and services, upstream and downstream transportation, fuel- and energy-related activities, end-of-life treatment, and investments being the most relevant for our business. We will continue to refine our assessment in the coming years, and we will use our initial assessment to work with customers and suppliers to reduce emissions across the supply chain.





## Energy Efficiency


The “Heartbeat Project,” in our Amsterdam production facility, alludes to the fact that without steam, we cannot run our plants. This initiative involved replacing an outdated steam boiler and compressed air utility plant that had become inefficient and obsolete with a new system that uses innovative heat recovery and heat integration technology to capture heat from the compressed air production. The heat is recovered in the form of water from which the steam is then created. This project has reduced our energy consumption at our Amsterdam production facility by 2.5%

Also at our Amsterdam production facility, after drying slurries in the FCC unit we typically further calcine the material at very high temperatures. This treatment process requires the use of a large amount of natural gas and generates hot air that is typically released into the environment. Many years ago, a heat integration process was designed for the facility to re-utilize the released heat, but it was never operationalized due to technical issues. Thanks to newly developed process controls that make the operation more reliable, we are now able to activate this closed loop heat cycle. The technical teams in Amsterdam continue to work on further heat reduction efforts.

In 2021, we entered a partnership with Schneider Electric to help us manage our global energy procurement and negotiate power purchase agreements (PPAs). Schneider Electric provides companies such as Albemarle with energy and automation digital solutions for the efficient and sustainable day-to-day management of energy supply.

Looking to the future, we plan to install a thermal oxidizer at our Taiwan facility. This will be a combustion system that prevents volatile organic compounds (VOCs) from being released into the air. Like the process already underway at our Amsterdam production facility, we are also pursuing energy-recovery projects in our Kings Mountain drying process, which would reduce scope 1 emissions.

While there are environmental benefits attributable to these initiatives, there are also financial advantages. As a global organization, we face imbalanced energy costs and are subject to legislation governing emissions such as carbon taxes in certain jurisdictions. This can lead to a high level of unpredictability in our input cost management. By introducing innovative process technology that helps us save on energy consumption, we can mitigate the financial implications of these rising costs and prepare for future regulatory changes.



In accordance with the GHG Protocol, our scope 3 assessment does not include negative or avoided emissions. **Our lithium products facilitate the global transition to clean energy.** Based on a well-to-wheels assessment by IEA, the avoidance of GHG emissions due to the substitution of internal combustion engine (ICE) vehicles by electric vehicles (EVs) was 53 million mt CO<sub>2</sub>e for the global EV fleet in 2019. **This implies that for every kilogram of GHG emitted during the production of lithium more than 50 kg of GHG is annually avoided during the use of the EV.<sup>1</sup>** This builds up over the lifetime of the battery.

## Albemarle Wins American Chemistry Council Energy Efficiency Award

After analyzing data at our lithium carbonate plant in Silver Peak, NV, our team found that steam usage was very high. Further investigation found a level transmitter on a water tank failing intermittently, which led to overflows. The level transmitter was replaced with improved technology, resulting in savings of nearly 70,000 gallons of propane and a reduction of 400 mt CO<sub>2</sub>/yr.

<sup>1</sup> Net and avoided well-to-wheel GHG emissions from the global electric vehicle fleet in the Stated Policies Scenario, 2020–2030 – Charts – Data & Statistics – IEA.



## Renewable Energy

Increasing our use of renewable energy is an integral part of how we are working towards our ambition of net-zero carbon emissions by 2050. Examples of how we use renewable energy in 2021 include:

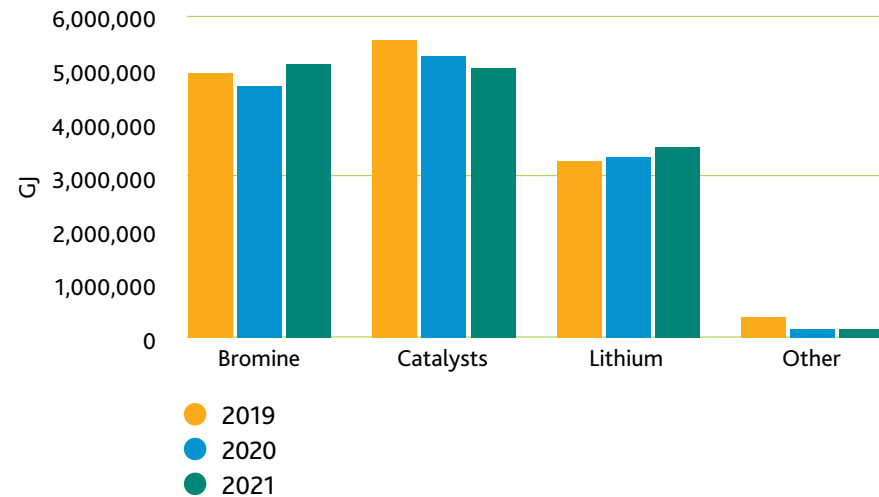
- Passive solar energy, which makes up 80% of Albemarle's total energy consumption, is used at our Salar de Atacama and Silver Peak production facilities to concentrate lithium brines
- Our Amsterdam production facility bought certificates for 100% renewable hydroelectricity from Norway
- At our Kemerton production facility in Western Australia, we negotiated a PPA for solar energy that is expected to come online in 2023 and represent up to 30% of our energy usage at the production facility. We are also looking at PPAs for our Silver Peak, Kings Mountain, and Chilean locations.
- For our Talison joint venture in Australia, we have signed an electricity supply agreement with East Rockingham Waste to Energy who harness energy from municipal and industrial waste diverted from landfills



## 2021 Performance

Our energy consumption (excluding passive solar energy) in 2021 was 13.8 million gigajoules (GJ), up 2.1% compared to 2020. Energy consumption decreased in Catalysts due to efficiency projects and lower production, offset by increases in Lithium and Bromine due to higher production. Approximately 80% of the total energy used in 2021 was passive solar energy. The remaining 13.8 million GJ energy use consists of fossil fuels such as natural gas, liquid petroleum gas (LPG), gasoline, distillates, and fuel oil (78%) and grid electricity and steam (22%). Approximately 16% of the grid electricity is renewable.

## Energy Use<sup>1</sup>



<sup>1</sup> Excluding passive solar.

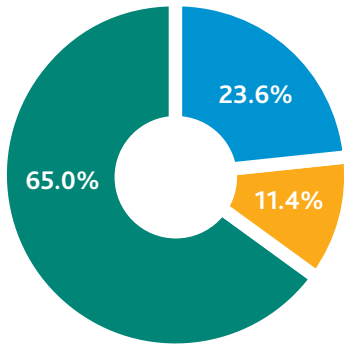


Total scope 1 and 2 GHG emissions were 899 thousand metric tons CO<sub>2</sub>e (kt CO<sub>2</sub>e) in 2021, down 3.8% year-on-year. Scope 2 emissions decreased 12% driven by higher renewable electricity consumption, partially offset by a 2% increase in scope 1 emissions due to higher production in Lithium and Bromine.

For scope 2, total company market-based emissions were lower than location-based emissions, indicating that we generally use electricity with a greener grid mix than the location averages. The market-based emissions for Lithium are higher than location-based emissions because we operate in regions with lower availability of renewable electricity.



## GHG Emissions



- Scope 1
- Scope 2
- Scope 3

| thousand metric ton CO <sub>2</sub> e           | Lithium | Bromine | Catalysts | Other | TOTAL |
|---|---------|---------|-----------|-------|-------|
| Scope 1 emissions                               | 167     | 203     | 229       | 6     | 605   |
| Scope 2 emissions (market-based)                | 127     | 103     | 55        | 9     | 294   |
| Scope 2 emissions (location-based) <sup>1</sup> | 105     | 162     | 72        | 9     | 348   |
| Scope 1 + 2 emissions <sup>2</sup>              | 294     | 306     | 284       | 15    | 899   |
| Scope 3 emissions                               | 522     | 458     | 690       | 5     | 1,675 |

We estimate that 2021 scope 3 GHG emissions were 1.675 million metric tons CO<sub>2</sub>e. This represents 65% of the total GHG emissions, which is in line with other leading special chemical peers. We will continue to refine our assessment in the coming years, and plan to use our initial assessment to work with customers and suppliers to reduce emissions across the supply chain.

Total scope 1 and 2 GHG emissions were 899 kt CO<sub>2</sub>e in 2021, down

# 3.8%

year-on-year

<sup>1</sup> Historically, Albemarle has reported scope 2 emissions using the market-based methodology. This year is the first time Albemarle will report using the location-based methodology as well.

<sup>2</sup> Based on scope 2 market-based.



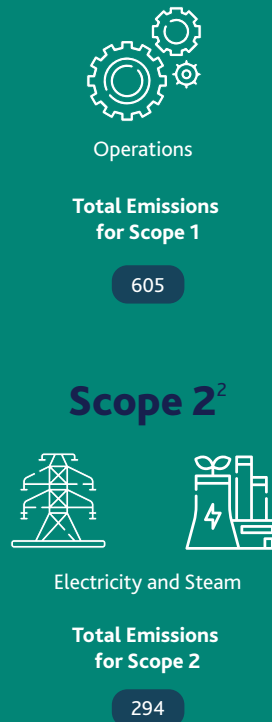


# OUR DIRECT AND INDIRECT EMISSIONS

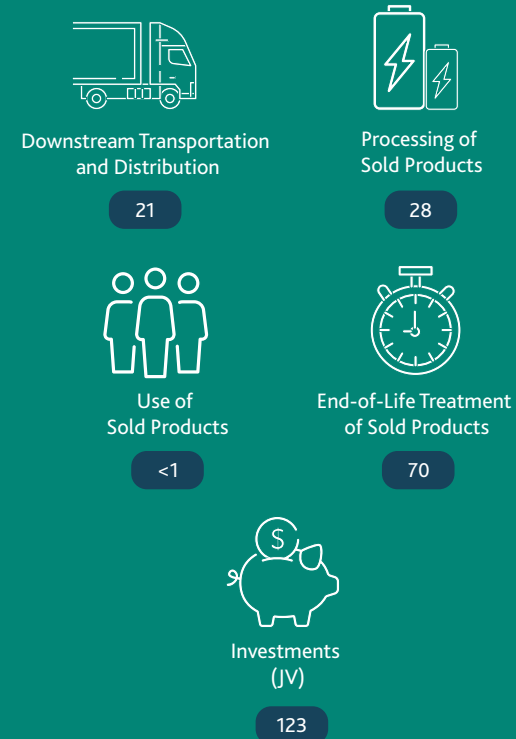
## Scope 3<sup>1</sup>



## Scope 1



## Scope 3<sup>1</sup>



# Thousand metric tons CO<sub>2</sub>e (kt CO<sub>2</sub>e)

<sup>1</sup> Upstream and downstream leased assets, as well as franchises, are not relevant categories for Albemarle.  
<sup>2</sup> Using market-based methodology.



### Progress Towards Targets

In 2020, the Health, Safety & Environment Committee of the Board approved our initial emissions reduction goals including:

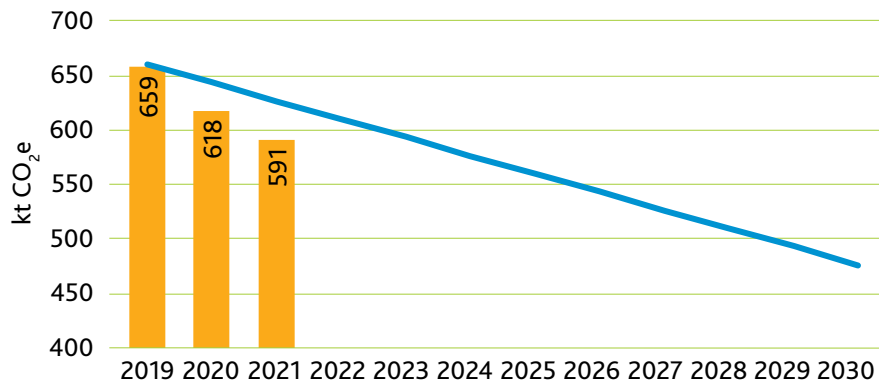
- Reducing the carbon intensity of our Catalysts and Bromine businesses by a combined 35% by 2030 in line with science-based targets
- Growing our Lithium business in a GHG intensity-neutral manner through 2030

In 2021, we made significant progress building the infrastructure to assess, measure and track progress towards these targets. As a result, we can confidently declare that we are on track to achieve these targets.

Combined GHG emissions for Catalysts and Bromine decreased to 591 kt CO<sub>2</sub>e in 2021, below the WB2C reduction scenario of the Science Based Targets (SBT). This reduction was driven primarily by reduced Catalysts' production, procurement of green electricity, and investments in scope 1 reductions as better heat integration (as detailed earlier).

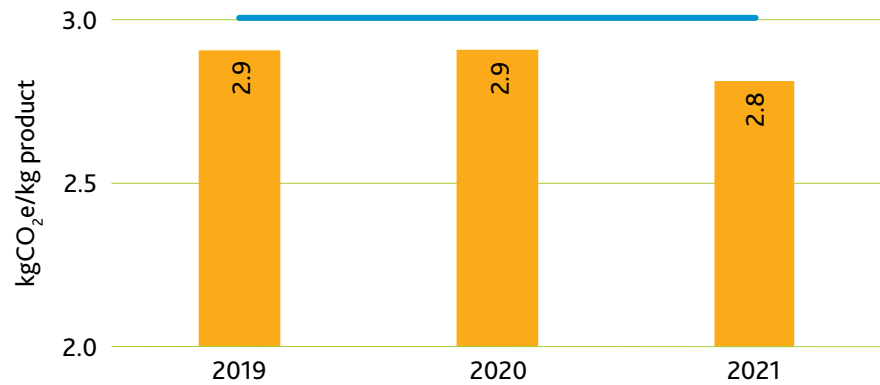
In Lithium, 2021 GHG intensity was 2.8 kg CO<sub>2</sub>e per kg product, below the stated target of 3.0 kg CO<sub>2</sub>e per kg product. The primary driver of this improvement was greener electricity mix via renewable contracts, power purchase agreements (PPAs) and investments in local solar energy installations. We are also improving the energy efficiency of new plants and seeking incremental energy efficiencies for existing plants.

### Catalysts + Bromine GHG Emissions



- Total GHG
- 2030 Target (SBT)

### Lithium GHG Intensity



- Ratio
- 2030 Target Maximum



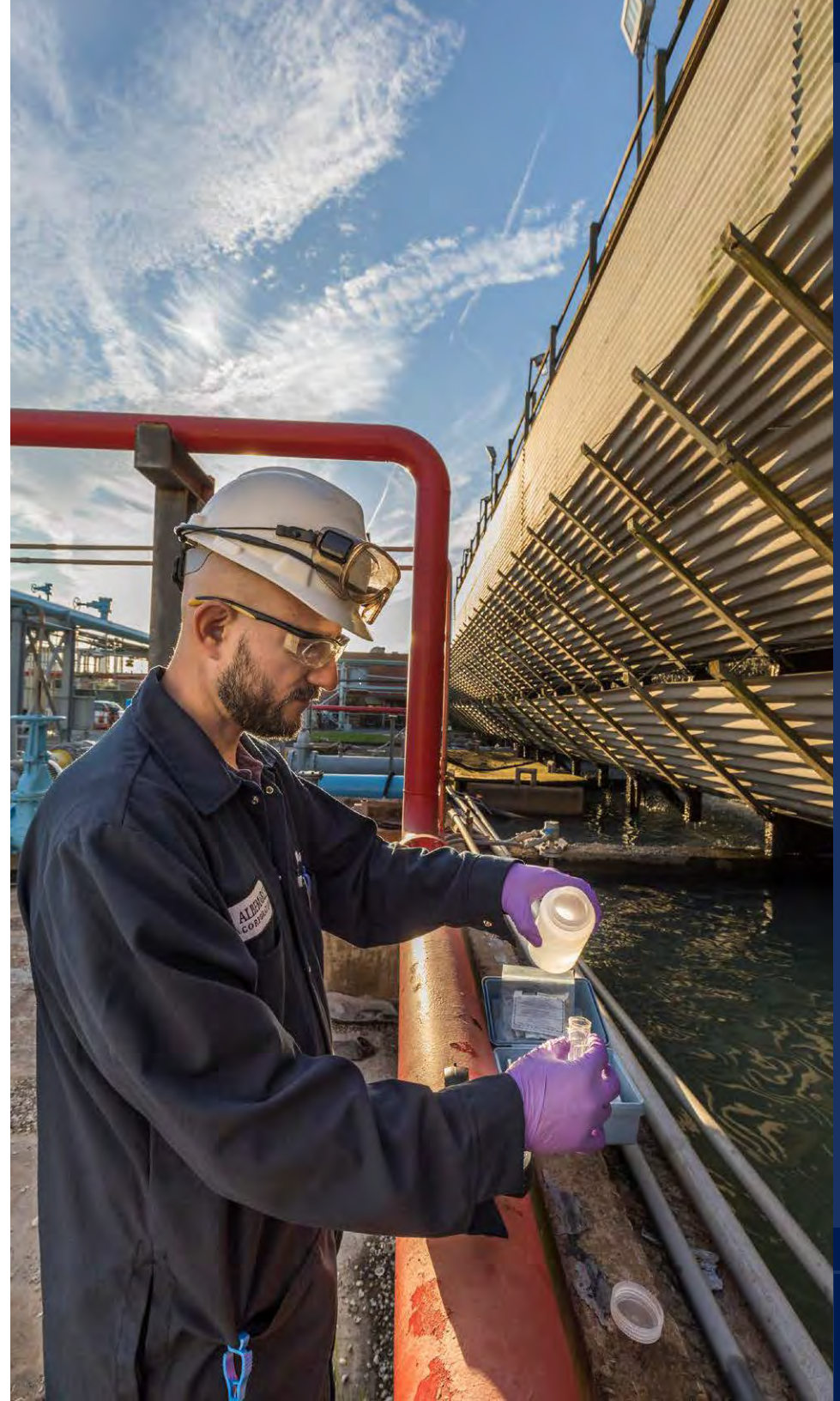
# LIFE CYCLE ASSESSMENTS

Life cycle assessments (LCAs) help us to better understand the environmental footprint of our products and to drive improvements in product and process innovation, sustainable procurement, investment decision making, and customer service. Our first LCAs, completed in 2021, related to rock-based lithium hydroxide and brine-based lithium carbonate. Both studies were performed in accordance with ISO 14040/14044 standards using primary data from our Salar de Atacama, La Negra, Greenbushes and Xinyu operations and design data for the Kemerton production facilities. The Universidad Católica de Chile<sup>1</sup> has simultaneously conducted a detailed LCA for brine-based lithium carbonate in Chile using Albemarle data and is expected to publish results separately.

Lithium plays a critical role in the transition to clean transportation. As a result, many Lithium customers are especially interested in the environmental impact of our products. In the coming years we will continue to refine and build LCAs for additional products across all our GBUs. We also plan to incorporate LCA requests into our sustainable procurement process to better understand the environmental impact of our own suppliers. With transparency and collaboration across the value chain we can collectively drive down GHG emissions.

Based on our initial cradle-to-gate LCAs, we estimate that our brine-based lithium carbonate production in Chile has about two times lower carbon footprint than our rock-based lithium hydroxide production in Australia (9.2 versus 4.7 kg CO<sub>2</sub>e/kg product). The distribution over scope 1, 2 and 3 is very different for brine-based and rock-based operations.

Global warming potential (GWP-100), commonly referred to as the carbon footprint, of Albemarle's Chilean brine-based lithium carbonate is dominated by raw materials (~60%), primarily related to the amount of energy required to produce the soda ash used in the lithium conversion process. The remaining 40% of the footprint is primarily energy (~25%) and transportation of raw materials and concentrated brine (~15%). Note that only 5% of the footprint is related to operations in Salar de Atacama. The Salar production facility uses passive solar energy for brine concentration which has a zero footprint in an LCA.

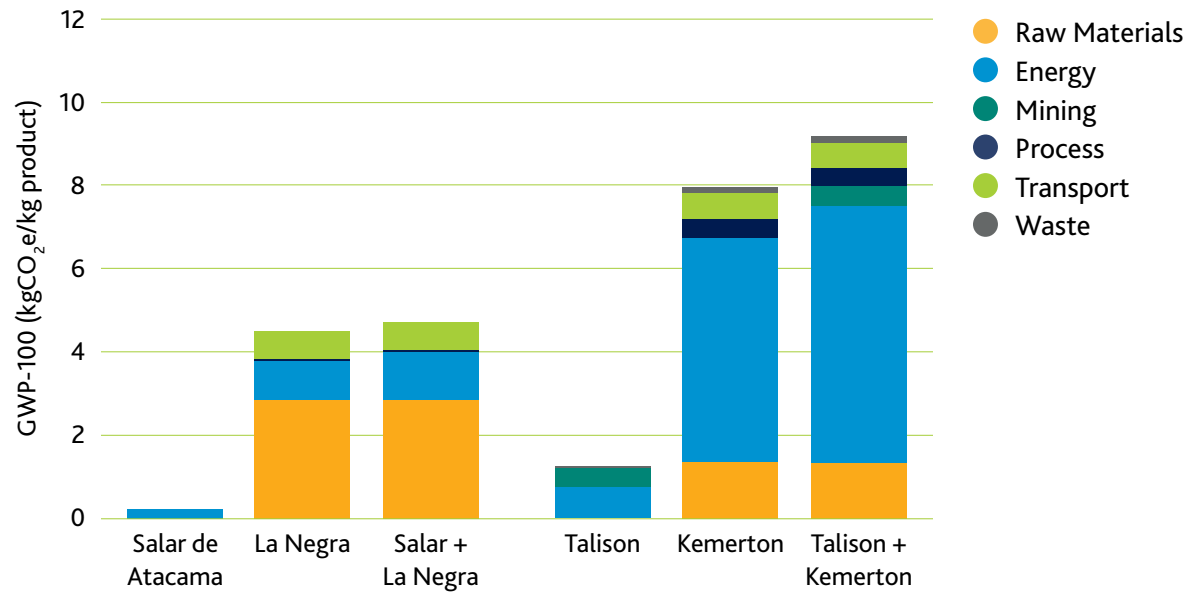


<sup>1</sup> Conducted by Departamento de Ingeniería y Gestión de la Construcción (DITUC).

