

THE POWER OF



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About the cover

The images represent everyday items that can be made with our recycled or renewable-based polymers, or given new life through our circular technologies and solutions. Through the power of circularity, products and materials are in use longer, helping to end plastic waste in the environment and addressing climate change.

Forward-looking information

Certain disclosures in this report may be considered forward-looking statements. These are made pursuant to safe harbor provisions of the Private Securities Litigation Reform Act of 1995. You should read the Cautionary Statement on page 80 of this report in conjunction with such statements.

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CEO LETTER



Dear Stakeholders,

We are pleased to present our 2020 sustainability report. This report highlights our company's efforts to advance our goals of ending plastic waste in the environment, helping to address climate change and support a thriving society.

Despite the many global challenges associated with COVID-19, throughout 2020 our team advanced and accelerated our sustainability efforts.

As you review the following pages, I hope you will see this work is not just programmatic but increasingly embedded in our core businesses and vital to providing sustainable solutions for our customers.

Advancing a circular economy

As countries around the world continue to combat COVID-19, we are reminded of the importance of plastics to our society. At the same time, we recognize the challenge of plastic waste must be addressed. To this end, our company has prioritized efforts to advance the circular economy and we have established an ambition to produce and market two million metric tons of recycled and renewable-based polymers annually by 2030.

To do so, we are focused on three key areas: mechanical recycling, advanced (or molecular) recycling, and the increased use of renewable feedstocks.

Our progress in the area of advancing the circular economy includes the following actions:

- **Expanding the capacity of our Quality Circular Polymers (QCP) mechanical recycling joint venture** to 55,000 metric tons per year. Today, these materials can be found in a range of consumer products including Samsonite's S'Cure ECO and Magnum ECO luggage collections;
- **Successfully starting our MoReTec molecular recycling pilot plant** in Ferrara, Italy. This technology returns post-consumer plastic waste to its molecular form for use as a feedstock for new plastic materials. We are continuing to work toward applying this technology at industrial scale;
- **Obtaining the International Sustainability and Carbon Certification (ISCC)** organization's ISCC PLUS certification for our cracker in Wesseling, Germany, and our European polymer production assets. As a result of this certification, LyondellBasell can provide mass balance certificates for its advanced or molecular recycled and renewable-based polymers; and,

- **Launching a suite of products using recycled or renewable-based content under the Circulen brand name.** LyondellBasell's *Circulen* materials enable brand owners to improve the sustainability of end products offered to consumers.

In addition, through the Alliance to End Plastic Waste, we continue to drive meaningful progress and impact through new solutions and investments in sustainable waste management systems with our value-chain partners.

Reducing our carbon footprint

As world leaders work together to develop more ambitious plans to mitigate climate change, LyondellBasell is also focused on doing our part to reduce greenhouse gas (GHG) emissions. Since announcing our initial GHG reduction target in our 2018 sustainability report, we moved forward with our planned activities in support of the ambitions of the Paris Agreement and are working to update our company's objectives in this area.

To do so, we are developing a number of projects, including:

- **Investing in energy efficiency** to reduce emissions from our manufacturing sites;



- **Incorporating clean renewable energy** into our long-term strategy;
- **Expanding our incorporation** of recycled and renewable-based feedstocks; and
- **Evaluating new and emerging carbon-reducing technologies** for use in our manufacturing processes.

Advancing a thriving society

We are also working more broadly to advance a thriving society. In 2020, we joined the United Nations Global Compact (UNGC) and committed to the Ten Principles. We also aligned our sustainability approach to the United Nations' Sustainable Development Goals. Our first UNGC Communication on Progress can be found in this report.

We appointed a Chief Talent and Diversity, Equity & Inclusion (DEI) Officer as well as a DEI Leadership Council made up of employees to accelerate enhancements to our workplace and culture.

I'm also proud of how our team supported the needs of local communities during this period.

Through our global philanthropy programs we were able to:

- **Award more than 900 grants** to local charitable organizations;
- **Support the needs of food banks** in 17 countries through special grants;
- **Support 6,000 employee volunteer hours** through our annual Global Care Day program; and,
- **Support our colleagues in Louisiana** following multiple hurricanes through our company Disaster Relief Fund.