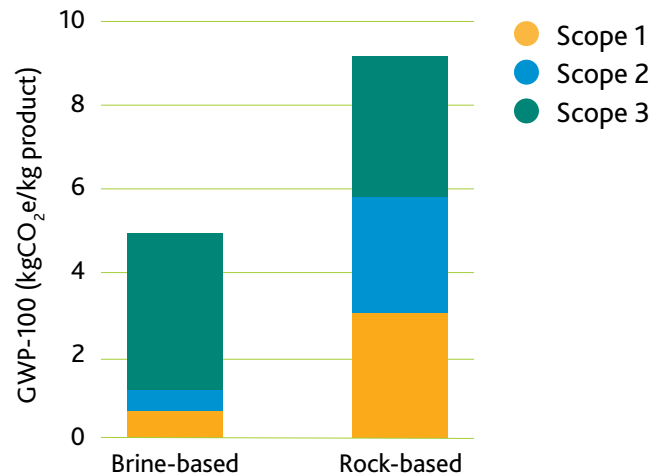


The carbon footprint of Albemarle's Australian rock-based lithium hydroxide production is dominated by energy (67%), primarily related to the combustion of natural gas and consumption of grid electricity. The remaining third is split between raw materials (14%), transportation of raw materials, spodumene and waste (6%), mining (5%), processing (5%), and waste processing (2%). The conversion process at our Kemerton production facility in Australia is inherently more energy intensive than our brine conversion in Chile due to the nature of the process steps, such as calcination. On the other hand, the footprint of the raw materials is lower than for brine operations even after we account for process emissions of CO<sub>2</sub> from carbonates in the rock-based operations (5%).

### GWP-100 ('Carbon Footprint') of Lithium from Brine and Rock



### Distribution of GWP by GHG Scope



# WATER

The efficient and responsible use of water is a key component of our sustainability strategy. As such, we invest heavily in novel technology that allows us to increase production without increasing water intensity. Our goal is to reduce the intensity of freshwater usage by 25% by 2030 in areas of high or extremely high water-risk – namely our lithium operations at La Negra and the Salar de Atacama in Chile, as well as our JBC Bromine operations in Safi, Jordan.

Water consumption is reviewed at GBU portfolio meetings on a quarterly basis, and we continually monitor our water withdrawal from rivers and lakes, groundwater, collected and stored rainwater, municipal water, and water obtained from other utilities. Our measurement of water use does not include brine (a source of bromine and lithium) due to its extreme salinity, which makes it unusable as a freshwater source for human consumption or agriculture.

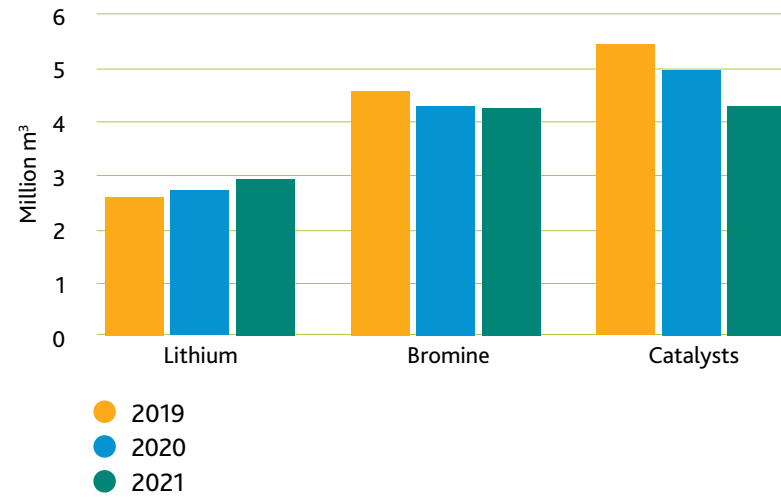
## Jordan

In 2021, we brought online our Brominated Flame Retardant Co-Product Cleanup project. Through our JBC joint venture, we invested \$20 million into a new technology that facilitates recycling of a major co-product stream from our BFR production process. This project materially improves plant overall equipment effectiveness, reduces energy, raw material and GHG consumption per metric ton of production, and reduces costs by \$3 million per year. This project also enables a subsequent project named NEBO, a \$30 million initiative that will take a co-product stream and will convert it to a saleable product without the need for additional freshwater consumption. NEBO is expected to reduce site freshwater consumption intensity by more than 10%. During 2021, our JBC joint venture also began recovering water from reject streams. Once fully optimized, this is expected to reduce the water intensity of the production site by an additional 14%. Together, these water reduction processes are of significant benefit in Jordan, which is the second most water-scarce country in the world.

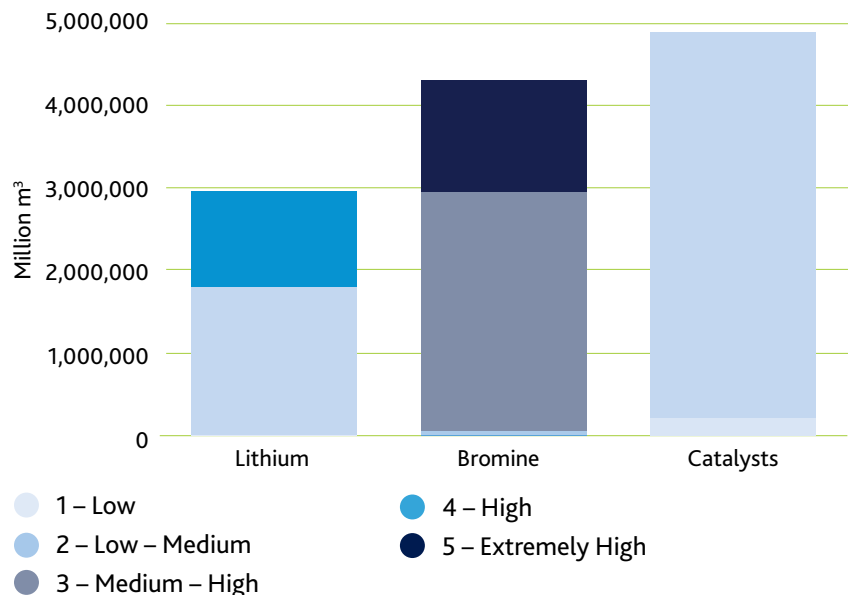
## Chile

At our La Negra operation, we have installed a thermal evaporator, a new technology that allows us to add production capacity of lithium carbonate without a corresponding increase in freshwater usage. The thermal evaporator, built at a cost of more than \$100 million, uses technology used in desalination plants to produce high-purity water from our plant's wastewater, which historically was discarded to solar evaporation ponds. The recycled water is used in our new state-of-the-art process plant that produces battery-grade lithium carbonate. At full capacity, the thermal evaporator is expected to reduce freshwater intensity by more than 30%. We are also currently studying the opportunity to replace freshwater use in Chile with desalinated seawater.

## Freshwater Consumption



## Water Consumption by Risk Category



## USA

At our bromine production facility in Magnolia, the marsh water recycling pilot initiated in 2020 continued into 2021 and has shown promising results. The process involves taking stormwater runoff from our innovative artificial marsh system, treating it, and converting it to freshwater for use in our operations. During the pilot, we reduced the amount of water taken from the underground aquifer by 20%. Based upon the completed pilot, a permanent recycling process has been designed and is scheduled for startup in 2023.

## Australia

At our Kemerton production facility, a Water Management Plan has been adopted to 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. In 2021, our Kemerton production facility was a runner-up in the Chamber of Minerals and Energy's South-West Ngwayir Award for sustainable water management planning.





# WASTE

It is in the best interest of the environment and of our business for Albemarle to reduce waste by maximizing the recovery of extracted minerals and recycling or re-using production by-products. This allows us to be good stewards of the environment while also reducing our costs.

## USA

In 2021, the team at our Magnolia production facility led an initiative to reduce the waste generated by the creation of off-spec products which typically occurs during transition periods of startup or shutdown. The team worked on analyzing all off-spec materials to better understand how these might be blended into the existing production to turn a waste stream into saleable product and prevent it from ending up in landfill. As a result, we have been able to save \$5 million at the Magnolia production facility and have diverted 732 tons of waste.

Also at Magnolia, our process technology teams have scoped a project to improve the yield of an intermediate used in the production of SAYTEX 8010. This capital project is scheduled for completion in Q4 2022 and is anticipated to reduce raw material usage and GHG generation per metric ton of SAYTEX 8010 produced.

At our Bayport plant, our process technology teams have been experimenting with varying sizes of filter cloths to find better ways to capture solids that are released when we wash our products. We are in the process of quantifying and verifying the results of the new filters, and we will report further on our progress in the future.

## Jordan

At our JBC joint venture, we have developed several innovative process changes to improve yield and reduce waste from our fire safety production process. The TBBPA (tetrabrom) waste treatment unit started up in August 2021, and our fire safety yield improvement project is on schedule for commissioning and startup during Q2 2022. Together these projects are expected to reduce hazardous waste generation at JBC by 60%, volatile organic compound (VOC) emissions to air by 80%, and the amount of raw materials used and GHG generated per metric ton of product produced.

## Australia

At our Kemerton production facility, we are using proprietary engineering and process knowledge benchmarking from similar mining operations locally and around the world to undertake a preliminary assessment of all potential waste streams.



## Tailings

We have been working on aligning our tailings management with industry best practices at our Australian production facilities. Tailings, which consist of ground rock and process effluents, are a waste by-product that is generated in the extraction process and presents an environmental challenge regarding disposal. At our Talison joint venture mining operations in Greenbushes, Australia, a tailings retreatment facility opened at the beginning of 2022.

In 2021, Albemarle was named an inaugural recipient of a Modern Manufacturing Grant as part of the Australian government’s Modern Manufacturing Initiative. The AUD \$4.9 million matched funding will help us create a specially designed system to turn the lithium aluminosilicate tailings at the Kemerton plant into a recycled aggregate and reduce the amount of material sent to landfill. Our goal is 100% repurposed use in building materials.





# RESOURCE STEWARDSHIP

Two of Albemarle's key businesses, Lithium and Bromine, depend and rely on the availability of natural resources, and we believe that, as stewards of the environment, it is our duty to manage those resources responsibly.

## Minerals

Albemarle manages mineral resources transparently, both at our own production facilities and at our joint venture facilities, to ensure good relationships with our local communities, governments, regulators, and other key stakeholders. For example, in the Salar, we monitor brine resources and report monitoring data to the relevant Chilean authorities, as well as to the local and indigenous communities. We meet regularly with the communities to review the data. In some cases, communities have used funds provided by Albemarle to hire independent third-party experts to interpret this data. At our MARBL, Talison, and JBC joint ventures, Albemarle has representation on the respective boards of directors, providing oversight on how our minerals are being managed and ensuring these operations comply with applicable laws and regulations.

## Land and Biodiversity

At Albemarle, we want to minimize the impact of our operations on biodiversity. Therefore, it is important to us to preserve and restore natural habitats as best as possible. We work with local communities and other stakeholders to ensure we consider protected land and species where applicable. Our commitments under IRMA also require us to consider and mitigate any negative impacts of our operations on natural habitats and sensitive ecosystems.

As part of our commitment to the conservation, preservation, and restoration of the Salar's ecosystem, and as a symbol of the legacy we want to create, we inaugurated the first botanical nursery at our Atacama plant in Chile. The nursery, which is in one of the driest deserts in the world will house up to 5,000 plants in climate-controlled environments that simulate azonal conditions to help maintain various botanical species. These plants, which will be irrigated using recycled, treated water from our facility, will eventually reforest the area and will help to ensure the preservation of the cultural and biological heritage of the Salar de Atacama basin.

We continue to monitor flamingo populations in the lagoons closest to our operations in La Negra based on a voluntary agreement we made with local communities in 2016. These migratory birds, which include three species, James, Andino, and Chilean, settle in the Peine-Punta La Negra lagoon systems during certain times of the year. We have spent over \$1 million to honor this commitment, which has resulted in an increase in the bird population. At Silver Peak, our Integrated Avian Management Program continues with the monitoring of migrating birds and avian mortalities and also provides guidance on the identification and implementation of measures for the prevention of bird fatalities.





# OUR PEOPLE, WORKPLACE & COMMUNITY





# SAFETY

We care about the health and wellbeing of our employees, contractors, suppliers, business partners, and host communities. By fostering a strong safety culture throughout our organization, we are committed to ensuring that everyone goes home safe and healthy every day. Keeping each other safe is a personal and mutual responsibility that we take very seriously. We operate our sites in accordance with applicable health and safety laws and regulations.

Our commitment to a safe work environment begins with our leadership. Albemarle's CEO, in tandem with our GBU Presidents, is accountable for our organization's safety performance. Together, they hold quarterly town halls to report on our company's safety results. The Health, Safety & Environment Committee of the Board provides oversight of Albemarle's safety program and meets with our Vice President, HS&E and Operational Excellence quarterly to review our HS&E performance, safety trends, safety audit results, and corrective action plans.

Our safety management system is based on the Responsible Care RC14001 chemical industry program that integrates the American Chemistry Council's (ACC) Responsible Care requirements with those of ISO 14001, and the OSHA Process Safety Management standards. We have adapted these standards to develop a robust and tailored program specific to Albemarle's needs and that apply to both our corporate headquarters and our individual sites. Each of our sites employs a HS&E manager or safety manager

equivalent who leads a team of staff to oversee and implement country-specific safety policies and procedures and to provide local safety resources.

Employees are required to complete training specific to safety and are expected to take proactive steps to identify and prevent workplace-related injuries and illness. Every shift change meeting begins with the sharing of safety moments, led by site management teams, supervisors, peers, or contractors. Sites utilize an employee-led, central safety committee that reviews processes and procedures to identify areas of improvement. We also have subcommittees that are formed around specific safety topics, and employees are encouraged to join these committees to engage with safety matters.



**Our people are our most important asset, and our ambition is to build a diverse, equitable, and inclusive workplace focused on safety, mutual respect, development, and wellbeing.**



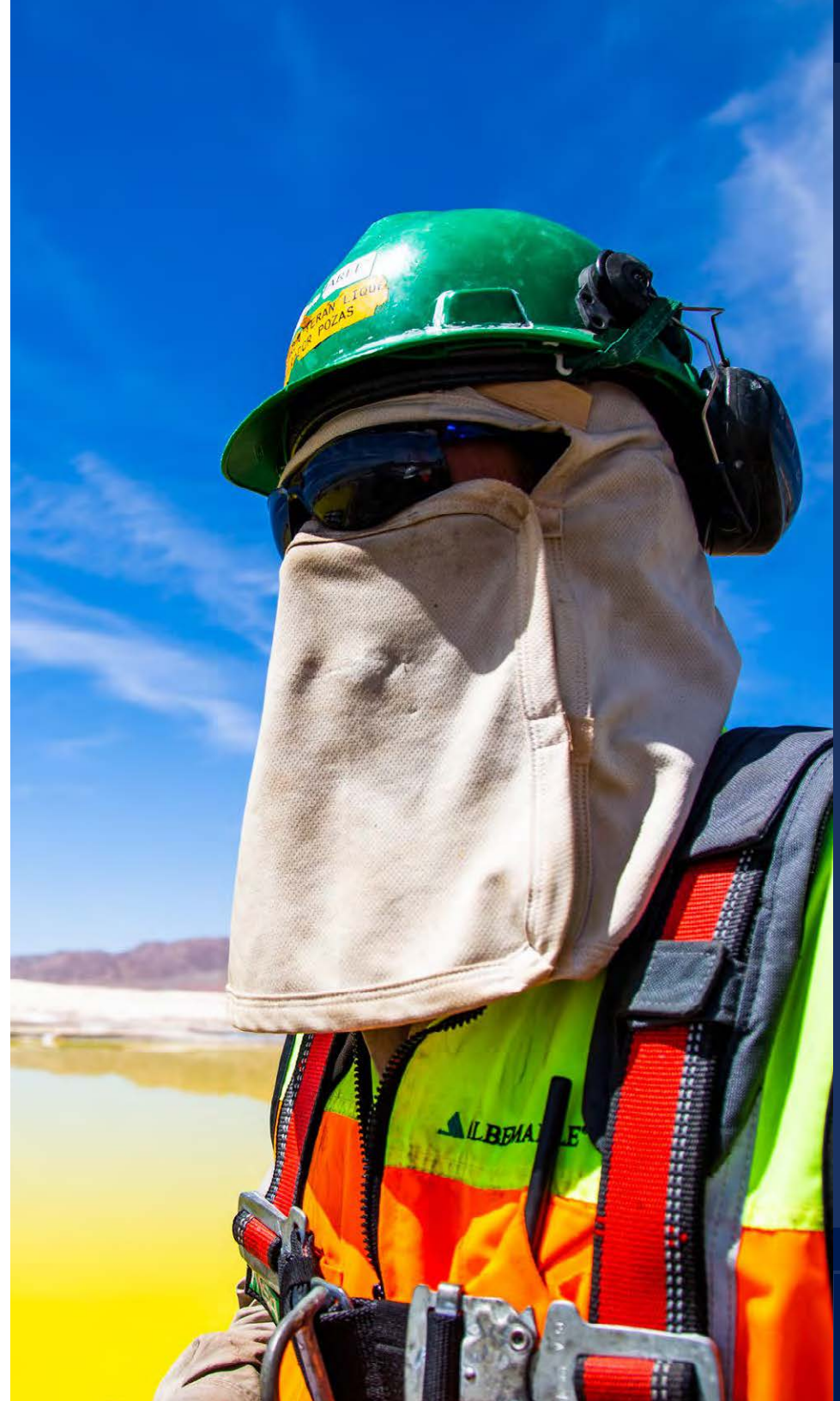
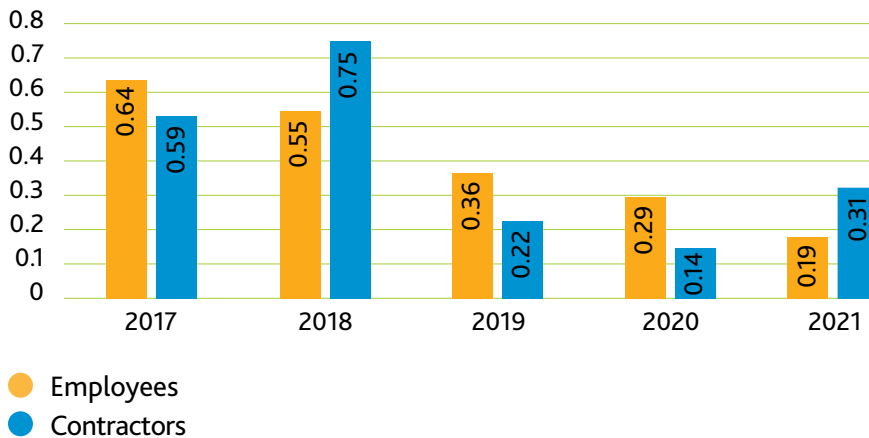
## Safety Performance

Albemarle's safety programs are designed for continuous improvement of our safety performance, and thus we continually work to improve and enhance our safety programs and procedures. We benchmark ourselves against our ACC peers and have consistently ranked in the top quartile for our safety performance. In 2021, we saw year-over-year progress that includes improvements in injury rate (TRIR) for employees, from 0.26 in 2020 to 0.19 in 2021, and we were recognized by the ACC with Responsible Care Facility Safety Awards for our achievements at many of our sites. It is important to note that we treat our nested contractors the same as our employees, holding them to the same standards and incorporating them into our safety programs and initiatives. That stated, we recognize an increase in TRIR this year for nested contractors and are supporting focused site efforts on contractor safety. We will

be staffing a corporate Contractor Safety position within the HSE group to drive improvement in our global contractor management program. Our goal is to attain zero incidents and to consistently rank among the top decile of our peers.

In 2021, we continued to focus on our key safety programs such as our Life Saving Rules, which are comprised of the eight most critical safety procedures that must be followed and that are designed to protect the lives of our employees and contractors. We have seen the benefits of this program through leading indicator data including safe work permit audit results. While we are pleased with the results that we have been able to achieve with our Life Saving Rules, our goal is ultimately to reduce the instances that necessitate the application of these rules in the context of high-risk activities as we work towards our goal of zero incidents.

### Total Recordable Injury Rate (TRIR) Employees and Contractors





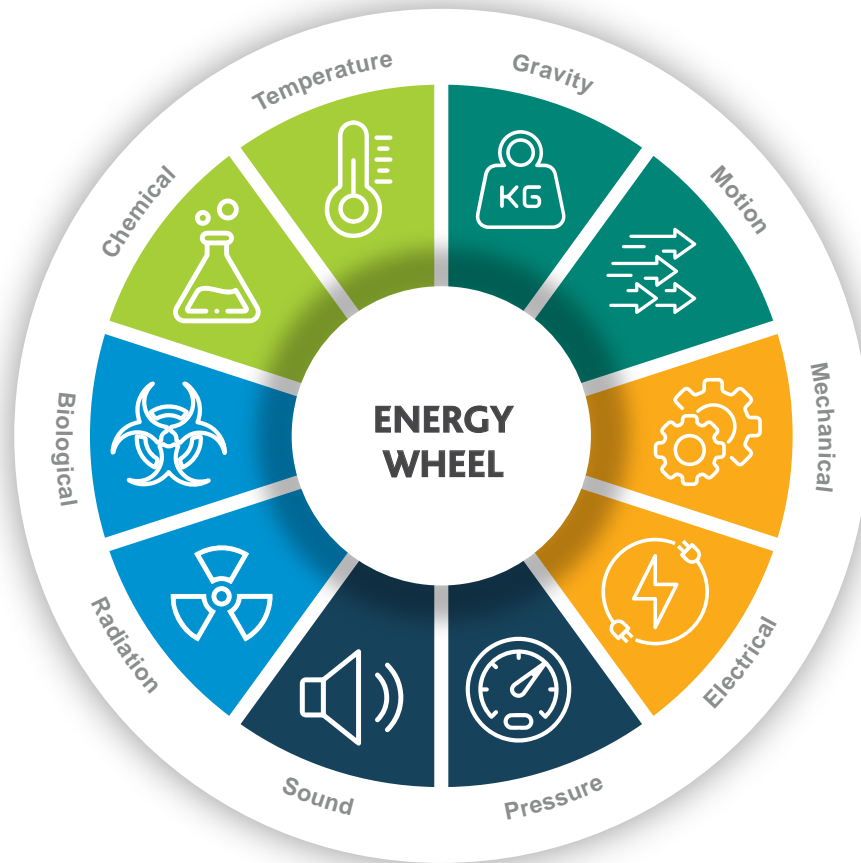
## Energizing SCAN

In our effort to achieve zero safety incidents, we deploy our SCAN (Survey, Consider, Act, and Notify) hazard recognition and mitigation tool daily. This tool teaches employees to stop, think, and identify potential hazards before they become incidents and to communicate to management any hazards that may require long-term solutions. In 2021, we enhanced our SCAN tool by integrating an external training program that focuses specifically on energy hazard recognition. The program is based on the premise that hazards are defined by exposure to one or more of 10 distinct energy forms such as gravity, motion, electrical, etc. Energy-based hazard recognition involves using the Energy Wheel to guide the scanning of dangerous work environments and is intended to be used as a prompt for the brain to consider some hazards that might otherwise go unnoticed. We look forward to seeing this tool rolled out globally in 2022.

In 2021, we piloted a new incident management, near miss management, and leading indicator management system that dovetails with our Manufacturing Excellence Management System (MEMS). We anticipate roll-out across the company in 2022. Additionally, we are building custom dashboards to help us monitor data, conduct gap analyses, and implement plans for continuous improvement. We look forward to enhanced reporting on our safety data, such as near misses and other leading indicators in future reports.

We conduct regular audits of our HS&E programs at our global sites. Due to travel limitations imposed by the pandemic in 2021, we created a hybrid model to allow us to proceed with our audits and to allow us to share safety best practices among our sites. We will continue to improve our audit process and, after travel limitations due to the pandemic are lifted, we envision incorporating best practices from this hybrid audit process into our in-person audit process.

## Energy Wheel



## SCAN in Action

While performing SCAN, a bromine bottle-filling operator at our Baton Rouge Process Development Center realized there was a better and safer way to fill bottles from the bromine storage tank. Working collaboratively with the safety and engineering teams, the box in which the bottles are filled was replaced with a new design that included adjustments to the height and accessibility of the box and the position of the bromine feed lines. This created a more ergonomically correct position for the operator and a safer filling environment.





## Future of Work

Future of Work is our new human resources framework that supports the Albemarle Way of Excellence operating model, our core values, our Code of Conduct, and our commitment to DE&I and Sustainability. Through this framework, we strive to optimize employee success and deliver a high-performance culture by:

- Embracing workplace flexibility while balancing business needs
- Investing in people, processes, and digital tools to improve employee productivity and customer satisfaction
- Designing collaborative workspaces
- Engaging employees, encouraging collaboration, and recognizing contributions
- Offering benefits that maximize overall employee wellbeing

In 2021, we took a phased approach to returning to the office. Utilizing an employee survey, we determined that our workforce favors a highly flexible work environment with partial or full remote capabilities. As a result, we reviewed each type of role to assess suitability for remote or hybrid working, and we implemented new guidelines for work post-pandemic through our Remoteability Framework. We are also researching ways to reconfigure our offices to reflect the changes in the way we work and expect to introduce hoteling and workspaces designed for enhanced collaboration.



### **The COVID-19 pandemic continues to be a challenge as we manage through the various waves of infection that affect each part of the world in differing ways and at different times.**

At the onset of the pandemic, we deployed Albemarle's Special Event Management Plan (SEMP), which guides our response to extraordinary and unforeseen events. We moved swiftly to create a global team to manage and implement COVID-19 safety protocols to keep our employees, business partners, and communities safe. Throughout 2021, we continued with mask, handwashing, and social distancing requirements as well as contact tracing.

We provided COVID-19 testing and, as vaccines became available, we encouraged vaccination. Wherever possible, we provided financial incentives for vaccination among our workforce and provided vaccines to family and community members and contractors onsite at our facilities. As of year-end 2021, approximately 80% of our workforce was vaccinated.

In our remote indigenous communities in Chile, we implemented very strict protocols regarding the interaction between our employees and the overall community. We wanted local residents to feel safe that when workers were transported from surrounding communities, or flying in from the capital city of Santiago, there would be minimal contact with community members. All Albemarle employees were required to adhere to strict reporting procedures and were mandated to remain at home at the slightest sign of illness.



## Connecting Our Employees Through Technology

During the pandemic, we accelerated the introduction of technology to support our employees working remotely. We also introduced technology to facilitate virtual interaction and collaboration when face-to-face engagement was not possible. For example, employees at our manufacturing sites were equipped with smart helmets that featured cameras to enable site audits, which normally take place in person.



### Health and Wellbeing

At Albemarle, we recognize the additional strain that the pandemic has placed on our workforce, regardless of location or work function. In 2021, we made significant investments in our health and wellbeing programs. We introduced an enhanced global Employee Assistance Program (EAP), which provides a confidential support service for employees experiencing personal difficulties, and we introduced mental health days. We rolled out Microsoft Viva, a digital platform that helps employees and employers navigate the complexities of working from home. Viva provides employees with confidential insights into their productivity, visible only to the employee. Viva also includes features such as reminders that prompt employees to take a break during the workday.



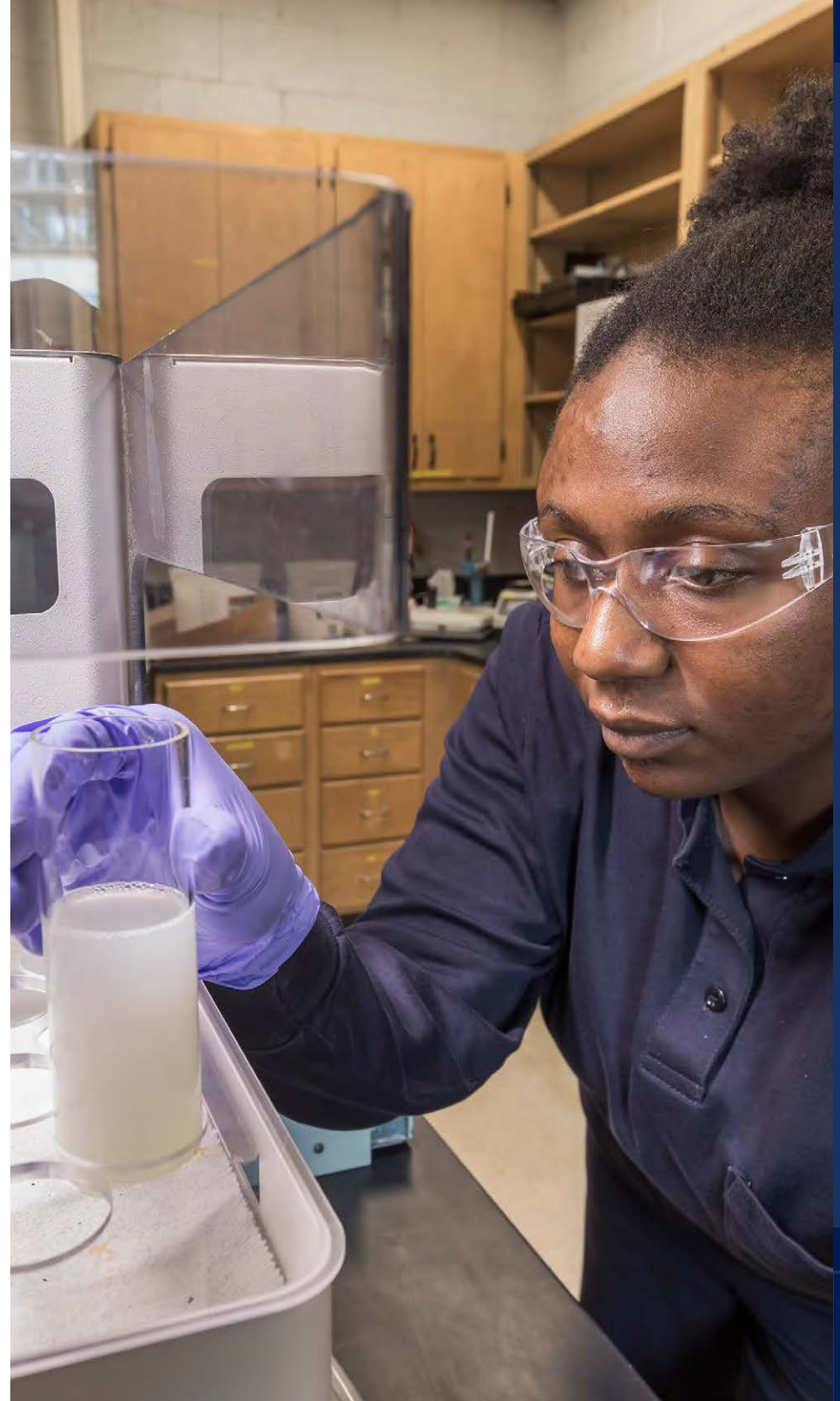


# DIVERSITY, EQUITY AND INCLUSION

We are committed to building a diverse, equitable, and inclusive workplace where everyone feels valued. We know that organizations that have a diverse workforce and inclusive culture are more innovative and are better positioned to attract and retain talent. For a global company like Albemarle, our success depends on our ability to employ people of different genders, ethnicities, sexual orientations, ages, and cultural backgrounds. Our aim is to create an inclusive culture by leveraging diverse perspectives, backgrounds, skills, and talents to foster a sense of belonging. We actively work to remove systemic barriers, and we challenge and respond to bias and discrimination within our workplace.

In 2021, we released our DE&I Strategic Plan. This plan provides a blueprint for measurable actions that will help us integrate diversity, equity and inclusion in our strategic decision-making, enhance organizational effectiveness, and meet our future challenges and needs. Through individual and collective responsibility from all employees, we can promote diversity, equity and inclusion as a vital and prominent part of the fabric and culture of Albemarle. The plan relies on our leadership, managers, and supervisors in all business units, functions, and locations to assume direct responsibility for implementation.

Under the leadership of our Vice President of Culture, we have reviewed our hiring and HR processes with a DE&I lens and added DE&I performance goals to our people leaders. Managers are required to present diverse candidate slates and have diverse interview panels for open positions as part of the hiring process. These performance goals and practices help us to be more accountable in bringing diversity into our hiring practices.





## Driving Diversity Through Our CONNECT Groups

We also expanded our Employee Resource Groups (ERGs) called CONNECT groups and leveraged the groups to drive various initiatives around DE&I throughout the organization.

CONNECT groups promote an atmosphere of inclusion and encouragement, where every employee's voice is heard. These executive-sponsored, employee-led groups are formed to promote a better workplace through shared perspectives and goals that positively impact our employees and their experience, alignment with our core values, and the creation and strengthening of relationships across the company.

CONNECT groups focus on four areas:

1. **Heritage Month Activities** – cultural education and awareness, communication skills, valuing differences, breaking down barriers to inclusion, membership campaigns
2. **Career Development** – leadership skills, networking, mentoring, guest speakers, increased access to company leaders, and talent development resources
3. **Attracting Talent** – support for the company's diversity recruiting efforts, support for onboarding and retention, association partnerships, supplier diversity recommendations
4. **Community Outreach** – contribute to the communities where we live and work via strategic alignment with one or two preferred non-profits

In 2021, our CONNECT groups provided learning opportunities for our employees through several events such as Black History Month, International Women's Day, Pride Month, and Hispanic Heritage Month.



## Day of Understanding

In 2021, our CEO, Kent Masters, became a signatory to CEO Action for Diversity and Inclusion, the largest CEO-driven business commitment to advance DE&I in the workplace. In June 2021, we held our first Day of Understanding. Days of Understanding encourage organizations to host candid conversations throughout the year to highlight and engage with real-time issues and events as they arise. As a signatory of CEO Action for Diversity and Inclusion, we are committed to providing unconscious bias training, sharing best practices, and engaging our Board of Directors in DE&I work, all of which we initiated in 2021 and which we will continue to do going forward.

**"If we are successful in equity and inclusion, we achieve that sense of belonging where everyone feels comfortable and contributes to the best of their ability. That's going to make Albemarle the best company we can be."**

– Kent Masters, Albemarle Chairman, President and CEO

## Learning and Leadership Development

In 2021, we executed training and education programs through our Albemarle University. Campaigns to complete training modules included topics such as DE&I Basics, Bias Awareness, Inclusive Leadership, and Cultural Awareness. Additional topics that are available for on-demand access include Gender Diversity, Generational Diversity, Unconscious Bias and Micro-Inequities, The Inclusive Manager Toolkit, and Inclusive Virtual Meetings. We will continue to offer training on additional subjects in 2022.

As our company expands globally, it is important that we help our employees develop capabilities to manage an international workforce. In the spirit of global, conscious inclusion, we provide an on-demand, cross-cultural inclusion learning platform, GlobeSmart, that allows our teams to take the GlobeSmart Profile and see how workstyles differ from each other and how they are similar to profiles of 100 different cultures. Culture Guides are available with in-depth information on how to bridge gaps within the context of 50 business topics.

To support gender diversity, we have entered into a partnership with [Fairygodboss](#), a U.S.-based, online career community and forum for women wishing to connect on career matters. The platform offers our female employees access to free resources and the opportunity to connect with like-minded individuals. It also provides them with the chance to share why they love working at Albemarle and allows us to build a pipeline of qualified female talent.



## Performance, Goals and Ambitions

We recognize areas of opportunity and are committed to improving gender and racial/ethnic diversity in our workforce. For 2022, our goal is to increase global gender diversity by a further 1% year-over-year with a particular focus on our manufacturing workforce. In the U.S., we also consider diversity in terms of race or ethnicity. We see room for improvement in increasing diverse talent in our senior-level roles. Our goal is to increase racial diversity in senior-level management roles by 1% year-over-year. We plan to increase gender diversity steadily and consistently with the long-term goal of meeting or exceeding global manufacturing benchmarks.

### Global Employees by Gender



- Male
- Female
- Not Declared

### Employees by Race/Ethnicity, U.S. Only



- White
- Non-White
- Undisclosed

## INVESTMENT IN TALENT

In an increasingly competitive labor market, we recognize that one of our highest priorities must be to attract and retain top talent. Therefore, in alignment with the AWE, we are focusing on creating a world-class employment brand. Our vision is for Albemarle to be the best employment experience for our employees. We do this by ensuring that we hire the right people for the right roles. We invest in our employees' personal and professional development and wellbeing to give them the tools they need to thrive and excel at Albemarle. We also take great care to foster a supportive environment by taking a comprehensive approach to attracting, engaging, developing, motivating, and retaining our talent and by providing pathways to leadership at all levels of the organization.

In 2021, we took a concerted look at what is needed for the future success of our organization as we execute against our long-term strategy and our ambitious growth plan. The result of our organizational assessment is leading us to apply a more strategic lens to our organizational structure, processes, and investments in global talent. Globally, we introduced a new regionalized governance model to our organizational structure as it relates to talent. We created local talent roles in recruiting, learning, and total rewards within different regions around the world with the purpose of building local capacity and expertise, and we put in place an HR Transformation Team and a Global Learning Council. Currently, we are in the process of building a Human Resources Global Service Center to

standardize human resources processes and learning and development programs at our sites.

Commitment to our investment in talent begins at the highest leadership level with our Board. The Board oversees ELT succession planning, including CEO succession planning, and meets annually to review and strengthen development plans. The Executive Compensation Committee of the Board evaluates and provides feedback on our executive talent management strategy and plans, including oversight of the performance of our executive officers and Albemarle's performance related to workforce demographics, progress, and goals aimed at attracting and retaining top talent.

Our ELT is accountable for enterprise people strategy aligned with Albemarle business strategy that builds the organizational capability needed for future growth. This includes providing guidance on human capital and leadership development investments, setting the talent agenda, approving the learning and leadership development budget, and putting in place a governance structure that will scale to support our ambitions and goals. In 2021, the commitment to talent development and building workforce capability resulted in our ELT approving a significant increase in the enterprise training budget, including hiring a full-time instructional designer and interactive learning developer and creating a new role on the Albemarle Leadership Team (ALT) for Organizational Effectiveness.



Starting in 2021, our ELT manages our high potential talent collectively as a leadership team via a dynamic talent process; guiding principles and working norms that include:

- Highlighting open roles and developmental opportunities in leadership meetings
- Providing opportunities for key talent to profile their impact on the AWE
- Getting to know pipeline talent being mentored for executive roles
- Facilitating cross-functional role and talent movement

Ultimately, the leadership team's objectives are to create the oversight and visibility that encourages active and equitable sponsorship and to intentionally and proactively plan for building leadership capability that underpins our values.

Insights from this important work are made available to employees to enable their career development journeys. For example, as part of our annual executive talent review and succession planning process, we identify the most critical and value-generating roles at Albemarle. At the same time, employees express career aspirations through Career Profiles and in discussions with their manager. One resource in development that aligns roles and interests is a learning paths playbook of the skills and abilities that lead to excellence at Albemarle. This resource will give employees and people leaders a clear understanding of the evolving needs of their current roles and the experiences needed to advance to new positions within the organization that align with their career ambitions.

## Employee Growth and Development

Albemarle provides training and development on a wide variety of topics, delivered through various channels, and adapted to each employee's specific role. Our robust technical training program, based on location and business unit, ensures that everyone has the necessary skills to perform their job in a safe and efficient manner. For example, our Safety Skills series offers a collection of 125 e-learning manufacturing safety courses and sees 21,000 course completions annually. Albemarle University facilitates our mandatory training requirements such as training on our Code of Conduct, cybersecurity, safety, and DE&I and provides a full suite of professional and leadership development modules to support our employees' upskilling efforts towards their ambitions to further their careers. In 2021, we expanded the number of learning modules available in Albemarle University to 18,000+ through the add-on of LinkedIn Learning and we continued to provide most of our learning programs on our digital platform after pivoting to virtual learning in 2020.

# 18,000+

learning modules available through Albemarle University

## Leadership Development

In 2021, we enhanced our leadership development opportunities. Leadership development is critical for our succession planning, and we take both a formal and informal approach to leadership development. We relaunched a global leadership program, Leading for Improved Performance, aimed at frontline supervisors and managers among our manufacturing workforce. This global, regionalized management development program, designed to embed manufacturing excellence leadership and accountability principles across sites is delivered in four different languages. Select sites have also piloted a new leadership offering, Supervisor Bootcamp, that accelerates the abilities of incoming frontline supervisors to take full ownership of the duties of their role, starting from day one on the job. Our Albemarle Leadership Program aimed at mid-career managers was well received with over 380 employees who took advantage of the program in 2021. In 2022, we will add an emerging leaders program, Elevating Leader, targeting aspiring leaders and current leaders who desire to advance in the organization, expand their global networks, and gain cross-functional leadership visibility.

## Elevate Women

To increase the number of women leaders in our organization, we have placed emphasis on career development programs aimed at our female workforce. In 2021, we launched our Elevate Women program with 80 women who participated in the first cohort, and we kicked off three additional cohorts, adding 60 more women across the globe to the overall program. The program is unique in that it does not restrict participation by leadership level – it is open to all women. Participants work in teams over four months to complete action learning projects featuring complex problems facing Albemarle that were selected by senior leadership as important to the success of the organization. As the capstone of the program, teams propose their recommendations and solutions to our ALT. We also delivered training and development sessions through our employee CONNECT groups. In 2021, our talent team partnered with the Women CONNECT group to offer coaching, mentoring, and networking opportunities for our female employees. We piloted an app that makes professional coaching highly accessible, scalable, and more affordable through virtual access. Moving forward, we are looking at rolling out the app to a broader group of Albemarle employees.





## LAUNCH

We believe in making a strong investment in early talent, internal mobility within the organization, and attracting and retaining new graduates. LAUNCH, our two-year rotational development program for recent college or university graduates, provides an opportunity for participants to take part in three assignments, including one international, to allow them to gain insight into Albemarle's culture. In 2021, we had 18 participants in the LAUNCH program and a 100% retention rate. Our 2021 LAUNCH cohort was 80% diverse, and of our incoming three LAUNCH participants, two are diverse.

At Albemarle, we also understand that mentoring has a critical role to play in career progression, and we empower and expect current people leaders to manage and mentor their teams on a regular basis. In 2021, we introduced our GROW Mentoring support model, which provides match support, educational resources for both mentors and mentees to set the relationship up for success, and easy access to career development resources. In 2022, we will focus on increasing accessibility and moving towards a mentoring and sponsorship culture for all our employees.

# 100%

retention rate of LAUNCH participants since program inception

## Committed to Local Hiring

As part of living our core values, we are committed to developing local talent and creating job opportunities in the communities in which we operate. For example, at our Salar site in Chile, 35% of our employees are indigenous, and at our La Negra site, we have partnered with Chile's National Training and Employment Service to create an apprenticeship program at our plant. The program provides young technical professionals from the Antofagasta region with the opportunity to develop their skills and fulfill their goal of working for a global company. In October 2021, the first 12 apprentices graduated from the program, and in 2022 we look forward to welcoming an additional 40 apprentices.



## High-Performance Culture

In 2021, we began expanding and optimizing systems of performance and leadership accountability. In addition to our online platform that captures employee goals, performance history, and multi-rater feedback (Workday Talent Management), we invested in new technology (WorkBoard) that better enables us to continuously maintain alignment to strategy and cascade goals. We introduced OKRs, a team-based, results-oriented approach to strategy alignment and goal execution. In 2022, we are making OKRs visible across Albemarle – employees have complete transparency to leaders' progress on goals, all the way up to the ELT's goal status. It is our expectation that OKRs will help us align with speed, prioritize for impact, and ultimately drive our innovation. For our leaders and employees, OKRs create clarity around purpose and link their contributions to the organization's success, inspiring enthusiasm, and a high-performance culture. We look forward to reporting more comprehensively on our OKRs in future reports.