Across our company, a passion to advance progress in sustainability is very evident. We have embraced the need for action not as a challenge, but as an opportunity to better serve our customers, communities and stakeholders both today and in the future.

Thank you for your interest in our company and in our efforts to advance a more sustainable world.

Most sincerely,

Bhavesh V. (Bob) Patel
Chief Executive Officer

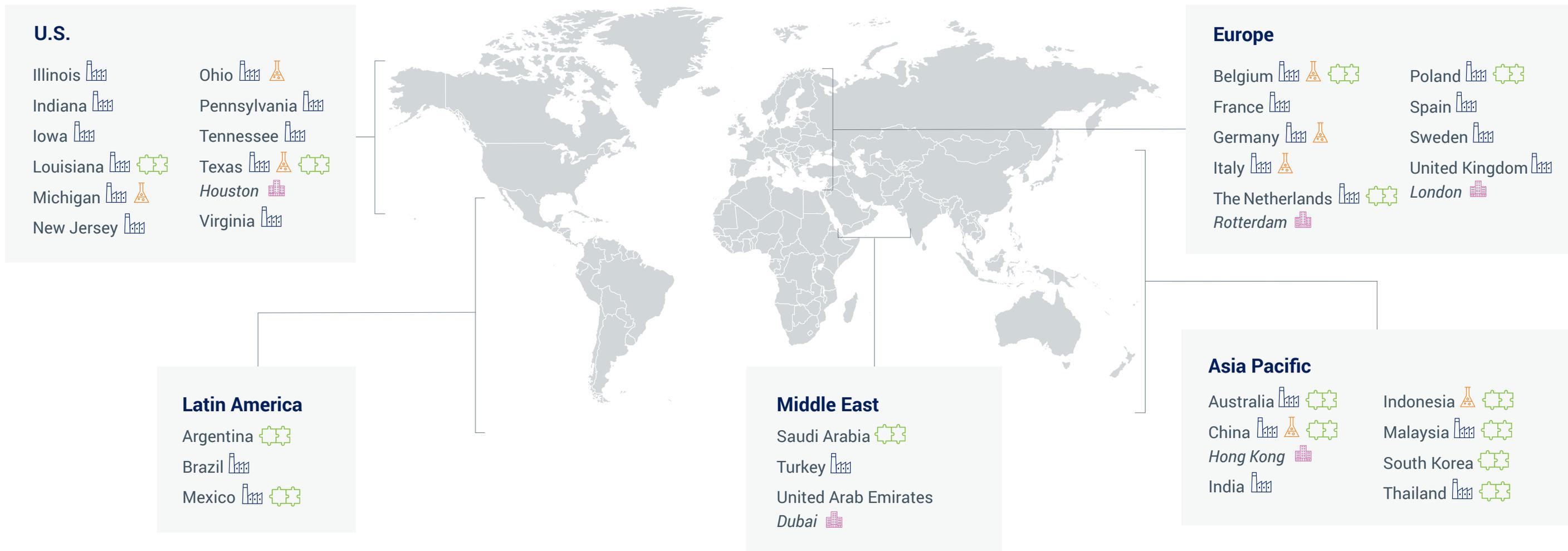
Chairman's note:

While the global pandemic challenged organizations around the globe in unprecedented ways, the Board of Directors is pleased with the progress the Company has made in advancing its sustainability efforts. The Board maintains oversight of environmental, social and governance (ESG) performance and remains committed to these objectives. We support the company's efforts to help eliminate plastic waste from the environment, to help address climate change, and maintain focus on diversity, equity and inclusion. As the company continues to develop sustainability strategies within its business segments, we believe LyondellBasell is well-positioned to deliver value to stakeholders while contributing to a better future for all.

Jacques Aigrain
Chairman of the Board

OUR GLOBAL PRESENCE

We have manufacturing sites and joint ventures in 22 countries. Our products are sold in more than 100 countries.



Regional Headquarters/Administrative Offices

Manufacturing

Research/Technical Centers

Joint Ventures

*Map is as of December 31, 2020.



OUR APPROACH TO SUSTAINABILITY

As one of the world's largest producers of plastics and chemicals, our products are used by millions of people around the world, every day.