The OKR methodology is just the beginning of our modernized, continuous performance management approach. Managers ensure all employees participate in at least two performance and career development reviews, and we use online, multi-rater feedback to incorporate peer and stakeholder feedback in employee performance reviews. Improving our systems of feedback, our ability to give and receive feedback, and aligning on our language in providing effective feedback are part of our 2022 strategy for building and sustaining a high-performance culture.



## Compensation and Benefits

We provide competitive wages, benefits, and performance incentives through our Total Rewards package. As a global company with an international presence in jurisdictions around the world, our Total Rewards package provides the necessary resources for our employees to manage their financial, physical, and mental health and reflects regional differences and requirements. Our Total Rewards program constantly evolves as we consider new ways to expand and enhance the program. In addition, we perform an annual pay equity analysis across our global operations to assist us in adjusting salary levels where needed. For all locations, we review our pay practices by gender, and in the U.S. by gender and race. Our yearly analysis also helps our hiring managers understand how best to apply fair remuneration practices.

Our Annual Incentive Program (AIP) is designed to provide incentives and rewards for achieving Albemarle's annual goals and objectives. This includes three ESG metrics, which measure performance objectives related to occupational safety, process safety, and environmental responsibility. The metrics comprise 10% of the annual incentive and rewards program. The Executive Compensation Committee of the Board has the overall responsibility of evaluating the performance of the CEO and approving the compensation structure for senior management and other key employees. The Executive Compensation Committee determines performance goals under the AIP annually to ensure our executive officers execute on short-term financial and strategic initiatives that drive our business strategy and long-term shareholder value.

**We believe our investment in talent has had tremendous benefits. One way in which we are seeing results is in Albemarle's turnover rate. In 2021, our total turnover was 11.6% and voluntary turnover rate was just 7.4%.**

# 11.6%

total turnover rate in 2021

# 7.4%

voluntary turnover rate





# COMMUNITY AND STAKEHOLDER ENGAGEMENT

At Albemarle, we strive for transparent communication and ongoing dialogue with all our stakeholders while sharing the benefits of our economic activity to build a positive legacy in the communities in which we operate.

Under the leadership of our VP of Global Government and Community Affairs, we are developing and implementing globally an enhanced Government and Community Affairs strategy. The strategy will reflect how we proactively engage the governments and communities where we operate to develop strong and sustainable relationships. By shifting from a decentralized approach to a more centralized model, we can be more consistent in our approach to government and community engagement across the entire organization and across all geographies. We have created a global team with deep expertise that will allow us to share best practices and resources and to develop a corporate-wide strategy, while still giving our local teams the authority to make the decisions that impact their communities locally. Our global [Community Relations and Indigenous Peoples Policy](#) governs our community engagement activities.

## Indigenous Relations and Engagement

In locations where Albemarle's operations are in areas with indigenous populations, our Government and Community 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.

In June, our Compliance and Ethics team presented our Community Relations and Indigenous Peoples Policy and introduced our Integrity Helpline to the local communities in Chile. This official complaint channel allows community members to raise and seek resolution for complaints and grievances and is available in Spanish and several indigenous languages.



## Indigenous Engagement in Chile

In Chile, Albemarle has cooperative agreements with several local indigenous groups, including with the Council of Atacameñan Peoples (CPA). The CPA represents 18 indigenous communities and 6,000 people that live around the Salar. Under our agreement, we meet with the CPA monthly to discuss community concerns, address changes that need to be made at our operations, and plan for our monthly joint visits to monitor water levels together. We also contribute 3.5% of our Chilean revenue to the indigenous communities in the CPA. Over the years, these funds have contributed to a variety of projects focused on improving the quality of life of local residents. Local communities choose the projects that are funded by Albemarle's contributions. In 2021, these projects included a new community center in Catarpe, new fairgrounds in Guatín, as well as housing in Machuca, which has permitted indigenous people to return to their ancestral homelands. The Machuca community also received funding for a tourist lodge, a photovoltaic plant, a sewage treatment plant, and a museum that showcases the cultural heritage and history of the Machuca people.





## Initiative for Responsible Mining Assurance

Albemarle has taken a global leadership role in demonstrating how we produce lithium sustainably by partnering with the Initiative for Responsible Mining Assurance (IRMA) to promote responsible practices in the mining industry. IRMA offers objective, independent third-party verification of industrial-scale mine sites using comprehensive standards agreed to through a collaborative, multi-stakeholder process including material producers, customers, labor, NGOs, and communities.

The IRMA standards are based on four overarching principles: business integrity, planning and managing for positive legacies, social responsibility, and environmental responsibility. The standards cover 26 assessment areas such as water management, human rights, greenhouse gas emissions, fair labor, and terms of work. Within these assessment areas there are approximately 800 individual criteria. The assessment also includes interviews with external stakeholders, review of relevant data and documents, the development of corrective action plans, and public disclosure of the audit results on IRMA's website.

In 2021, our Salar de Atacama site was the first lithium mine in the world to complete an IRMA self-assessment. In 2021, we also began our third-party audit in accordance with the IRMA standards. In 2022, we began IRMA self-assessments and third-party audits at our JV mining sites in Australia.

We have already begun to take the insights gleaned from these assessments to help us close identified gaps. For example, in the Salar, as part of our environmental permit, we worked to identify and protect cultural patrimony sites within our operations. Now, following our IRMA self-assessment process, we have set up a working group to help the community do the same for sites outside our operations. During our self-assessment, we also discovered that in some cases grievances were being reported directly to Albemarle community relations staff rather than through official grievance mechanisms. We are improving our internal tracking systems to help ensure efficient resolution of these issues directly with the community.

## GIZ Multi-Stakeholder Platform for the Sustainability of the Salar de Atacama Basin

Albemarle actively supports a multi-stakeholder and multi-sectoral platform coordinated by the German Agency for International Cooperation (GIZ). This platform includes representatives of the major industries in the Salar de Atacama including tourism, agribusiness, and mining. The partnership intends to foster understanding and dialogue around the impact of water usage and to jointly develop a shared vision and action plan for the future of the Salar watershed to improve long-term integrated natural resource management. Participating companies include Daimler AG, Fairphone, Volkswagen Group, and BASF.



# ALBEMARLE FOUNDATION

## WE GROW THE GOOD FOR A BETTER WORLD

Albemarle Foundation, established in 2007, is a private, endowed 501(c)(3) entity (Foundation) that serves as the primary mechanism for Albemarle’s philanthropic giving and volunteerism. Through our Foundation we control where our donations are directed, we leverage our donations to ensure maximum community benefits, and we provide a platform for employee volunteerism. Our mission is to strengthen our communities by enhancing the quality of life for our employees, customers, and neighbors through charitable giving, academic scholarships, and volunteerism. The Foundation uses community grants, matching grants, volunteer grants, and a scholarship program to distribute funds that make a profound impact.

In 2019, the Foundation initiated Albemarle Foundation Global, formalizing global efforts, and providing resources and guidance to optimize them. To support the existing and newly created Community Outreach Councils at our international sites with their grant distribution efforts, the Foundation works through the Charities Aid Foundation America, a global grant-making organization that helps direct grants to validated charities outside the U.S.

[Albemarle Foundation](#) is governed by a board of directors, Foundation team, and employee-led site councils. Employee site councils serve as the local eyes and ears of the Foundation to reflect the unique character of every community in which we live and operate. In collaboration with employee feedback, site councils identify needs in their communities, research, and screen opportunities for employee volunteer efforts, and distribute community grants.

### Albemarle Foundation Scholarship Program

Initiated in 2007, the scholarship program is open to dependent children of any regular employee or retiree of Albemarle Corporation and its subsidiaries who are eligible high school seniors. In 2010, William Gottwald, former chairman of Albemarle Corporation, donated \$1 million to create an endowed fund to grow what is now known as the Gottwald Scholarship Program. This donation expanded the number of \$2,500 scholarships awarded and created the \$5,000 Floyd D. Gottwald Scholarship. Albemarle Foundation pays 50% of the annual scholarship amount.

In 2021, \$72,500 in scholarships were distributed representing 29 students active in the program. Five of those students make up the Class of 2021 Gottwald Scholarship Recipients. Since inception, the program has awarded \$906,000 in scholarships to a total of 95 scholars. Scholarship recipients are selected by an independent committee comprised of educators from our local communities.

### Partnering to Support Diversity, Equity and Inclusion

In 2021, we continued our focus on strengthening our relationship with our community and internal partners in alignment with our DE&I efforts. CONNECT groups, true to their name, connect, collaborate, and incorporate many Foundation programs to educate and bring together our employees and positively impact our communities through volunteerism and grants targeted at programs that enhance and assist the CONNECT group(s) mission. For 2021, the Foundation distributed over \$50,000 in grants in direct support of these efforts to organizations such as HEAL Charlotte, Human Rights Campaign Foundation, Houston Area Urban League, Ronald McDonald House, the USO, and the YMCA.

In 2021, we committed \$100,000 to SHARE Charlotte’s SHINE™ program to help provide valuable resources, education, and collaboration opportunities to Black-led and Black-benefiting non-profit organizations.

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**“We were thrilled to be partnering with the Albemarle Foundation again in 2021! With their gift they are recognizing the unique funding and resource challenges that Black-led, Black-benefiting non-profits face. This investment is one way they can help level the playing field and meaningfully impact the work of these organizations.”**

– **Melissa Hovey**, Managing Director of SHARE Charlotte

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## Supporting Each Other Through the Albemarle Care Fund

The Albemarle Care Fund (ACF) helps Albemarle employees and retirees who experience financial hardship due to natural disasters, life-threatening illnesses or injuries, death, or other catastrophic or extreme circumstance beyond their control. In addition to providing natural disaster relief efforts to impacted employees, ACF can be initiated by employees who seek to help one another during distressing events and difficult times. This employee-sponsored fundraiser program exemplifies the true power of our people who have utilized this resource to provide overwhelming support to colleagues in need.

Albemarle Care Fund has distributed over \$1.6 million since inception. In 2021, over \$25,000 was distributed in natural disaster relief to impacted employees and over \$57,000 was distributed in matched grants for employee-sponsored fundraisers in benefit of a colleague in need.



## Investing in the Future – Our \$10 Million Education Initiative

In 2018, Albemarle Foundation announced a \$10 million education initiative in Charlotte, North Carolina. The Foundation’s gift was matched by another \$10 million grant from Bank of America. Funds for the initiative came from a special gift approved by Albemarle’s Board of Directors and was distributed through the Foundation to selected non-profits over a five-year period.

“Thanks to Albemarle, Freedom School Partners served 882 scholars through our in-person Freedom School program and the distribution of books and enrichment kits, helping 87% of scholars gain or maintain their reading ability.”

– Glenda Bernhardt, Chief Executive Officer, Freedom School Partners

“We are grateful for Albemarle’s support over the past three years which provides funding for college and career advising, virtual college tours, ACT and SAT preparation, boot camps, and parent workshops to 200 underserved Black high school students. As a result of the funding, 100% of the seniors graduated from high school and 100% of them are now attending college.”

– John Martin, CEO and Co-Founder, Young Black Leadership Alliance

“We remain grateful to work alongside partners like the Albemarle Foundation, who are helping us close the opportunity gap and ensure that all youth in our community can reach their full potential.”

– Amanda Wilkinson, Association Director of Literacy and Youth Programs – YMCA Charlotte

### 2021 Albemarle Foundation Highlights:

U.S. & international grants distributed:

**\$6M+**

Employee contributions to Albemarle Foundation employee giving campaign (U.S. only):

**\$770k**

U.S. & international employee volunteer hours:

**8k+**

In 2022, we look forward to employee re-engagement through in-person volunteer efforts, the Foundation’s continued success across all community outreach platforms and celebrating Albemarle Foundation’s 15th anniversary.





# ENGAGEMENT AROUND THE WORLD

As a global industry leader, Albemarle works with a broad group of stakeholders to foster positive, long-term relationships built on mutual trust, transparency, and respect. We engage with our host communities with care, honesty, and humility. The following graphic is a representative sampling of the work of Albemarle Foundation and the Government and Community Affairs teams around the world in 2021.



Silver Peak, Nevada



Magnolia, Arkansas



King's Mountain, North Carolina



Catarpe, Chile



Langelsheim, Germany



Amsterdam, The Netherlands



Chengdu & Xinyu, China



Western Australia



## Silver Peak, Nevada

We donated funds to local organizations, including the Silver Peak Volunteer Fire Department and the Nye & Esmeralda County School District.

## Chile

A new community center in Catarpe, built with funds received from Albemarle was opened in 2021.

## Amsterdam, The Netherlands

We worked with municipal leaders and stakeholders to discuss local re-zoning and how Albemarle can minimize the effects of our operations on future community members.

## Charlotte, North Carolina

We work with local education partners such as Read Charlotte to support literacy and learning from kindergarten through college for children from underserved communities.

## Magnolia, Arkansas

We resumed our Magnolia wildlife habitat education program providing students from our local high school with hands-on skills related to water quality testing, microorganisms, and pollinators.

## King's Mountain, North Carolina

Our 2,000-square-foot pollinator garden situated on top of a rock pile reclaimed by Albemarle from a previous lithium mining site is a habitat for pollinators such as the monarch butterfly and was re-certified in 2021.

## Langelsheim, Germany

Employees raised 60,000 Euros (approximately \$70,000) including corporate matches from Albemarle Foundation and our local German subsidiary, donated to Red Cross Goslar in support of small communities impacted by flooding, who do not typically benefit from governmental grants.

## Kemerton, Australia

100% of our Kemerton employees completed indigenous engagement and cultural awareness training.

## Wodgina, Australia

We are working with community leaders and stakeholders to understand the unique heritage at Wodgina and our obligations under the Western Australian government's Aboriginal Cultural Heritage Act.

## Xinyu, China

We held a community fundraising campaign with funds donated to an outdoor fitness facility and items such as refrigerators, air conditioners, and furniture donated to the Chitang Village, Jieqiao Village and Jiangli Community.

## Across China

In honor of Breast Cancer Awareness Month, our Women CONNECT China group organized a series of breast cancer awareness activities ranging from a pink ribbon do-it-yourself workshop to breast health talks and the distribution of awareness promotion materials.



## Jordan: Dead Sea Shore Cleanup

Our employees worked with the local school, built by JBC in 2020, to support STEM (science, technology, engineering, and mathematics) and English language learning. Employees taught classes, mentored students, and continued to support the Innovation Club, providing youth ages 4-18 with knowledge about the importance of STEM and entrepreneurship for their career prospects. We also worked with municipal and regional governments on greening neighborhoods in Safi and engaged our employees in cleaning up the shores of the Dead Sea.







# SUSTAINABLE VALUE CREATION





# BUSINESS AND FINANCIAL RESILIENCE

## Leading Our Industry in Integrating Sustainability with Profitability

The COVID-19 pandemic has demonstrated that we can adapt quickly to unforeseen circumstances while maintaining business continuity and safeguarding our people, our assets, and our communities. As a global market leader with durable competitive advantages, we have a track record of realizing economic value for our shareholders through strong financial performance and a positive return on investment.

Throughout 2021, we continued to take a prudent and disciplined approach to the management of our global, best-in-class asset portfolio while focusing on operational excellence to drive investment returns. Our balance sheet was bolstered by strong margins and cash flow, giving Albemarle the financial flexibility to support our long-term growth strategy. We maintained our Investment Grade credit rating based on our financial strength and our growth and earnings potential. As a result, both debt and equity investors showed a strong interest in Albemarle, and we were able to raise ~\$1.5 billion through our equity offering.

Also in 2021, in line with our Climate Strategy and at the request of Albemarle shareholders and some of our customers, we filed disclosure under CDP for the first time. The CDP is a global framework that has become the de facto international standard for reporting on environmental impacts for use in financial decision-making. The CDP provides Albemarle investors and other stakeholders with critical environmental data around climate, water, and supply chain infrastructure to integrate sustainability into the investment process. In 2022, we will further expand our CDP disclosure. With the filing of our 2021 annual report, we also disclosed against the SEC's Rule S-K 1300, intended to improve the reliability of information to investors regarding property disclosures for mining registrants and harmonize disclosures with international reporting standards.

## Enterprise Risk Management

Albemarle's Enterprise Risk Management (ERM) program clearly identifies and defines risks that could significantly impact our company's 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 look at quantitative and qualitative factors to rate each identified risk regarding severity and likelihood to determine which risks should be prioritized. We also pressure test our risk mitigation and management activities with a broad group of relevant stakeholders.

Albemarle's Vice President, Audit and Risk Management and the Enterprise Risk Management Committee, comprised of members of the ALT, oversee our ERM program and periodically reassess our key risks considering a constantly evolving business context and risk landscape. In 2021, we identified 10 top enterprise risks: execution of large and complex capital projects, catastrophic incidents, cybersecurity, external risks to our strategy, geopolitical risks, compliance, regulatory pressure, talent, supply chain, and shareholder activism.

## Internal Audit

Albemarle's Internal Audit team is a key function of our ERM program. There are several inputs considered during the development of our annual audit plan, including:

- Strategic objectives and key initiatives
- Key risk factors as disclosed in our Form 10-K
- Internal Audit risk assessment, including interviews with cross-functional Albemarle leaders
- ERM framework coupled with internal and external risk information
- Direct input from the Internal Audit team

## Managing Cyber Risk

One of our top 10 risks, cybersecurity risk is increased as employees continue to work remotely due to the pandemic. As such, the integrity and security of critical business processes and information is a key area of focus for our ELT and Board.

To mitigate the possibility of a cybersecurity breach, our Chief Information Security Officer oversees security initiatives and protocols that focus on IT governance and standardization and vulnerability management through continuous monitoring. This includes a third-party security operations center (SOC) and cybersecurity engineers who provide 24/7 network monitoring. We continuously implement improvements consistent with the National Institute of Standards and Technology (NIST) cybersecurity framework and audit against these standards, and we upgrade our threat intelligence systems on a routine basis. We have a documents management program in place, which includes data loss and management information protection.

Our IT Department conducts periodic cyber response drills, and in 2021, we ran our first ransomware risk exercise with our ELT to simulate what would happen if our business became the victim of a ransomware attack. The exercise helped our ELT better understand their roles and responsibilities in the event of such an occurrence and what assets might be most at risk of attack. We intend to repeat this exercise on a periodic basis. We have also put in place technology and infrastructure to support our remote workforce and ensure routine communications from leadership to remind employees to be vigilant of cyber threats, and we conduct monthly employee training on cybersecurity.

## Managing Geopolitical Risk

As a global company that derives over 75% of our profits from outside North America and with facilities and offices spread over five continents, geopolitical events can significantly affect our business. 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. We are also faced with asymmetric tax and regulatory regimes around the world, which adds 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.



## Managing Talent Risk

As Albemarle continues to grow and expand globally, it is more important than ever that we have the right complement of people to drive our strategy forward. The Executive Compensation Committee of the Board considers human resources risks and potential risks relating to our employee (including executive) compensation programs.

To mitigate our talent risks, we have introduced initiatives with a focus on talent acquisition and retention, training and development, and succession management, and we have invested significantly in training and development for our employees. For examples of those initiatives, please see the Our People, Workplace & Community section of this report.

## Managing Human Rights Risks

As a global company operating in the extractives industry, Albemarle knows the importance of meaningful engagement with its stakeholders and strives for positive human rights impacts, particularly in culturally sensitive locations such as Chile and Western Australia where our sites are located on indigenous peoples' lands. We recognize the human rights of our stakeholders, and we respect those rights through clear policy commitments, a range of due diligence initiatives, formal community agreements, and accessible grievance mechanisms for reporting concerns. Respecting the human rights of our employees, workers in our supply chain, members of our communities and other stakeholders represents our core values in action.

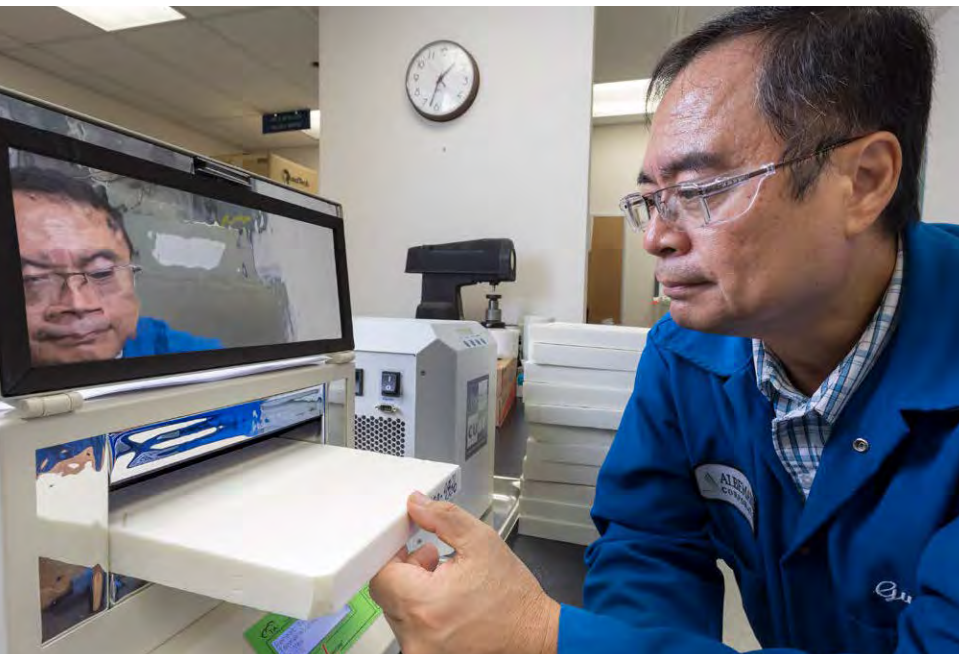
We recognize the human rights of our stakeholders as expressed in the International Bill of Human Rights and the International Labour Organization's Declaration on Fundamental Principles and Rights at Work, and we acknowledge our responsibility to consider and address the impact of our operations on the human rights of our stakeholders. We have expressed our commitment in policies and procedures such as our Human Rights Policy, Community Relations and Indigenous Peoples Policy, Global Labor Policy and Health, Safety, Security & Environmental Policy, among other standards. These standards provide direction and guidance to our employees to ensure that our stakeholder and community engagement activities support the fundamental principles of basic human rights.

In 2021, Albemarle engaged an external legal firm to conduct human rights due diligence to help us identify potential risks at our Salar site in Chile and Xinyu and Meishan plants in China. We also introduced a human rights risk lens to our procurement process. In 2022, we plan to conduct human rights assessments in La Negra, Chile, and at our JBC joint venture in Safi, Jordan.

## Managing Climate Risk

Climate change has been identified as one of the most pressing issues and risks 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 avoid climate change by limiting global warming to well below two degrees Celsius and are pursuing efforts to limit it to 1.5 degrees Celsius. This is not only the right thing to do, but it also strengthens our competitive position, improves our operational efficiency, and creates value for our stakeholders.

We recognize that reducing our carbon footprint is a multi-decade, continuous improvement journey requiring investments in technology, infrastructure, and people as well as partnership with suppliers and customers. 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, at least annually. The Audit & Finance Committee of our Board reviews climate change as it relates to ERM, at least annually.





# BUSINESS ETHICS AND REGULATORY COMPLIANCE

At Albemarle, we view compliance as the foundation for building trust. We have a responsibility to operate our business in a transparent and ethical manner. Our relationships with our stakeholders are built on the trust that we will consistently and reliably deliver against our commitments.

## Code of Conduct

We have put in place a robust and comprehensive ethics and compliance program which is managed by our Chief Compliance Officer. Albemarle's Chief Compliance Officer reports on emerging compliance risks and the status of our programs to the Audit & Finance Committee of our Board on a quarterly basis. Our approach to business ethics is directed by our [Code of Conduct \(Code\)](#), a public statement that defines our guiding principles and represents our core values in action. The Code, which is available in English, Dutch, German, Chinese, and Spanish, outlines the ethical expectations we have of our employees, officers, and directors for the way they conduct their day-to-day business. In 2021, our Board approved minor updates to the Code, including a new introduction from our CEO.

The Code provides standards to deter improper actions and promote honest, ethical, and responsible conduct, compliance with applicable laws and regulations, full, fair, accurate, and timely disclosure in filings and other public communications, prompt internal reporting of violations, and individual

accountability. Updates to the Code were made in 2021 to align content with several new Albemarle policies, including our new [Global Labor Policy](#), [Human Rights Policy](#), and [Community Relations and Indigenous Peoples Policy](#). In addition, Albemarle's eight Life Saving Rules were added to the Code to ensure consistency, compliance, and understanding of critical safety measures and safeguards across the organization. All updates to the print version of our Code were also made available via our eCode, which is accessible to our employees on their computers, tablets, and smartphones. In 2021, 47% of Albemarle employees consulted the eCode, with many referring to it on multiple occasions. These analytics help us to identify locations where targeted campaigns to raise awareness of the Code can be deployed.

Albemarle expects its suppliers, contractors, sales representatives and any other third party doing business with Albemarle to similarly act in a manner consistent with our core values and our Business Partner Code of Conduct. In addition, compliance-sensitive third parties also receive periodic training.



## Communications and Training

Training is a critical component of our ethics and compliance program. All employees must renew their commitment to the Code annually, and in 2021, 99% of all employees completed their assigned Code of Conduct training by year end. This training addressed workplace conduct, use of social media, making charitable donations on behalf of Albemarle, and care with electronic communications. We also provide in-depth compliance training to employees according to potential ethics and compliance risks they might face. For example, in 2021, we provided the following training:

- Holistic, scenario-based “core values in action” training for those employees involved in procurement
- Similarly, holistic training for those employees engaging with government officials (which included anti-bribery and corruption compliance)
- Training to all employees on Albemarle’s Information, Communications & Technology Policy which addresses information management, data privacy, and cybersecurity

# 99%

of all employees completed their assigned Code of Conduct training by year end

New joining employees are automatically assigned training which is relevant to their role. For example:

- All new employees are required to complete Code of Conduct training within 90 days of commencing work with Albemarle
- Employees in procurement or sales are required to take function, ethics, compliance, and system-related training specific to their roles
- Employees who may manage personal data of Albemarle employees or third parties are assigned data privacy training

## Risk Assessment

The scope and design of our ethics and compliance program is informed by various forms of risk assessment:

- The company conducts periodic assessments of our exposure to specific ethics and compliance risks, 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 Enterprise Risk Management framework.
- The Chief Compliance Officer, supported by the Legal Department, is responsible for the identification of new risks, due to the introduction of new laws, or expansion into new territories.
- Through day-to-day support of Albemarle’s global business units and functions, and associated analytics, the compliance team can maintain a real-time risk profile in areas such as third-party risk management and employee expenses.
- The cultural health of our employees 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 a number of 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
- Global Security Policy
- Health, Safety, Security and Environmental Policy
- Human Rights Policy
- Political Contribution Policy

To view these, visit [Albemarle Policies](#).



## Analytics and Monitoring

We use real-time analytics to support our ethics and compliance program to provide us with insight and to help us direct resources where they are needed. This monitoring program is dependent on a publicly recognized analytics solution that our ethics and compliance team developed in coordination with our IT Department. We use data sourced from internal systems and third-party suppliers to develop real-time dashboards that are used by our compliance team and senior management. Our monitoring program is supplemented by periodic ethics and compliance audits of Albemarle sites, non-controlled joint ventures, and third parties.

## Speak Up

Employees are required to speak up when they suspect activity that is potentially in violation of our Code of Conduct or an applicable law. Concerns can be raised anonymously and without fear of retaliation and can be reported to supervisors, the Chief Compliance Officer or members of his team, the General Counsel or members of the Legal Department, 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.

The metric typically used as a proxy for measuring a company's speak-up culture is 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 period. In their 2021 Ethics & Compliance Hotline and Incident Management Benchmark Report, Navex report an industry median of 1.3 reports per 100 employees. In 2021, Albemarle received 1.2 reports per 100 employees, down from 1.3 in 2020. These figures exclude policy inquiry questions. The year-over-year decline in reports is consistent with that experienced by other companies and is most likely due to Covid-19 pandemic-related work restrictions.

## Conflicts of Interest

Albemarle respects the privacy of its employees, and their right to pursue outside activities and interests. When potential conflicts of interest arise, we ask employees to take appropriate steps to manage the risks arising from them. This includes discussing a potential conflict with their supervisor, registering the conflict using an online tool managed by Global Ethics & Compliance, and respecting any commitments made with regards to the conflict.

## Bribery and Anti-Corruption

We prohibit all forms of bribery and corruption, whether by our employees, third-party sales representatives, or anyone else acting on our behalf. This includes making facilitation payments. In accordance with the UN Global Compact Tenth Principle, Albemarle works against corruption in all its forms.

Albemarle's [Anti-Corruption Policy](#) provides guidance on the types of activities that might constitute bribery, the scenarios in which bribery might arise, and Albemarle's expectations and requirements in those scenarios. The Policy is supplemented by tailored anti-corruption-related requirements that are embedded in functional policies relating to sales, procurement, government engagement, community engagement, charitable donations, and commercial sponsorships.

Albemarle takes a similar approach with regards to anti-corruption training, with a mix of principle and risk-based training including:

- Code of Conduct training for all employees which typically includes an element addressing anti-corruption
- General training focused on the Company's Anti-Corruption Policy
- Tailored core values/business ethics training (including anti-corruption) for employees engaging in particular functional activity (e.g., sales, procurement, government engagement)
- Business ethics training (including anti-corruption) for "gatekeeper" roles such as inquire to cash and travel and expenses

Excluding 2021 Code of Conduct training (which included reference to the Anti-Corruption Policy and anti-corruption risk specific to charitable donations), the Company provided tailored training to employees engaged in procurement and engagement with government officials. The total number of employees identified as requiring training was 1,259 and the total number of employees receiving such training was 1,142 (91%).<sup>1</sup>

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

- Due diligence and pre-approval for use of compliance-sensitive third parties such as distributors and government-facing suppliers, and continuous monitoring of transactions involving such third parties. In 2021, Albemarle extended its third-party due diligence to include other types of suppliers who present elevated anti-corruption risk
- 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 2021, three site audits (9%) were conducted by Internal Audit (percentage calculated based on 32 site count).

<sup>1</sup> The training season for those engaging with government officials extended into 2022 due to the establishment of an enhanced Government and Community Affairs Function.



## External Engagement

Albemarle plays an active role in the broader ethics and compliance community. Albemarle's Chief Compliance Officer is a member of the Compliance Week Advisory Board and a member of the teaching faculty of the Practicing Law Institute. Albemarle's compliance officer for the Europe, Middle East, India, and Africa region is a lecturer on business ethics at Erasmus University, Rotterdam, and a member of the supervisory board of the Stichting Register Arbeidsdeskundigen.

## Regulatory Compliance and Government Affairs

Albemarle's Global Product Stewardship Team is responsible for product regulatory activities and supports key Health, Safety & Environment (HS&E) initiatives. We strive to 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 ensure that our products have been tested and evaluated to identify any product safety hazards or risks to human health and the environment. In addition, we focus on communicating our compliance appropriately by making certain that our product safety data sheets, labels and other forms of communication clearly identify and communicate hazards for their proper use and safe handling.

In 2021, we formed our new Government and Community Affairs (G&CA) team led by the Vice President of G&CA and comprised of subject matter experts. This group is regularly informed by cross-functional company stakeholders in Communications, Regulatory Affairs, Albemarle Foundation, and Investor Relations and Sustainability.

In addition, Albemarle's G&CA group includes multiple global team members that are responsible for the strategy, localization and execution of G&CA initiatives within Chile, Australia, China, Jordan, and the European Union (EU).

The G&CA team is responsible for the development and implementation of Albemarle's enhanced global government and community affairs strategy. Our strategy involves:

- 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 good will 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; 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



# VALUE CHAIN EXCELLENCE – FROM RAW MATERIALS SOURCING TO PRODUCT DELIVERY

Our goal is to provide the best products and services to our customers, delivered to their satisfaction and manufactured sustainably with inputs from a world-class supply chain. To meet our ambition, we are placing greater emphasis on our procurement practices and how they can support our growth strategy.

In 2021, to underline the importance of a reliable and transparent supply chain to our business success, we undertook an extensive review of our organizational structure and governance processes as they relate to our supply chain and procurement management. We created the role of Chief Supply Chain Officer (CSCO) with cross-functional oversight and mobilization capabilities across the entire Albemarle organization to enable end-to-end supply chain optimization and traceability. This was particularly important in the past year as we, like many other businesses, faced supply chain disruptions. The role of our CSCO also involves anticipating, mitigating, and managing disruptions, including improving exception-based processes that require the mobilization of cross-functional teams to meet short-term deliverables and ensure supply chain resilience.

## Supply Chain Center of Excellence

In support of Albemarle’s growth strategy and under the leadership of our CSCO, we created a Supply Chain Center of Excellence with the purpose of driving efficiency and effectiveness in the procurement process. The Supply Chain Center of Excellence helps us strengthen supplier relationships and manage risks

associated with our supply chain. In partnership with Global Procurement, we launched One Procurement, our new policy framework, which ensures 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 functions and capabilities and drives unified procurement behavior across the entire Albemarle organization while still enabling GBU ownership over key supply chain activities. As part of our optimization process, our specific focus on working with higher quality suppliers in all regions has reduced the overall supplier count. For example, over the past four years, we have eliminated 173 logistics suppliers. We continue to collaborate daily with suppliers to ensure alignment with Albemarle’s values.

## Logistics Operations

Albemarle depends on smooth and efficient logistics for the flow of materials to our plants and delivery of finished goods to our customers. Like many companies, in 2021, we faced challenges because of the COVID-19 pandemic and the obstruction in the Suez Canal. These challenges included long delivery times

due to bottlenecks at ports and trucking shortages, as well as an exponential increase in shipping costs, attributable to work disruptions at ports around the world due to quarantines and shutdowns. As a result, in some instances, our markets faced a 60% increase in shipping times and quadrupled costs on select lanes in container shipping costs. However, in most cases, we were able to perform substantially better than market.

In 2021, we implemented strategic steps to help address these disruptions and to mitigate future risks. For example, we consolidated our freight forwarding suppliers from more than 130 to six and reduced our marine suppliers from 21 to six to better leverage our volume and spend and reduce risk. We also rationalized a network of more than 30 trucking companies down to five strategic partners. We applied a port diversification strategy to avoid port congestions and shutdowns, and we deployed transportation management shipment track and trace on our marine logistics, so we continually knew where our shipments were at any given time. We are in the process of rolling out this system to our road and rail activities, and we anticipate full implementation in 2022.

Following these actions, Albemarle only saw an increase in delivery time of 10-14 days, compared to the industry average of 14-21 days during this period of disruption. In the past, we operated according to a just-in-time delivery model for our supply chain inputs. In 2021, we minimized supply chain shocks by ensuring a safety stock of key sole-sourced raw materials as appropriate to our productions processes. In addition, to better serve our customers, we stored products closer to key customer sites and developed contingency shipping routes.



## Reducing Our Logistics Carbon Footprint

We are conscious of the role transportation plays in contributing to GHG emissions and we believe that we have substantial opportunities to reduce our environmental impact through logistics network optimization and consolidation. Therefore, we established a Distribution Safety Department to manage HS&E for our logistics suppliers. Under the guidance of this new department, we adopted the use of a transportation management tool to measure and monitor the carbon footprint of our logistics suppliers. In late 2021, this tool was introduced globally for marine transportation, and we will be rolling out the tool globally throughout 2022 for all transportation modes. We also introduced a fuel surcharge program that encourages our suppliers to reduce their environmental impact.

We are increasingly shifting from high-carbon to low-carbon transportation modes by moving more goods via rail as a substitution for truck transport, and we are shortening route distances where possible, as well as the number of delivery visits per vendor to our sites. We are also in the process of establishing an awards program to recognize the sustainability efforts made by our logistics partners to reduce their environmental footprint. We look forward to reporting more on this in the future.

## Driving Sustainability in our Supply Chain Through Responsible Sourcing

Responsible and sustainable sourcing, in accordance with our core values and with respect for the human rights of our stakeholders, helps mitigate risk and build trust. We work to ensure that our suppliers are socially, legally, and ethically responsible – and treat the people who work for them fairly and with dignity.

The sourcing of goods and services by Albemarle is governed by the [Albemarle Code of Conduct](#) and supporting policies and procedures, which require 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 conflict 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

The Code is supplemented by Albemarle's [Business Partner Code](#), which sets out our expectations for compliance and sustainable practices with the business partners we work with.

In 2021, we launched a new global procedure governing the qualification of suppliers. We undertake due diligence as appropriate on prospective business partners that present heightened risks relating to human rights, health and safety, the environment, corruption, fraud, or antitrust to ensure that we conduct business only with suitable and reputable business partners.

To further mitigate such risks, we:

- Identify credible information or indicators of violations by existing suppliers, we take prompt steps to investigate and remediate any issues, 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

In 2022, we expect to further enhance our vendor qualification processes with the adoption of a supplier management platform and a holistic supply chain risk management tool. In accordance with new and proposed legislation relating to responsible sourcing, and industry standards such as IRMA, OECD, and the Responsible Minerals Initiative (RMI), we are also conducting a more in-depth assessment of forced and child labor in our extended supply chain.





## 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 including, for example, the U.S. Customs and Border Protection Forced Labor list
- 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

## Diversity in Our Supply Chain

The value we place on diversity is not limited to our internal operations, but it is also important to us to ensure diversity in our global supply chain. In 2021, championed by our Women CONNECT Cohort, we laid the groundwork for the development of our Supplier Diversity Program. This global initiative commits us to actively seek out and maintain a diverse supplier base, build local supplier capability, and promote local enterprise through the localization of our supply chain. We rely on TealBook, a procurement intelligence software platform that pulls data from a wide range of sources to provide us with up-to-date, quality information on how suppliers measure up on diversity and other sustainability indicators. TealBook's initial assessment of diversity in our supply chain revealed that 14% of our global spend is with diverse companies. We have begun to look at how we can improve those metrics, and as a start, in 2021, we rolled out our Supplier Diversity Program in the United States with a focus on women-owned businesses. In 2022, we will be extending the program across the globe and look forward to reporting on our supplier diversity progress in future sustainability reports.

# 14%

of our global spend is with diverse companies

## Product Stewardship

Albemarle's Global Product Stewardship (GPS) team is responsible for ensuring that our products are safe when used for their intended purpose. We are legally required to provide safety data sheets (SDS) in most jurisdictions in which we sell our products. The GPS team is responsible for preparing the data sheets, which provide a summary of all our testing results, product information summaries, and information on safe handling and disposal of our products. The team also manages our product regulatory activities, including 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.

## Providing Value to Our Customers

Albemarle's industry-leading sustainability performance is a positive differentiator, helping us to provide the best products and services to our customers. We sell our products on the value that we create for our customers and continually engage with them on how we can support them in achieving their business and sustainability goals that contribute to leadership within their respective industries. In 2021, we conducted a Bromine "Voice of the Customer" survey to better understand our key customers' main sustainability concerns and interests. Overwhelmingly, respondents cited environmental sustainability, such as reducing our carbon footprint, emissions, and water usage, adopting renewable energy, and resource circularity as most important to them.



The Lithium team is actively partnering with our customers on scope 3 GHG assessments and product life cycle assessments. These assessments allow us to identify areas for improvement throughout the value chain. As we continue to execute against our sustainability strategy, we will incorporate feedback from our customers into our planning process.

We rely on customer feedback to help us with our continuous improvement efforts and to develop new materials and products, as well as to create new markets for those products. In 2021, we created a new business development team with this purpose in mind. Increasingly, we are involving our customers directly in our R&D process as we pivot to a model of collaborative and embedded innovation development in lieu of the historically more sequential approach. Real-time feedback from our customers provides us with deep insights into their businesses and helps us accelerate the development of differentiated materials that give our customers distinct products in their respective markets.

## PRODUCT AND PROCESS INNOVATION – CONNECTING THE TECHNICALLY POSSIBLE TO THE COMMERCIALY VIABLE

At Albemarle, product and process innovation, from minerals to market, is the engine that drives sustained and sustainable growth for all our GBUs and allows us to stay relevant to our customers as their business and sustainability needs evolve. Innovation is critical not only to our financial success but also to our ability to execute on our commitments to sustainability. We pride ourselves on the work of our global team of over 350 world-class R&D scientists and engineers who also collaborate with external experts such as academics, professional institutes, and cutting-edge start-ups that provide Albemarle with access to leading-edge knowledge in specialized areas. We also leverage our JVs and government funding to make strategic investments in R&D, and we prioritize investment in projects that accelerate our growth strategy and drive sustainability at Albemarle forward.

Our product portfolios for each business are reviewed by cross-functional teams at the GBU leadership level on a quarterly basis and we ensure a balanced mix between new-to-market technology, next-generation products, and incremental innovation of existing products. For projects of critical importance, we form cross-functional business innovation teams that own exploration and development of new product targets. The GPS team participates in GBU product portfolio reviews with the respective R&D team as they consider new raw materials and new product development to help identify potential risks, conduct computer modeling for newly introduced formulations, and recommend whether a new formulation should be greenlighted. The GPS team also regularly reviews Albemarle's products to identify opportunities for improved

product formulations from a safety and sustainability perspective. Equally, we work towards ensuring that we have the right infrastructure, expertise, and training for our people in place to leverage the many R&D and innovation opportunities we are developing, and to be able to move swiftly on those new opportunities. To this end, we use analytic methods and deep data science to help us hone in on what really matters and where the biggest opportunities lie for Albemarle.

**350+**  
world-class R&D scientists and  
engineers on our global team

**\$1.7 –  
\$2.0B**

in revenue from products designed  
for use-phase resource efficiency

**2,000+**  
active patents

**500**  
pending patents



## Innovation in Our Bromine Business – Innovating for Sustainable Growth

Our Bromine process technology programs are developed in alignment with our long-term asset roadmap and deliver the capacity required to support market growth while leveraging technical improvements to bring material cost reductions and sustainability improvements.

The Bromine R&D team also drives a full portfolio of new product development programs across each of our core market segments as well as new market areas where we see strong opportunities to leverage bromine technology.

Our diverse and healthy Bromine new product pipeline includes MercLok™, a brominated platform of materials for use in remediation of mercury contaminated soils and sediments. MercLok™ was in field testing during 2021, and is expected to launch commercially in 2022. The product shows great promise across a wide range of contaminated soils.

During 2022, we will also launch SAYTEX ALERO™ which is a new sustainable polymeric fire safety product that will have application in several market segments.

## Innovation in Our Catalysts Business – Doing More with Less

Albemarle's catalysts contribute to the production of clean-burning and environmentally friendly transportation fuels. R&D in our Catalysts business revolves around developing new generations of refining catalysts. Better performing catalysts enable refiners to convert disadvantaged feedstocks with higher efficiency into high-quality transportation fuels. Today's internal combustion engines generating lower emissions of SOx and NOx, and with high fuel efficiencies, require these high-quality fuels.

In 2021, we launched a product portfolio that is specifically aimed at enabling refiners to process bio-feedstocks to produce biofuels. Globally, refiners are switching out a fraction of their mineral oil feed slate for bio-renewable feedstocks. These feedstocks present technical challenges in the traditional oil refinery for which our catalysts offer solutions.

We are also working on developing and refining catalysts and catalyst solutions that can contribute to the chemical recycling of non-recoverable plastic waste which addresses some of the fundamental limitations of physical recycling of plastic.



### Innovation Case Study

In 2021, Albemarle introduced Next Generation KF 774 PULSAR™ Clean Fuels Catalyst, a novel and innovative solution for the co-processing of renewables. The KF 774 PULSAR™, developed together with Albemarle's joint venture, Nippon Ketjen, is our newest catalyst in a growing portfolio of Clean Fuels Technology catalysts. The co-processing of renewables brings significant operational challenges, including reduced cycle length and yield, higher H2 consumption and pressure drop control issues. In addition, biofeed contains solid impurities that lead to gum formation. The Next Generation KF 774 PULSAR™ Clean Fuels Catalyst successfully addresses these critical issues and brings a highly innovative product to the catalysts market.





## Innovation in Our Lithium Business – Improved Resource Utilization, More Efficient Chemical Processes, and Advanced Performance Products

We pride ourselves on our technological expertise and innovation, which contribute to more efficient and sustainable lithium extraction, purification, and conversion to high-performance products. This includes process innovations that allow us to recover more lithium from every ton of rock that we mine or from each liter of brine that we pump. For instance, improvements in extraction and purification technologies help us to increase yields from our conventional lithium resources while opening access to non-conventional resources in the future. At the same time, innovation includes new process technologies that increase asset utilization and improve reaction yields, which drive higher lithium recovery through to our products while minimizing waste streams.

Downstream in the lithium value chain, as batteries become more precisely engineered, so must the lithium materials we produce. This is driving customer demand for more advanced forms of lithium that enable both near-term improvements and farther-horizon breakthroughs in lithium-ion battery performance. This trend offers tremendous opportunity to make gains in sustainability. For instance, by increasing battery energy density through novel forms of lithium we are helping to make electric vehicles safer and longer range.

Combined improvements in lithium recovery at our resources, process enhancements in our conversion plants, and advances in battery performance in end-use products are incredibly powerful levers for improving sustainability. For every ton of lithium that we produce, these innovations are helping us reduce GHG emissions while realizing lower usage of energy and freshwater.

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**For every ton of lithium that we produce, these innovations are helping us reduce GHG emissions while realizing lower usage of energy and freshwater.**

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## High Performance Lithium Materials

In 2021, our R&D team worked on a technology called prelithiation, a novel form of introducing additional lithium to either the cathode or anode side of a battery to make better use of all the active battery components such as nickel, manganese, and cobalt, and thereby increase battery energy density by as much as 20%.

Prelithiation works by offsetting the lithium that is lost irreversibly during formation reactions in the battery anode. The need, and therefore value, of a prelithiation solution has become greater as anodes have moved towards higher energy density silicon-modified carbon compositions. In parallel, Albemarle scientists continue to advance high-purity lithium reagents that will enable safer lithium-ion batteries by replacing conventional polymer separators with solid ion conductors. At the same time, we are working on highly engineered lithium metal anodes that could potentially double battery energy densities. These types of innovations will have a significant impact on how far an electric vehicle can travel per charge and will make a tremendous contribution to the greening of mobility.

## Innovating for the Circular Economy

One of the most critical environmental responsibilities we have is to recover and reuse precious resources. To this end, our innovation team is working on chemistries that will enable us to take scrap materials from the battery production and recover lithium from end-of-life batteries and re-inject these materials back into our conversion plants to produce battery-grade quality lithium. This type of recycling will position lithium as a reusable resource in the circular economy. We are working with strategic customers and industry partners to access scrap and end-of-life lithium streams.



## Battery Materials Innovation Center

In June of 2021, we opened Albemarle's Battery Materials Innovation Center (BMIC), a state-of-the-art battery technology lab at our Kings Mountain site in North Carolina. The BMIC supports our lithium hydroxide, lithium carbonate, and advanced energy storage materials growth platforms.

Cell-building capabilities at the BMIC generate meaningful data for next-generation battery material design to help our customers deliver high-performing cost-effective batteries. The center has been equipped to enable the synthesis of new materials, material properties characterization and analysis, material scale-up capabilities, and material integration into battery cells for performance testing. The facility includes a dry room with a multi-layer pouch cell line that can create cellphone-sized batteries to demonstrate critical aspects of battery performance and accelerate transition of new products to customers. The lab is also developing lithium metal anode technologies that hold promise to increase battery energy density by as much as 50% through the introduction of surface-engineered lithium foils less than 20 microns in thickness, about one-fifth of the average thickness of a human hair.

## Localization of Battery Production

Governments around the world have expressed interest in developing more localized value chains for critical raw materials such as lithium, including localized production. As a global leader, Albemarle is uniquely positioned with existing operations in Asia-Pacific, North and South America, and Europe. Today, Asia dominates the lithium battery supply chain, representing 86% of battery production. Based on discussions with our customers, we are analyzing options to restart our spodumene mine in Kings Mountain, North Carolina, and the potential to build additional conversion assets in North America and in Europe. Longer-term, there is potential to unlock by expanding extraction from conventional resources, exploring non-conventional resources, and developing material and process technologies that will enable next-generation batteries.





## Data Analytics

At Albemarle, we have built a world-class data science team to help us turn tremendous amounts of data and information into insight to drive smarter and faster decisions. Our data science team develops demand and supply forecasts that are specific to region, resource, application, and battery chemistry. Our analytics team combines forces with our resource and mining experts when we look at new acquisitions, for example, to better understand prospective sites and to ensure that we're making intelligent investments. Teamed with our R&D scientists and engineers, our data scientists build physics-based performance models that help us anticipate the value of novel lithium materials, sometime even before we invent them, thereby providing focus for our research efforts. These same models help our application engineers and New Business Development team position new products where they create greatest market value.

## Project Albemarle Intelligence

Project Albemarle Intelligence (Project AI) was rolled out at our Bayport facility in Texas in 2021. This multivariate machine learning model gathers real-time data from Albemarle's distributive control systems, laboratory information management systems, our SAP system, and other areas in the company to combine data and intelligence into one location. It allows us to do a detailed model analysis on how our plants can run in the most efficient way so that we can improve quality, yield, productivity, and raw material consumptions and achieve process stability for more consistent operational processes.

Project AI helps us identify opportunities for more efficiencies and also notifies plant operators before problems occur, thereby reducing plant downtime. These advanced analytics are also an important tool for managing our environmental impacts and specifically our GHG emissions. Our Bayport plant has already realized \$4 million annualized savings, and Project AI is now underway at our Amsterdam and La Negra sites, with an anticipated rollout at our Xinyu and Magnolia locations in 2022.

## Advanced Process Controls, Real Time Optimization and Online Analytical Technology

We are in the process of deploying Advanced Process Controls (APC) coupled with online process analytical technology on selected Bromine processes at Magnolia. APC leverages empirical and physics-based models to automatically drive the plant to its optimum in real time every minute of the day. APC is expected to drive material capacity increases, cost reduction and sustainability benefits. Following initial deployments on selected processes at Magnolia, the APC approach will be copied to JBC in 2023.





# PERFORMANCE DATA



# PERFORMANCE DATA<sup>1</sup>

## Environment

| TOPIC  | METRIC   | 2019 | 2020 | 2021  |
|--|--|------|------|-------|
| Energy   | Total energy consumed, million gigajoule (GJ)  | 14.1 | 13.5 | 13.8  |
|  | Percentage grid electricity <sup>2</sup>   | 21%  | 21%  | 21%   |
|  | Percentage renewable energy from primary energy sources                              | 2.0% | 1.7% | 3.2%  |
|  | Total self-generated energy, million GJ  | 0.2  | 0.3  | 0.2   |
| Emissions  | Scope 1 GHG emissions, thousand metric tons CO <sub>2</sub> e (kt CO <sub>2</sub> e) | 607  | 585  | 605   |
|  | Percentage covered under emissions-limiting regulations                              | 11%  | 16%  | 13%   |
|  | Scope 2 GHG emissions, market-based, kt CO <sub>2</sub> e                            | 358  | 350  | 294   |
|  | Scope 2 GHG emissions, location-based, kt CO <sub>2</sub> e                          | –    | –    | 348   |
|  | Total scope 1 + 2 GHG emissions, kt CO <sub>2</sub> e <sup>2</sup>                   |      |      | 899   |
|  | Scope 3 GHG emissions, kt CO <sub>2</sub> e  |      |      | 1,675 |
|  | Category 1 – Purchased goods and services, kt CO <sub>2</sub> e                      |      |      | 1,037 |
|  | Category 2 – Capital goods, kt CO <sub>2</sub> e                                     |      |      | 35    |
|  | Category 3 – Fuel- and energy-related activities, kt CO <sub>2</sub> e               |      |      | 127   |
|  | Category 4 – Upstream transportation and distribution, kt CO <sub>2</sub> e          |      |      | 213   |
|  | Category 5 – Waste generated in operations, kt CO <sub>2</sub> e                     |      |      | 15    |
|  | Category 6 – Business travel, kt CO <sub>2</sub> e                                   |      |      | 2     |
|  | Category 7 – Employee commuting, kt CO <sub>2</sub> e                                |      |      | 4     |
|  | Category 8 – Upstream leased assets, kt CO <sub>2</sub> e                            |      |      | –     |
|  | Category 9 – Downstream transportation and distribution, kt CO <sub>2</sub> e        |      |      | 21    |
|  | Category 10 – Processing of sold products, kt CO <sub>2</sub> e                      |      |      | 28    |
|  | Category 11 – Use of sold products, kt CO <sub>2</sub> e                             |      |      | –     |
| Category 12 – End-of-life treatment of sold products, kt CO <sub>2</sub> e |  |      | 70   |       |
| Category 13 – Downstream leased assets, kt CO <sub>2</sub> e               |  |      | –    |       |
| Category 14 – Franchises, kt CO <sub>2</sub> e                             |  |      | –    |       |
| Category 15 – Investments, kt CO <sub>2</sub> e                            |  |      | 123  |       |
|  | Total scope 1 + 2 + 3 GHG emissions, kt CO <sub>2</sub>                              |      |      | 2,574 |

<sup>1</sup> Some historical data have been restated due to methodology and/or categorization changes.

<sup>2</sup> Total scope 1 and 2 based on market-based methodology.



| TOPIC       | METRIC  | 2019            | 2020  | 2021  |
|-------------|---|-----------------|-------|-------|
| Emissions   | <b>GHG Emissions by Business, kt CO<sub>2</sub>e</b>  |                 |       |       |
|             | Lithium   | 276             | 288   | 294   |
|             | Bromine   | 318             | 303   | 306   |
|             | Catalysts   | 341             | 315   | 284   |
|             | Other (FCS, non-production facilities)  | 30              | 29    | 15    |
| Air quality | NO <sub>x</sub> emissions, metric tons (t) <sup>1</sup> (excluding N <sub>2</sub> O)                    | 710             | 647   | 753   |
|             | SO <sub>x</sub> emissions, t  | 1,458           | 1,402 | 1,447 |
|             | VOCs, t   | 847             | 973   | 866   |
|             | HAPs, t   | 178             | 182   | 164   |
| Water       | Total water withdrawal, million cubic meters (m <sup>3</sup> )  | 25.5            | 24.4  | 23.0  |
|             | Total water consumed, million cubic meters (m <sup>3</sup> )  | 12.9            | 12.7  | 11.5  |
|             | Percentage of fresh water consumed in regions with high or extremely high water risk                    | 20.4%           | 20.2% | 21.6% |
|             | Percentage of fresh water consumed in regions with high water risk (category 3–4)                       | 9.0%            | 9.6%  | 9.9%  |
|             | Percentage of fresh water consumed in regions with extremely high water risk (category 4–5)             | 11.4%           | 10.7% | 11.7% |
|             | Number of incidents of non-compliance associated with water quality permits, standards, and regulations | 0               | 0     | 0     |
| Waste       | Amount of hazardous waste generated, kt   | 21 <sup>1</sup> | 20    | 13    |
|             | Percentage of hazardous waste recycled  | 9%              | 7%    | 8%    |

<sup>1</sup> Numbers have been recalculated due to new information.





## Workforce

| TOPIC             | METRIC                                | 2019 |      | 2020 |      | 2021 |      |
|-------------------|---------------------------------------|------|------|------|------|------|------|
|                   |                                       | #    | Rate | #    | Rate | #    | Rate |
| Health and safety | <b>Total Recordable Incident Rate</b> |      |      |      |      |      |      |
|                   | Employees                             | 22   | 0.36 | 18   | 0.29 | 12   | 0.19 |
|                   | Contractors                           | 3    | 0.22 | 2    | 0.14 | 5    | 0.31 |
|                   | <b>Fatalities</b>                     |      |      |      |      |      |      |
|                   | Employees                             | 0    | 0    | 0    | 0    | 0    | 0    |
|                   | Contractors                           | 0    | 0    | 0    | 0    | 0    | 0    |

| TOPIC             | METRIC   | 2019       | 2020  | 2021  |
|-------------------|--|------------|---|---|
| Health and safety | Employee occupational diseases                                       | 0          | 0   | 0   |
|                   | Employee hours worked  | 12,264,868 | 12,529,648  | 12,816,721  |
|                   | Contractor hours worked  | 2,694,534  | 2,781,531   | 3,256,553   |
|                   | Employee types of injury   | N/A        | Overexertion; contact with chemicals; slip, trip, or fall; struck by or against, caught between | Slip, trip, or fall; struck by or against; burns (chemical and temperature) |
|                   | Percentage of workers covered by health and safety management system | 100%       | 100%  | 100%  |

| TOPIC          | METRIC  | 2019 |      | 2020           |                   | 2021 |      |
|----------------|---|------|------|----------------|-------------------|------|------|
|                |   | #    | Rate | #              | Rate              | #    | Rate |
| Process safety | Process safety incidents count (PSIC)         | 8    | 0.11 | 3 <sup>1</sup> | 0.04 <sup>1</sup> | 4    | 0.05 |
|                | Process safety incident severity rate (PSISR) | 2    | 0.03 | 3 <sup>1</sup> | 0.04 <sup>1</sup> | 6    | 0.08 |
|                | Number of transport incidents                 | 6    | –    | 4              | –                 | 1    | –    |

<sup>1</sup> Numbers have been updated to reflect the new industry standard definition published in the 3rd edition of API RP 754 in 2021.



| TOPIC                    | METRIC  | 2019 | 2020 | 2021 |
|--------------------------|---|------|------|------|
| Training and development | <b>Average Training Hours Per Employee/Year</b>   |      |      |      |
|                          | Male  | 25.8 | 19   | 16.2 |
|                          | Female  | 29.2 | 19.4 | 17.7 |
|                          | Not declared  | 15.5 | 32.7 | 8.1  |
|                          | Senior management   | 21.5 | 13.7 | 7    |
|                          | Mid management  | 38.2 | 27.7 | 10.4 |
|                          | Other   | 21.7 | 16.1 | 19.4 |
|                          | Manufacturing   | 21.4 | 16.9 | 20.6 |
|                          | Non-manufacturing   | 31.9 | 22.2 | 11.4 |
|                          | <b>Percentage of Employees Receiving Regular Performance/Career Development Reviews</b> |      |      |      |
|                          | Male  | 78%  | 84%  | 85%  |
|                          | Female  | 87%  | 94%  | 93%  |
|                          | Not declared  | 44%  | 80%  | 63%  |
|                          | Senior management   | 100% | 100% | 100% |
|                          | Mid management  | 99%  | 99%  | 100% |
|                          | Other   | 73%  | 82%  | 83%  |
|                          | Manufacturing   | 66%  | 77%  | 79%  |
|                          | Non-manufacturing   | 93%  | 97%  | 96%  |



| TOPIC           | METRIC   | 2019       | 2020       | 2021       |
|-----------------|--|------------|------------|------------|
| Labor relations | <b>Percentage of Total Employees Covered by Collective Bargaining Agreements</b> |            |            |            |
|                 | <b>Total</b>   | <b>33%</b> | <b>32%</b> | <b>32%</b> |
|                 | United States of America   | 6%         | 7%         | 8%         |
|                 | Chile  | 90%        | 83%        | 79%        |
|                 | Netherlands  | 94%        | 93%        | 93%        |
|                 | Germany  | 85%        | 83%        | 86%        |
|                 | China  | 0%         | 0%         | 0%         |
|                 | Number of strikes and lockouts   | 0          | 0          | 1          |
|                 | Duration of strikes and lockouts (in days)                                       | 0          | 0          | 35         |





| TOPIC           | METRIC  | 2019  |      | 2020  |      | 2021  |      |
|-----------------|---|-------|------|-------|------|-------|------|
|                 |   | #     | Rate | #     | Rate | #     | Rate |
| Labor relations | <b>Entitled to Parental Leave</b>                                     |       |      |       |      |       |      |
|                 | Male  | 4,220 | 100% | 4,307 | 100% | 4,313 | 100% |
|                 | Female  | 1,161 | 100% | 1,162 | 100% | 1,233 | 100% |
|                 | Not declared  | 84    | 100% | 85    | 100% | 72    | 100% |
|                 | <b>Took Parental Leave</b>  |       |      |       |      |       |      |
|                 | Male  | 68    | 2%   | 72    | 2%   | 80    | 2%   |
|                 | Female  | 52    | 4%   | 57    | 5%   | 66    | 5%   |
|                 | Not declared  | 0     | 0%   | 0     | 0%   | 0     | 0%   |
|                 | <b>Returned to Work After Parental Leave Ended, or Still on Leave</b> |       |      |       |      |       |      |
|                 | Male  | 68    | 100% | 72    | 100% | 80    | 100% |
|                 | Female  | 52    | 100% | 56    | 98%  | 66    | 100% |
|                 | Not declared  | N/A   |      | N/A   |      | N/A   |      |
|                 | <b>Still Employed 12 Months after Returning to Work</b>               |       |      |       |      |       |      |
|                 | Male  | 66    | 97%  | 67    | 93%  | 76    | 95%  |
|                 | Female  | 47    | 90%  | 51    | 91%  | 64    | 97%  |
|                 | Not declared  | N/A   |      | N/A   |      | N/A   |      |



| TOPIC                            | METRIC                                  | 2019         |            |              | 2020         |            |              | 2021         |            |              |  |
|----------------------------------|---|--------------|------------|--------------|--------------|------------|--------------|--------------|------------|--------------|--|
|                                  |   | Permanent    | Temporary  | Contractors  | Permanent    | Temporary  | Contractors  | Permanent    | Temporary  | Contractors  |  |
| Employees by employment contract | <b>Total<sup>1</sup></b>                | <b>5,297</b> | <b>168</b> | <b>1,258</b> | <b>5,365</b> | <b>189</b> | <b>1,137</b> | <b>5,385</b> | <b>233</b> | <b>1,289</b> |  |
|                                  | Male                                    | 4,137        | 83         | 121          | 4,201        | 106        | 36           | 4,159        | 154        | 52           |  |
|                                  | Female                                  | 1,126        | 35         | 40           | 1,127        | 35         | 15           | 1,193        | 40         | 32           |  |
|                                  | Not declared                            | 34           | 50         | 1,097        | 37           | 48         | 1,086        | 33           | 39         | 1,205        |  |
|                                  | <b>Breakdown by Country<sup>2</sup></b> |              |            |              |              |            |              |              |            |              |  |
|                                  | United States of America                | 1,973        | 2          | 908          | 2,014        | 1          | 765          | 1,749        | 1          | 847          |  |
|                                  | China                                   | 1,092        | 2          | 24           | 1,094        | 0          | 25           | 1,161        | 0          | 41           |  |
|                                  | Chile                                   | 724          | 30         | 60           | 742          | 57         | 88           | 766          | 62         | 89           |  |
|                                  | Germany                                 | 602          | 112        | 102          | 574          | 95         | 104          | 563          | 127        | 102          |  |
|                                  | Netherlands                             | 447          | 4          | 41           | 430          | 9          | 46           | 402          | 24         | 39           |  |
| Australia                        | 56                                      | 5            | 37         | 83           | 15           | 38         | 308          | 12           | 76         |              |  |
| Hungary                          | 206                                     | 11           | 32         | 226          | 10           | 24         | 256          | 3            | 22         |              |  |

| TOPIC                        | METRIC       | 2019      |           | 2020      |           | 2021      |           |
|------------------------------|--------------|-----------|-----------|-----------|-----------|-----------|-----------|
|                              |              | Full-Time | Part-Time | Full-Time | Part-Time | Full-Time | Part-Time |
| Employees by employment type | Male         | 4,173     | 47        | 4,267     | 40        | 4,281     | 32        |
|                              | Female       | 1,099     | 62        | 1,099     | 63        | 1,169     | 64        |
|                              | Not declared | 84        | 0         | 84        | 1         | 71        | 1         |

<sup>1</sup> Excluding JV.  
<sup>2</sup> Employees in all major locations.



| TOPIC                           | METRIC                        | 2019          |                   |       | 2020          |                   |       | 2021          |                   |       |
|---------------------------------|-------------------------------|---------------|-------------------|-------|---------------|-------------------|-------|---------------|-------------------|-------|
|                                 |                               | Manufacturing | Non-Manufacturing | Total | Manufacturing | Non-Manufacturing | Total | Manufacturing | Non-Manufacturing | Total |
| Diversity and equal opportunity | <b>Employees by Gender</b>    |               |                   |       |               |                   |       |               |                   |       |
|                                 | Male                          | 90%           | 63%               | 77%   | 90%           | 62%               | 78%   | 89%           | 62%               | 77%   |
|                                 | Female                        | 8%            | 37%               | 21%   | 8%            | 37%               | 21%   | 9%            | 38%               | 22%   |
|                                 | Not declared                  | 2%            | 1%                | 2%    | 2%            | 1%                | 2%    | 2%            | 1%                | 1%    |
|                                 | <b>Employees by Age Group</b> |               |                   |       |               |                   |       |               |                   |       |
|                                 | Under 25                      | 3%            | 0%                | 2%    | 4%            | 2%                | 3%    | 4%            | 2%                | 3%    |
|                                 | 25–45                         | 43%           | 52%               | 47%   | 47%           | 56%               | 51%   | 49%           | 57%               | 53%   |
|                                 | 45+                           | 53%           | 47%               | 50%   | 47%           | 42%               | 44%   | 45%           | 41%               | 43%   |
| Not disclosed                   | 2%                            | 1%            | 1%                | 2%    | 1%            | 2%                | 2%    | 1%            | 1%                |       |

| TOPIC                           | METRIC  | 2019  |        |     |       | 2020  |        |     |       | 2021  |        |     |       |
|---------------------------------|---|-------|--------|-----|-------|-------|--------|-----|-------|-------|--------|-----|-------|
|                                 |   | Total | Senior | Mid | Other | Total | Senior | Mid | Other | Total | Senior | Mid | Other |
| Diversity and equal opportunity | <b>Employees by Race by Level<sup>1</sup></b> |       |        |     |       |       |        |     |       |       |        |     |       |
|                                 | White   | 77%   | 82%    | 74% | 77%   | 77%   | 81%    | 76% | 76%   | 71%   | 79%    | 68% | 71%   |
|                                 | Non-white                                     | 21%   | 13%    | 23% | 21%   | 20%   | 16%    | 21% | 21%   | 24%   | 17%    | 27% | 24%   |
|                                 | Not disclosed                                 | 3%    | 5%     | 3%  | 2%    | 3%    | 3%     | 3%  | 3%    | 5%    | 4%     | 5%  | 5%    |

<sup>1</sup> U.S. employees only.





| TOPIC                           | METRIC  | 2019 | 2020 | 2021 |
|---------------------------------|---|------|------|------|
| Diversity and equal opportunity | <b>Ratio of Basic Salary and Remuneration of Women to Men for Manufacturing</b>     |      |      |      |
|                                 | United States of America  | 98%  | 97%  | 95%  |
|                                 | China   | 102% | 85%  | 76%  |
|                                 | Chile   | 109% | 118% | 117% |
|                                 | Germany   | 87%  | 84%  | 84%  |
|                                 | Netherlands   | 81%  | 94%  | 96%  |
|                                 | Australia   | 98%  | 101% | 91%  |
|                                 | Hungary   | N/A  | N/A  | N/A  |
|                                 | <b>Ratio of Basic Salary and Remuneration of Women to Men for Non-Manufacturing</b> |      |      |      |
|                                 | United States of America  | 76%  | 77%  | 77%  |
|                                 | China   | 60%  | 63%  | 54%  |
|                                 | Chile   | 78%  | 76%  | 77%  |
|                                 | Germany   | 69%  | 63%  | 60%  |
|                                 | Netherlands   | 73%  | 73%  | 73%  |
|                                 | Australia   | 66%  | 66%  | 71%  |
| Hungary                         | 82%   | 79%  | 80%  |      |

| TOPIC                           | METRIC   | 2019  |        |      |       | 2020  |        |      |       | 2021  |        |     |       |  |
|---------------------------------|--|-------|--------|------|-------|-------|--------|------|-------|-------|--------|-----|-------|--|
|                                 |  | Total | Senior | Mid  | Other | Total | Senior | Mid  | Other | Total | Senior | Mid | Other |  |
| Diversity and equal opportunity | <b>Ratio of Basic Salary and Remuneration of Women to Men by Level<sup>1</sup></b> |       |        |      |       |       |        |      |       |       |        |     |       |  |
|                                 | United States of America   | 95%   | 99%    | 95%  | 88%   | 96%   | 98%    | 94%  | 90%   | 95%   | 101%   | 96% | 89%   |  |
|                                 | China  | 135%  | 95%    | 81%  | 155%  | 132%  | 98%    | 85%  | 151%  | 113%  | 113%   | 88% | 152%  |  |
|                                 | Chile  | 109%  | 0%     | 91%  | 130%  | 118%  | 0%     | 93%  | 149%  | 115%  | 0%     | 86% | 147%  |  |
|                                 | Germany  | 93%   | 101%   | 88%  | 99%   | 87%   | 0%     | 84%  | 96%   | 84%   | 0%     | 84% | 89%   |  |
|                                 | Netherlands  | 87%   | 0%     | 87%  | 95%   | 89%   | 0%     | 89%  | 95%   | 89%   | 84%    | 88% | 96%   |  |
|                                 | Australia  | 76%   | 0%     | 101% | 78%   | 77%   | 0%     | 102% | 89%   | 88%   | 0%     | 97% | 96%   |  |
|                                 | Hungary  | 82%   | N/A    | 91%  | 94%   | 79%   | 65%    | 85%  | 92%   | 80%   | 69%    | 86% | 93%   |  |

<sup>1</sup> Employees in all major locations.



| TOPIC          | METRIC                                  | 2019 |      | 2020 |      | 2021 |      |  |
|----------------|---|------|------|------|------|------|------|--|
|                |   | #    | Rate | #    | Rate | #    | Rate |  |
| Employee hires | Male                                    | 414  | 10%  | 396  | 9%   | 740  | 18%  |  |
|                | Female                                  | 183  | 16%  | 129  | 11%  | 271  | 23%  |  |
|                | Not declared                            | 71   | 85%  | 33   | 17%  | 17   | 22%  |  |
|                | <b>Breakdown by Age</b>                 |      |      |      |      |      |      |  |
|                | Under 25                                | 48   | 57%  | 71   | 42%  | 128  | 73%  |  |
|                | 25–45                                   | 403  | 16%  | 317  | 12%  | 649  | 23%  |  |
|                | 45+                                     | 150  | 5%   | 127  | 5%   | 238  | 10%  |  |
|                | Unknown                                 | 67   | 96%  | 43   | 25%  | 13   | 17%  |  |
|                | <b>Breakdown by Country<sup>1</sup></b> |      |      |      |      |      |      |  |
|                | United States of America                | 252  | 13%  | 223  | 11%  | 282  | 16%  |  |
|                | China                                   | 68   | 6%   | 67   | 6%   | 156  | 14%  |  |
|                | Chile                                   | 151  | 20%  | 125  | 16%  | 147  | 18%  |  |
|                | Germany                                 | 33   | 5%   | 11   | 2%   | 62   | 9%   |  |
|                | Netherlands                             | 32   | 7%   | 13   | 3%   | 20   | 5%   |  |
|                | Australia                               | 48   | 79%  | 44   | 56%  | 265  | 127% |  |
| Hungary        | 64                                      | 29%  | 44   | 20%  | 67   | 27%  |      |  |

<sup>1</sup> Employees in all major locations.



| TOPIC             | METRIC                                  | 2019 |      | 2020 |      | 2021 |      |  |
|-------------------|---|------|------|------|------|------|------|--|
|                   |   | #    | Rate | #    | Rate | #    | Rate |  |
| Employee turnover | Male                                    | 390  | 9%   | 383  | 9%   | 453  | 11%  |  |
|                   | Female                                  | 172  | 15%  | 141  | 12%  | 164  | 14%  |  |
|                   | Not declared                            | 75   | 89%  | 31   | 16%  | 14   | 18%  |  |
|                   | <b>Breakdown by Age</b>                 |      |      |      |      |      |      |  |
|                   | Under 25                                | 37   | 44%  | 27   | 16%  | 53   | 30%  |  |
|                   | 25–45                                   | 257  | 10%  | 232  | 8%   | 306  | 11%  |  |
|                   | 45+                                     | 270  | 10%  | 270  | 11%  | 261  | 11%  |  |
|                   | Unknown                                 | 73   | 104% | 26   | 15%  | 11   | 14%  |  |
|                   | <b>Breakdown by Country<sup>1</sup></b> |      |      |      |      |      |      |  |
|                   | United States of America                | 301  | 15%  | 230  | 11%  | 243  | 14%  |  |
|                   | China                                   | 82   | 7%   | 83   | 8%   | 86   | 8%   |  |
|                   | Chile                                   | 95   | 13%  | 90   | 12%  | 94   | 12%  |  |
|                   | Germany                                 | 42   | 6%   | 64   | 9%   | 42   | 6%   |  |
|                   | Netherlands                             | 31   | 7%   | 27   | 6%   | 32   | 7%   |  |
| Australia         | 2                                       | 3%   | 7    | 9%   | 43   | 21%  |      |  |
| Hungary           | 51                                      | 24%  | 25   | 11%  | 44   | 18%  |      |  |

<sup>1</sup> Employees in all major locations.





| TOPIC                        | METRIC  | 2019 |       |       |         |             |           |         |  |
|------------------------------|---|------|-------|-------|---------|-------------|-----------|---------|--|
|                              |   | U.S. | China | Chile | Germany | Netherlands | Australia | Hungary |  |
| Market presence <sup>1</sup> | <b>Ratio of Standard Entry Level Wage Compared to Local Minimum Wage for:</b> |      |       |       |         |             |           |         |  |
|                              | Male  | 308% | 363%  | 218%  | 108%    | 170%        | 213%      | 156%    |  |
|                              | Female  | 308% | 363%  | 218%  | 108%    | 170%        | 213%      | 156%    |  |
|                              | Proportion of senior management hired from local community (%)                | 94%  | 100%  | 100%  | 100%    | 80%         | 100%      | N/A     |  |
|                              | METRIC  |      | 2020  |       |         |             |           |         |  |
|                              |   | U.S. | China | Chile | Germany | Netherlands | Australia | Hungary |  |
|                              | Male  | 314% | 382%  | 204%  | 106%    | 164%        | 221%      | 144%    |  |
|                              | Female  | 314% | 382%  | 204%  | 106%    | 164%        | 221%      | 144%    |  |
|                              | Proportion of senior management hired from local community (%)                | 95%  | 100%  | 100%  | 100%    | 92%         | 100%      | N/A     |  |
|                              | METRIC  |      | 2021  |       |         |             |           |         |  |
|                              |   | U.S. | China | Chile | Germany | Netherlands | Australia | Hungary |  |
|                              | Male  | 327% | 397%  | 212%  | 117%    | 169%        | 166%      | 144%    |  |
|                              | Female  | 327% | 397%  | 212%  | 117%    | 169%        | 166%      | 144%    |  |
|                              | Proportion of senior management hired from local community (%)                | 98%  | 100%  | 100%  | 100%    | 86%         | 100%      | 100%    |  |

<sup>1</sup> Employees in all major locations.



## Social

| TOPIC                | METRIC   | 2019        | 2020        | 2021        |
|----------------------|--|-------------|-------------|-------------|
| Albemarle Foundation | Grants awarded to Albemarle Foundation programs                            | \$6,193,676 | \$5,665,655 | \$6,059,334 |
|                      | Employee contributions to Albemarle Foundation Annual Campaign (U.S. only) | \$818,920   | \$907,674   | \$764,628   |
|                      | Albemarle Foundation Scholarship Awards                                    | \$85,000    | \$81,250    | \$75,000    |
|                      | Employee Matching Grant Program Awards                                     | \$434,165   | \$730,387   | \$905,688   |
|                      | Employee Volunteer Grant Program Awards                                    | \$169,650   | \$150,142   | \$78,100    |
|                      | Albemarle Care Fund Awards   | \$65,854    | \$58,381    | \$86,869    |
|                      | Employee volunteer hours   | 17,717      | 9,810       | 8,199       |

## Products

| TOPIC   | METRIC  | 2019          | 2020          | 2021          |
|---|---|---------------|---------------|---------------|
| Innovation                                      | Revenue from products designed for use-phase resource efficiency  | \$1.7 – 2.0 B | \$1.4 – 1.6 B | \$1.7 – 2.0 B |
|   | Active patents  | 2,100         | 2,100         | 2,100         |
|   | Pending patents   | 550           | 550           | 500           |
| 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 | N/A           | N/A           | 85.6%         |
|   | Percentage of such products that have undergone a hazard assessment   | N/A           | N/A           | 100%          |

## Governance

| TOPIC         | METRIC   | 2019      | 2020         | 2021         |
|---------------|--|-----------|--------------|--------------|
| Financial     | Net sales  | \$3.589 B | \$3.129 B    | \$3.328 B    |
|               | Financial assistance received from the government <sup>1</sup> | \$689,030 | \$11,736,425 | \$23,658,935 |
| Public policy | Political contributions Albemarle Corporation (USD)            | \$0       | \$2,500      | \$0          |
|               | Political contributions PAC (USD)                              | \$0       | \$29,300     | \$0          |

<sup>1</sup> 2019 data for the Netherlands only.



| TOPIC                        | METRIC  | 2019  | 2020  | 2021  |
|------------------------------|---|-------|-------|-------|
| Board diversity <sup>1</sup> | <b>By Gender</b>  |       |       |       |
|                              | Male  | 9     | 7     | 6     |
|                              | Female  | 4     | 3     | 3     |
|                              | <b>By Race</b>  |       |       |       |
|                              | White   | –     | 7     | 6     |
|                              | Black   | –     | 2     | 2     |
|                              | Hispanic  | –     | 1     | 1     |
|                              | <b>By Age</b>   |       |       |       |
|                              | Under 30  | 0     | 0     | 0     |
|                              | 30–50   | 0     | 0     | 0     |
| Over 50                      | 13  | 10    | 9     |       |
| Ethics and compliance        | <b>Training</b>   |       |       |       |
|                              | Number of employees completing Code of Conduct training     | 5,364 | 5,275 | 5,224 |
|                              | Percentage of employees completing Code of Conduct training | 97%   | 99%   | 99%   |
|                              | <b>Breakdown by Employee Category<sup>2</sup></b>           |       |       |       |
|                              | Manufacturing   |       |       | 2,872 |
|                              | Non-manufacturing   |       |       | 2,352 |
|                              | <b>Breakdown by Country<sup>2</sup></b>                     |       |       |       |
|                              | United States   |       |       | 1,630 |
|                              | China   |       |       | 1,116 |
|                              | Chile   |       |       | 732   |
|                              | Germany   |       |       | 636   |
|                              | Netherlands   |       |       | 412   |
|                              | Australia   |       |       | 293   |
| Hungary                      |   |       | 224   |       |

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

<sup>2</sup> Employees in all major locations.





| TOPIC  | METRIC  | 2019 | 2020 | 2021  |
|--|---|------|------|-------|
| Ethics and compliance  | <b>Training</b>   |      |      |       |
|  | Number of employees engaging with procurement and government officials completing tailored training <sup>1,2</sup>        |      |      | 1,142 |
|  | Percentage of employees engaging with procurement and government officials completing tailored training <sup>1,2</sup>    |      |      | 91%   |
|  | <b>Breakdown by Employee Category<sup>3</sup></b>   |      |      |       |
|  | Manufacturing   |      |      | 245   |
|  | Non-manufacturing   |      |      | 897   |
|  | <b>Breakdown by Country<sup>3</sup></b>   |      |      |       |
|  | United States   |      |      | 424   |
|  | China   |      |      | 182   |
|  | Chile   |      |      | 143   |
|  | Germany   |      |      | 89    |
|  | Netherlands   |      |      | 92    |
|  | Australia   |      |      | 56    |
|  | Hungary   |      |      | 103   |
|  | Number of governance body members that anti-corruption policies and procedures have been communicated to <sup>4</sup>     |      |      | 16    |
|  | Percentage of governance body members that anti-corruption policies and procedures have been communicated to <sup>4</sup> |      |      | 100%  |
|  | Operations assessed for risks related to corruption <sup>5,6</sup>  | 14   | 6    | 3     |
| Production in countries that have the 20 lowest rankings in Transparency International's Corruption Perception Index | 0%  | 0%   | 0%   |       |
| Confirmed incidents of corruption  | 0   | 0    | 0    |       |
| Number of legal actions pending or completed for anti-competitive behavior, antitrust, and monopoly practices        | 0   | 0    | 0    |       |

<sup>1</sup> Outside of Code of Conduct training.

<sup>2</sup> Total number of employees identified for training in 2021 was 1,259.

<sup>3</sup> Employees in all major locations.

<sup>4</sup> All in the U.S.

<sup>5</sup> In 2019, 14 locations were assessed (out of 25).

<sup>6</sup> In 2021, 3 locations were assessed (out of 32).





# GRI CONTENT INDEX



# GRI CONTENT INDEX

Albemarle has reported the information cited in this GRI content index for the calendar year 2021, unless otherwise noted, with reference to the GRI Universal Standards 2021.

## GRI 1: Foundation 2021

| GRI STANDARD   | DISCLOSURE  | RESPONSE   | PAGE NUMBERS |
|--|---|--|--------------|
| GRI 2: General Disclosures 2021                              | 2-1 Organizational details  |  |              |
|  | Legal name  | <a href="#">2021 Annual Report Form 10k</a>  | Page 3       |
|  | Nature of ownership and legal form  | <a href="#">2021 Annual Report Form 10k</a>  | Page 3       |
|  | Location of its headquarters  | <a href="#">2021 Annual Report Form 10k</a>  | Page 3       |
|  | Countries of operation  | <a href="#">2021 Annual Report Form 10k</a>  | Pages 23–25  |
|  | 2-2 Entities included in the organization’s sustainability reporting  | 2021 Sustainability report – About this Report   | Page 2       |
|  | 2-3 Reporting period, frequency and contact point   | January 1 – December 31, 2021.<br><br>Since calendar year 2007, Albemarle Corporation has produced a Sustainability Report annually. The 2021 Sustainability Report was published on June 2, 2022.<br><br>Contact information can be found on the back cover of the 2021 Sustainability Report PDF.  | Page 2       |
|  | 2-4 Restatements of information   | Relevant restatements are footnoted in the 2021 Sustainability Report and Performance Data.  |              |
|  | 2-5 External assurance  | This entire Sustainability Report is not subjected to a comprehensive external assurance process, however, our total energy consumption and scope 1 and scope 2 GHG emissions metrics have been assured by PwC.<br><br>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 2021 Sustainability Report contains a consolidation of this information. | Page 105     |
|  | 2-6 Activities, value chain and other business relationships  | <a href="#">2021 Annual Report Form 10k</a>  | Pages 3–5    |
| 2-7 Employees  | Performance Data  | Page 84  |              |
| 2-8 Workers who are not employees                            | Performance Data  | Page 84  |              |
| 2-9 Governance structure and composition                     | 2021 Sustainability Report – Corporate Governance<br><a href="#">2022 Proxy Statement</a>                       | Pages 22–23 /<br>Pages 40–48   |              |
| 2-10 Nomination and selection of the highest governance body | <a href="#">Corporate Governance Guidelines</a> / <a href="#">Nominating &amp; Governance Committee Charter</a> | Page 6 / Sections I., III.A., and III.B.   |              |





| GRI STANDARD                    | DISCLOSURE   | RESPONSE   | PAGE NUMBERS                      |
|---------------------------------|--|--|-----------------------------------|
| GRI 2: General Disclosures 2021 | 2-11 Chair of the highest governance body  | <a href="#">2022 Proxy Statement</a> / <a href="#">Corporate Governance Guidelines</a>   | Page 40 / Annexes A and B         |
|                                 | 2-12 Role of the highest governance body in overseeing the management of impacts | <a href="#">Corporate Governance Guidelines</a> / <a href="#">Health, Safety &amp; Environment Committee Charter</a>   | Page 1 / Pages 1–3                |
|                                 | 2-13 Delegation of responsibility for managing impacts                           | <a href="#">Corporate Governance Guidelines</a> / <a href="#">Health, Safety &amp; Environment Committee Charter</a>   | Page 1 / Pages 1–3                |
|                                 | 2-14 Role of the highest governance body in sustainability reporting             | <a href="#">Corporate Governance Guidelines</a> / <a href="#">Health, Safety &amp; Environment Committee Charter</a>   | Page 1 / Pages 1–3                |
|                                 | 2-15 Conflicts of interest   | <a href="#">Corporate Governance Guidelines</a> / <a href="#">2022 Proxy Statement</a> / <a href="#">Audit &amp; Finance Committee Charter</a>                     | Page 7 / Pages 49, 56–61 / Page 6 |
|                                 | 2-16 Communication of critical concerns  | <a href="#">2022 Proxy Statement</a> / <a href="#">Corporate Governance Guidelines</a> / <a href="#">Audit &amp; Finance Committee Charter</a>                     | Page 71 / Page 4 / Pages 6–7      |
|                                 | 2-17 Collective knowledge of the highest governance body                         | <a href="#">Health, Safety &amp; Environment Committee Charter</a>   | Pages 1–3                         |
|                                 | 2-18 Evaluation of the performance of the highest governance body                | <a href="#">Corporate Governance Guidelines</a>  | Page 8                            |
|                                 | 2-19 Remuneration policies   | <a href="#">2022 Proxy Statement</a>   | Pages 2–23                        |
|                                 | 2-20 Process to determine remuneration   | <a href="#">2022 Proxy Statement</a>   | Pages 2–23                        |
|                                 | 2-21 Annual total compensation ratio   | <a href="#">2022 Proxy Statement</a> / <a href="#">2021 Proxy Statement</a>  | Page 37 / Page 42                 |
|                                 | 2-22 Statement on sustainable development strategy                               | 2021 Sustainability Report – Q&A with the CEO  | Pages 5–6                         |
|                                 | 2-23 Policy commitments  | <a href="#">Sustainable Governance</a>   |                                   |
|                                 | 2-24 Embedding policy commitments  | 2021 Sustainability Report – Business Ethics and Regulatory Compliance   | Pages 65–68                       |
|                                 | 2-25 Processes to remediate negative impacts                                     | Website – <a href="#">Speaking Up</a>  |                                   |
|                                 | 2-26 Mechanisms for seeking advice and raising concerns                          | Website – <a href="#">Speaking Up</a>  |                                   |
|                                 | 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 – <a href="#">People, Workplace, Community</a>   |                                   |
|                                 | 2-29 Approach to stakeholder engagement  | 2021 Sustainability Report – Stakeholder Engagement  | Page 29                           |
|                                 | 2-30 Collective bargaining agreements  | Performance Data   | Page 82                           |



| GRI STANDARD                       | DISCLOSURE   | RESPONSE   | PAGE NUMBERS      |
|------------------------------------|--|--|-------------------|
| GRI 3: Material Topics 2021        | 3-1 Process to determine material topics   | 2021 Sustainability Report – Materiality   | Page 27           |
|                                    | 3-2 List of material topics  | 2021 Sustainability Report – Materiality   | Page 27           |
|                                    | 3-3 Management of material topics  | 2021 Sustainability Report   | Pages 30–76       |
| GRI 201: Economic Performance 2016 | 201-1 Direct economic value generated and distributed                                | 2021 Sustainability Report – How We Create Value   | Pages 10–11       |
|                                    | 201-2 Financial implications and other risks and opportunities due to climate change | 2021 Sustainability Report – Enterprise Risk Management<br><a href="#">2021 Annual Report Form 10k</a> | Page 62 / Page 8  |
|                                    | 201-3 Defined benefit plan obligations and other retirement plans                    | <a href="#">2021 Annual Report Form 10k</a>  | Pages 60, 100–105 |
|                                    | 201-4 Financial assistance received from government                                  | Performance Data   | Page 90           |
| GRI 202: Market Presence 2016      | 202-1 Ratios of standard entry level wage by gender compared to local minimum wage   | Performance Data   | Page 89           |
|                                    | 202-2 Proportion of senior management hired from the local community                 | Performance Data   | Page 89           |



| GRI STANDARD                            | DISCLOSURE   | RESPONSE  | PAGE NUMBERS      |
|---|--|---|-------------------|
| GRI 205: Anti-corruption 2016           | 205-1 Operations assessed for risks related to corruption                            | <p>In accordance with the U.S. Department of Justice Criminal Division Memorandum on the Evaluation of Corporate Compliance Programs, the Company takes a multi-faceted approach to managing anti-corruption risk, which is not limited to snapshot site-based assessments:</p> <ul style="list-style-type: none"> <li>(a) due diligence and pre-approval for use of compliance-sensitive third parties such as distributors and government-facing vendors, and continuous monitoring of transactions involving such third parties;</li> <li>(b) due diligence and pre-approval of compliance payments such as charitable donations, community project contributions and commercial sponsorships;</li> <li>(c) pre-approval for gifts &amp; hospitality above a specified threshold, and monitoring of employee expenses; and</li> <li>(d) global anti-corruption risk assessment as part of the Company's broader Enterprise Risk Management program.</li> </ul> <p>This is supplemented by periodic site audits, which include anti-corruption. In FY2021, 3 (9%) site audits were conducted by Internal Audit (percentage calculated based on 32 site count). Inherent corruption risk arises from the Company's:</p> <ul style="list-style-type: none"> <li>(a) distributors selling to third-party customers;</li> <li>(b) vendors engaging with government officials on behalf of the Company for the purposes of e.g. securing licenses/permits for new capital projects or existing operations; and</li> <li>(c) employee engagement with government officials for the purposes of e.g. securing licenses/permits for new capital projects or existing operations.</li> </ul> <p>This inherent risk is assessed and managed through the above-referenced due diligence/pre-approval activity and the Company's broader anti-corruption and business ethics program.</p> |                   |
|   | 205-2 Communication and training about anti-corruption policies and procedures       | 2021 Sustainability Report – Business Ethics and Regulatory Compliance / Performance Data   | Page 67 / Page 91 |
|   | 205-3 Confirmed incidents of corruption and actions taken                            | Performance Data  | Page 92           |
| GRI 206: Anti-competitive Behavior 2016 | 206-1 Legal actions for anti-competitive behavior, antitrust, and monopoly practices | Performance Data  | Page 92           |
|   | GRI 302: Energy 2016   | 302-1 Energy consumption within the organization  | Performance Data  |
|   | 302-4 Reduction of energy consumption  | 2021 Sustainability Report – Energy and Emissions   | Page 33           |





| GRI STANDARD                      | DISCLOSURE   | RESPONSE  | PAGE NUMBERS |
|-----------------------------------|--|---|--------------|
| GRI 303: Water and Effluents 2018 | 303-1 Interactions with water as a shared resource   | 2021 Sustainability Report – Water  | Pages 39–40  |
|                                   | 303-3 Water withdrawal   | Performance Data  | Page 79      |
|                                   | 303-5 Water consumption  | Performance Data  | Page 79      |
| GRI 304: Biodiversity 2016        | 304-1 Operational sites owned, leased, managed in, or adjacent to protected areas and areas of high biodiversity value outside protected areas | 2021 Sustainability Report – Resource Stewardship   | Page 42      |
| GRI 305: Emissions 2016           | 305-1 Direct (Scope 1) GHG emissions   | Performance Data  | Page 78      |
|                                   | 305-2 Energy indirect (Scope 2) GHG emissions  | Performance Data  | Page 78      |
|                                   | 305-3 Other indirect (Scope 3) GHG emissions   | Performance Data  | Page 78      |
|                                   | 305-4 GHG emissions intensity  | 2021 Sustainability Report  | Page 36      |
|                                   | 305-5 Reduction of GHG emissions   | Performance Data  | Page 78      |
|                                   | 305-7 Nitrogen oxides (NO <sub>x</sub> ), sulfur oxides (SO <sub>x</sub> ), and other significant air emissions                                | Performance Data  | Page 79      |
| GRI 306: Waste 2020               | 306-1 Waste generation and significant waste-related impacts   | 2021 Sustainability Report – Waste  | Page 41      |
|                                   | 306-2 Management of significant waste-related impacts  | 2021 Sustainability Report – Waste  | Page 41      |
|                                   | 306-3 Waste generated  | Performance Data  | Page 79      |
|                                   | 306-4 Waste diverted from disposal   | Performance Data  | Page 79      |
| GRI 401: Employment 2016          | 401-1 New employee hires and employee turnover   | Performance Data  | Page 87      |
|                                   | 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 with the exception of Albemarle’s additional pension plan.</p> <p>Netherlands: part-time employees receive the same benefits as full-time employees.</p> |              |



| GRI STANDARD                                    | DISCLOSURE   | RESPONSE   | PAGE NUMBERS |
|---|--|--|--------------|
| GRI 401:<br>Employment 2016                     | 401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees | <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   | Page 83      |
| GRI 403:<br>Occupational Health and Safety 2018 | 403-1 Occupational health and safety management system   | 2021 Sustainability Report – Safety  | Page 44      |
|   | 403-2 Hazard identification, risk assessment, and incident investigation                                 | 2021 Sustainability Report – Safety  | Pages 44–46  |
|   | 403-3 Occupational health services   | Performance Data   | Page 80      |
|   | 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 &amp; 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> |              |



| GRI STANDARD   | DISCLOSURE   | RESPONSE  | PAGE NUMBERS |
|--|--|---|--------------|
| GRI 403: Occupational Health and Safety 2018                   | 403-5 Worker training on occupational health and safety  | 2021 Sustainability Report – Safety   | Pages 44–46  |
|  | 403-6 Promotion of worker health   | Performance Data  | Page 80      |
|  | 403-8 Workers covered by an occupational health and safety management system   | Performance Data  | Page 80      |
|  | 403-9 Work-related injuries  | Performance Data  | Page 80      |
| GRI 404: Training and Education 2016                           | 404-1 Average hours of training per year per employee  | Performance Data  | Page 81      |
|  | 404-2 Programs for upgrading employee skills and transition assistance programs                                      | 2021 Sustainability Report – Investment in Talent   | Pages 51–54  |
|  | 404-3 Percentage of employees receiving regular performance and career development reviews                           | Performance Data  | Page 81      |
| GRI 405: Diversity and Equal Opportunity 2016                  | 405-1 Diversity of governance bodies and employees   | Performance Data  | Pages 85–86  |
|  | 405-2 Ratio of basic salary and remuneration of women to men   | Performance Data  | Page 86      |
| GRI 406: Non-discrimination 2016                               | 406-1 Incidents of discrimination and corrective actions taken   | Albemarle has confirmed one incident of discrimination and had one open investigation with allegations of discrimination during the reporting period. Status of the incidents and actions taken: labor discrimination (chronic illness) by a contract employee towards an Albemarle employee. The subject’s work period ended prior to the completion of the investigation. The investigation currently in progress alleges an Albemarle recruiter would not submit a counter offer to the hiring manager and pushed to accept a lower offer due to gender. |              |
| GRI 407: Freedom of Association and Collective Bargaining 2016 | 407-1 Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk | Performance Data  | Page 82      |
| GRI 413: Local Communities 2016                                | 413-1 Operations with local community engagement, impact assessments, and development programs                       | 2021 Sustainability Report – Community and Stakeholder Engagement   | Pages 55–56  |
| GRI 415: Public Policy 2016                                    | 415-1 Political contributions  | Performance Data  | Page 90      |
| GRI 416: Customer Health and Safety 2016                       | 416-1 Assessment of the health and safety impacts of product and service categories                                  | Performance Data  | Page 90      |





# SASB INDEX

| DISCLOSURE NUMBER                   | TOPIC AND ACCOUNTING METRIC                             | RESPONSE         | PAGE NUMBERS |
|-------------------------------------|---|------------------|--------------|
|                                     | <b>Greenhouse Gas Emissions</b>                         |                  |              |
| RT-CH-110a.1 / EM-MM-110a.1         | Gross global Scope 1 emissions                          | Performance Data | Page 78      |
| RT-CH-110a.1 / EM-MM-130a.1         | Percentage covered under emissions-limiting regulations | Performance Data | Page 78      |
|                                     | <b>Air Quality</b>                                      |                  |              |
| RT-CH-120a.1 / EM-MM-120a.1         | NO <sub>x</sub> (excluding N <sub>2</sub> O)            | Performance Data | Page 79      |
|                                     | SO <sub>x</sub>   | Performance Data | Page 79      |
|                                     | Volatile organic compounds (VOCs)                       | Performance Data | Page 79      |
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|                                     | <b>Energy Management</b>                                |                  |              |
| RT-CH-130a.1 (1) / EM-MM-130a.1 (1) | Total energy consumed                                   | Performance Data | Page 78      |
| RT-CH-130a.1 (2) / EM-MM-130a.1 (2) | Percentage grid electricity                             | Performance Data | Page 78      |
| RT-CH-130a.1 (3) / EM-MM-130a. (3)  | Percentage renewable from primary energy sources        | Performance Data | Page 78      |
| RT-CH-130a.1 (4)                    | Self-generated energy                                   | Performance Data | Page 78      |

| DISCLOSURE NUMBER           | TOPIC AND ACCOUNTING METRIC  | RESPONSE  | PAGE NUMBERS |
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|                             | <b>Water Management</b>  |   |              |
| RT-CH-140a.1 (1)            | Total water withdrawn  | Performance Data  | Page 79      |
| RT-CH-140.a.1 (2)           | Total water consumed   | Performance Data  | Page 79      |
|                             | Percentage of fresh water consumed in regions with high or extremely high baseline water risk                            | Performance Data  | Page 79      |
|                             | Percentage of fresh water in regions with high water risk (category 3–4)   | Performance Data  | Page 79      |
|                             | Percentage of fresh water in regions with extremely high water risk (category 4–5)                                       | Performance Data  | Page 79      |
| RT-CH-140a.2 / EM-MM-140a.2 | Number of incidents of non-compliance associated with water quality permits, standards, and regulations                  | Performance Data  | Page 79      |
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|                             | <b>Hazardous Waste Management</b>  |   |              |
| RT-CH-150a.1                | Amount of hazardous waste generated  | Performance Data  | Page 79      |
|                             | Percentage recycled  | Performance Data  | Page 79      |
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|                             | <b>Community Relations</b>   |   |              |
| RT-CH-210a.1                | Discussion of engagement processes to manage risks and opportunities associated with community interests                 | 2021 Sustainability Report – Community and Stakeholder Engagement | Pages 55–56  |
|                             |  |   |              |
|                             | <b>Labor Relations</b>   |   |              |
| EM-MM-310.a.1               | Percentage of active workforce covered under collective bargaining agreements, broken down by U.S. and foreign employees | Performance Data  | Page 82      |
| EM-MM-310a.2                | Number and duration of strikes and lockouts  | Performance Data  | Page 82      |



| DISCLOSURE NUMBER | TOPIC AND ACCOUNTING METRIC  | RESPONSE   | PAGE NUMBERS |
|-------------------|--|--|--------------|
|                   | <b>Workforce Health &amp; Safety</b>   |  |              |
|                   | <b>Direct employees</b>  |  |              |
| RT-CH-320a.1 (1)  | Total recordable injury rate (TRIR)  | Performance Data   | Page 80      |
| RT-CH-320a.1 (1)  | Fatality rate  | Performance Data   | Page 80      |
|                   | <b>Contract employees health &amp; safety</b>  |  |              |
| RT-CH-320a.1 (1)  | Total recordable injury rate (TRIR)  | Performance Data   | Page 80      |
| RT-CH-320a.1 (1)  | Fatality rate  | Performance Data   | Page 80      |
|                   | <b>Product Design for Use-phase Efficiency</b>   |  |              |
| RT-CH-410.a.1     | Revenue from products designed for use-phase resource efficiency   | Performance Data   | Page 90      |
|                   | <b>Safety &amp; Environmental Stewardship of Chemicals</b>   |  |              |
| RT-CH-410.b.1     | (1) Percentage of products that contain Globally Harmonized System of Classification and Labeling of Chemicals (GHS) Category 1 and 2 Health and Environmental Hazardous Substances, (2) percentage of such products that have undergone a hazard assessment | Performance Data   | Page 90      |
| RT-CH-410.b.2     | Discussion of strategy to (1) manage chemicals of concern and (2) develop alternatives with reduced human and/or environmental impact  | 2021 Sustainability Report – Business Ethics and Regulatory Compliance | Pages 65–68  |
|                   | <b>Business Ethics &amp; Transparency</b>  |  |              |
| EM-MM-510a.1      | Description of the management system for prevention of corruption and bribery throughout the value chain   | 2021 Sustainability Report – Business Ethics and Regulatory Compliance | Page 67      |
| EM-MM-510a.2      | Production in countries that have the 20 lowest rankings in Transparency International’s Corruption Perception Index   | Performance Data   | Page 92      |





| DISCLOSURE NUMBER | TOPIC AND ACCOUNTING METRIC  | RESPONSE  | PAGE NUMBERS |
|-------------------|--|---|--------------|
|                   | <b>Management of the Legal &amp; Regulatory Environment</b>  |   |              |
| EM-CH-530a.1      | Discussion of corporate positions related to government regulations and/or policy proposals that address environmental and social factors affecting the industry | 2021 Sustainability Report – Regulatory Compliance and Government Affairs | Page 68      |
|                   | <b>Operational Safety, Emergency Preparedness &amp; Response</b>   |   |              |
| RT-CH-540a.1 (1)  | Process safety incidents count (PSIC)  | Performance Data  | Page 80      |
| RT-CH-540a.1 (2)  | Process safety total incident rate (PSTIR)   | Performance Data  | Page 80      |
| RT-CH-540a.1 (3)  | Process safety incident severity rate (PSISR)  | Performance Data  | Page 80      |
| RT-CH-540a.2      | Number of transport incidents  | Performance Data  | Page 80      |



# REPORT OF INDEPENDENT ACCOUNTANTS



## Report of Independent Accountants

To the Board of Directors of Albemarle Corporation

We have reviewed the accompanying Albemarle Corporation (Albemarle) management assertion that the total energy consumption and greenhouse gas (GHG) emissions metrics (sustainability metrics) for the year ended December 31, 2021 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.

Our 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 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.

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 or metrics being reported.

The preparation of the total energy consumption 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.

As discussed in management's assertion, Albemarle has estimated GHG emissions for certain emissions 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 2, 2022



# MANAGEMENT ASSERTION LETTER

## Overview

With respect to the total energy consumption and greenhouse gas (GHG) emissions metrics (sustainability metrics) presented by Albemarle Corporation (Albemarle) in the table to the right for the year ended December 31, 2021, 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

- 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.
- Under the financial control approach, joint ventures are included in the organizational boundary according to the equity share approach. The Salmag (Chile) and Safi (Jordan) joint ventures are deemed to be within Albemarle’s financial control, and in turn, the emissions are included within Scope 1 and 2 based on their respective share of equity in the operation. All remaining joint ventures are not within Albemarle’s financial control, and therefore, are excluded from Scope 1 and 2 emissions and the emissions from these joint ventures are included under Scope 3, Category 15: Investments. Scope 3 GHG emissions are not within the scope of this management assertion.
- Emissions of divested businesses are included on a pro-rata basis using prior year data. Emissions from the Fine Chemistry Services business, which was divested on June 1, 2021, are therefore incorporated on a 5/12th basis.
- New production facilities, which there were none in 2021, are included starting in the year and month in which it first produces saleable goods.

| Metric                   | Definition of the Metric and Assessment Criteria  | Metric Quantity  |
|--------------------------|---|--|
| Total Energy Consumption | Direct and indirect energy consumed related to Scope 1 and Scope 2 activities.  | 13.8 million Gigajoules (GJ)   |
| Scope 1 GHG Emissions    | Direct emissions of GHG from stationary and mobile combustion. Stationary combustion relates to combustion of fossil fuels, chemical process releases, and fugitive emissions. Mobile combustion relates to emissions from leased/owned vehicles. | 605 thousand metric tons of carbon dioxide equivalent (kt CO <sub>2</sub> e)                               |
| Scope 2 GHG Emissions    | Indirect emissions of GHG from the use of purchased grid electricity and steam.   | Location-based:<br>348 thousand kt CO <sub>2</sub> e<br>Market-based:<br>294 thousand kt CO <sub>2</sub> e |

## Total Energy Consumption

- 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 consumption.
- Total energy consumption (in million gigajoule) is the sum of direct energy from purchased fuels (natural gas, liquid petroleum gas (LPG), gasoline, distillates, and fuel oil) and indirect energy from purchased grid electricity and steam.
- Energy is calculated by conversion to 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 sections below. Consumption data is then converted to gigajoule.
- The preparation of the total energy consumption 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.
- Estimated energy consumption accounts for approximately 1% of total energy consumption.





## General GHG Emissions 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 or metrics being reported.
- GHG emissions are expressed in carbon dioxide equivalent (CO<sub>2</sub>e) emissions and include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), and industrial gases, such as hydrochlorofluorocarbons (HCFC's) and hydrofluorocarbons (HFCs). The other GHGs of sulfur hexafluoride (SF<sub>6</sub>), perfluorocarbons (PFCs), and nitrogen trifluoride (NF<sub>3</sub>) are not emitted by Albemarle's facilities. Emissions data by individual GHG is not disclosed as a majority of CO<sub>2</sub>e relates to CO<sub>2</sub>. Carbon dioxide equivalent emissions are calculated by multiplying actual or estimated energy, fuel, and refrigerant usage by the relevant emission factor taking into account the Global Warming Potentials (GWPs) of the compounds as defined by the Intergovernmental Panel on Climate Change's (IPCC) Fifth Assessment Report (AR5 – 100 year). All emission factors are updated annually where applicable.

## Scope 1 GHG Emissions

- Albemarle tracks emissions from the stationary combustion of fossil fuels, the release of GHG emissions during chemical processes, and the release of fugitive emissions and mobile combustion related to emissions from leased/owned vehicles.
- Emissions from stationary and mobile 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).
  - Non-production facilities:
    - Consumption is estimated based on the actual square meter of office space in each location as reported by facility and office managers. The average energy consumed per square meter of office space is based on publicly available information for non-residential buildings.
  - Emissions from Albemarle operated vehicle fleet:
    - Calculated based on the total number of leased/owned vehicles obtained from the fleet management team, the estimated annual average distance driven per car based on publicly available average annual number of kilometers driven in 2020, and the average GHG emissions per kilometer based on publicly available data of CO<sub>2</sub> performance of new passenger cars.
  - Emission factors used to convert the consumption of fossil fuels into GHG emissions at production and non-production facilities: United States (US) Environmental Protection Agency (EPA) Code of Federal Regulations, Title 40, Chapter I, Subchapter C, Part 98, Table C-1: Default CO<sub>2</sub> Emission Factors and High Heat Values for Various Types of Fuel (Last Modified: December 9, 2016).
- Emissions from chemical processes:
  - Estimated based on actual quantity of chemicals consumed which are known to release GHG emissions during the chemical process and dissolved CO<sub>2</sub> in brine. The GHG emissions are calculated on the basis of stoichiometry (chemical process) or measured content (CO<sub>2</sub> in brine). The calculation outputs the quantity of CO<sub>2</sub> generated by the process which is then converted to CO<sub>2</sub>e using the relevant GWP.
- Emissions from fugitives:
  - Hydrofluorocarbons (HFC's) and hydrochlorofluorocarbons (HCFC's) are related to replenishment of purchased refrigerants during 2021. 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 CO<sub>2</sub>e.
- Estimated emissions from non-production facilities, the divested business, operated vehicle fleet, and chemical processes account for approximately 8% of Scope 1 GHG emissions.



## Scope 2 GHG Emissions

- Albemarle tracks indirect emissions from the purchase of grid electricity and steam.
- Production facilities:
  - Electricity and steam usage data is obtained based on monthly utility invoices from third-party suppliers. A location or market-based emission factor (as described below) is then applied.
- Non-production facilities:
  - Consumption is estimated based on the actual square meter of office space in each location as reported by facility and office managers. The average energy consumed per square meter of office space is based on publicly available information for non-residential buildings.
- Emission Factors: Location-based:
  - Obtained from the US EPA Emissions & Generation Resource Integrated Database (“eGRID”) factors by subregion (released February 23, 2021) for US (production and/or non-production) facilities and International Energy Agency (IEA) Emission Factors 2021, released in 2021 for non-US production and/or non-production facilities.
- Emission Factors: Market-based:
  - Albemarle used Guarantees of Origin (GOs) during 2021 to contractually procure renewable energy in relation to the Amsterdam production facility in the Netherlands.
  - GOs applicable to the 2021 reporting year have been both contracted and retired as of the date of this management assertion.
  - Emission factors were applied based on the GHG Protocol hierarchy and availability of data including the factors below listed from highest to lowest precision:
    - Electricity contract – GOs considered 0 g CO<sub>2</sub>e/MWh.
    - 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.
- Estimated emissions from non-production facilities and the divested business account for approximately 3% of the Scope 2 GHG emissions.

## Contact Us

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