We have the potential – and responsibility – to use this scale and reach to make a positive impact across our value chains. That's why we are working to deliver meaningful progress to address some of the world's most pressing challenges such as reducing plastic waste in the environment, helping to mitigate climate change and contributing to a thriving society for our employees, the communities where we operate and the people who depend on our products.

OUR FIVE PILLARS

We developed five pillars that frame our response to the three global challenges that are most relevant to our business.



OUR PILLARS				
END PLASTIC WASTE IN THE ENVIRONMENT	ADVANCE THE CIRCULAR ECONOMY	ADDRESS CLIMATE CHANGE	GROW SUSTAINABLE SOLUTIONS	ENHANCE OUR WORKPLACE, OPERATIONS, AND COMMUNITIES
<p>We believe that ending plastic waste in the environment is a critical issue of our time. We are committed to helping eliminate plastic waste and are engaged in collaborative efforts across the value-chain to direct action where it is needed most.</p>	<p>We believe that transitioning to a circular economy will reduce resource use and enable a more sustainable future. We are advancing technologies and innovations that will help conserve finite resources and retain their value for as long as possible.</p>	<p>We believe that climate change is one of the most important global challenges both now and for future generations. We support the ambitions of the Paris Agreement and are reducing greenhouse gas emissions intensity from our operations to deliver solutions that help advance a low-carbon economy.</p>	<p>We believe growing our portfolio of sustainable solutions will help address society’s most pressing challenges. By doing so, we will continue to reliably produce products and offer solutions that are critical to improving the quality of life for billions around the world.</p>	<p>We believe the health and safety of our people and the communities where we operate are our highest priorities. We are committed to operating our company sustainably to deliver industry-leading performance, and enhancing our workplace and communities through the power of many.</p>



PLASTIC WASTE

Plastics make modern society possible, and often have a lower environmental impact when used in consumer goods and packaging than alternative materials such as glass, aluminum and paper.

Plastics play a vital role in advancing a wide range of sustainability efforts such as addressing food waste through packaging, protecting the quality of critical healthcare products, reducing emissions through the light-weighting of vehicles, ensuring the safety of water supplies through durable pipes and increasing the energy efficiency of buildings.

Our goal is to keep these resources in use for as long as possible to maximize their value and help eliminate plastic pollution. There is no single solution to this challenge, and a combination of actions will be needed to achieve a circular economy for plastics.

How we'll do it

- Reduce plastic waste from our operations and supply chain
- Develop mechanical and advanced (molecular) recycling solutions to meet customers' and brand owners' environmental and circular goals
- Support policies and programs that expand plastic waste management systems and recycling infrastructure, and inform consumers how to properly recycle plastic

2030 Goals

- Produce and market two million metric tons of recycled and renewable-based polymers annually
- Help divert millions of metric tons of plastic waste in cities across the globe through Alliance to End Plastic Waste projects
- Unlock at least five times our investment to increase the recovery and recycling of plastic and accelerate solutions to end plastic waste

Related stories in this report

-  [Making More Sustainable Plastics](#)
-  [Taking Care of You, and the Planet](#)
-  [Renewing Plastics and Ghanaian Women's Livelihoods](#)
-  [Keeping Pellets, Flakes and Powders Out of the Environment](#)






CLIMATE CHANGE

Addressing climate change is one of the greatest challenges our world is facing. We support the ambitions of the Paris Agreement, and are working to reduce the intensity of greenhouse gas (GHG) emissions from our operations and delivering solutions that help advance a low-carbon economy.

We continue to integrate climate change considerations into our ongoing business planning, and we are expanding our climate risk assessment using Task Force on Climate-related Financial Disclosures (TCFD) recommendations to support our approach.

Our carbon reduction plan will evolve as we evaluate what can be achieved with existing technologies and as we explore breakthrough technologies.

How we'll do it

- Use fossil fuels more efficiently, and increase the use of feedstocks from renewable sources and from plastic waste
- Increase our use of renewable energy
- Grow our portfolio of products and solutions that reduce GHG emissions
- Assess breakthrough technologies to enable further decarbonization across our operations

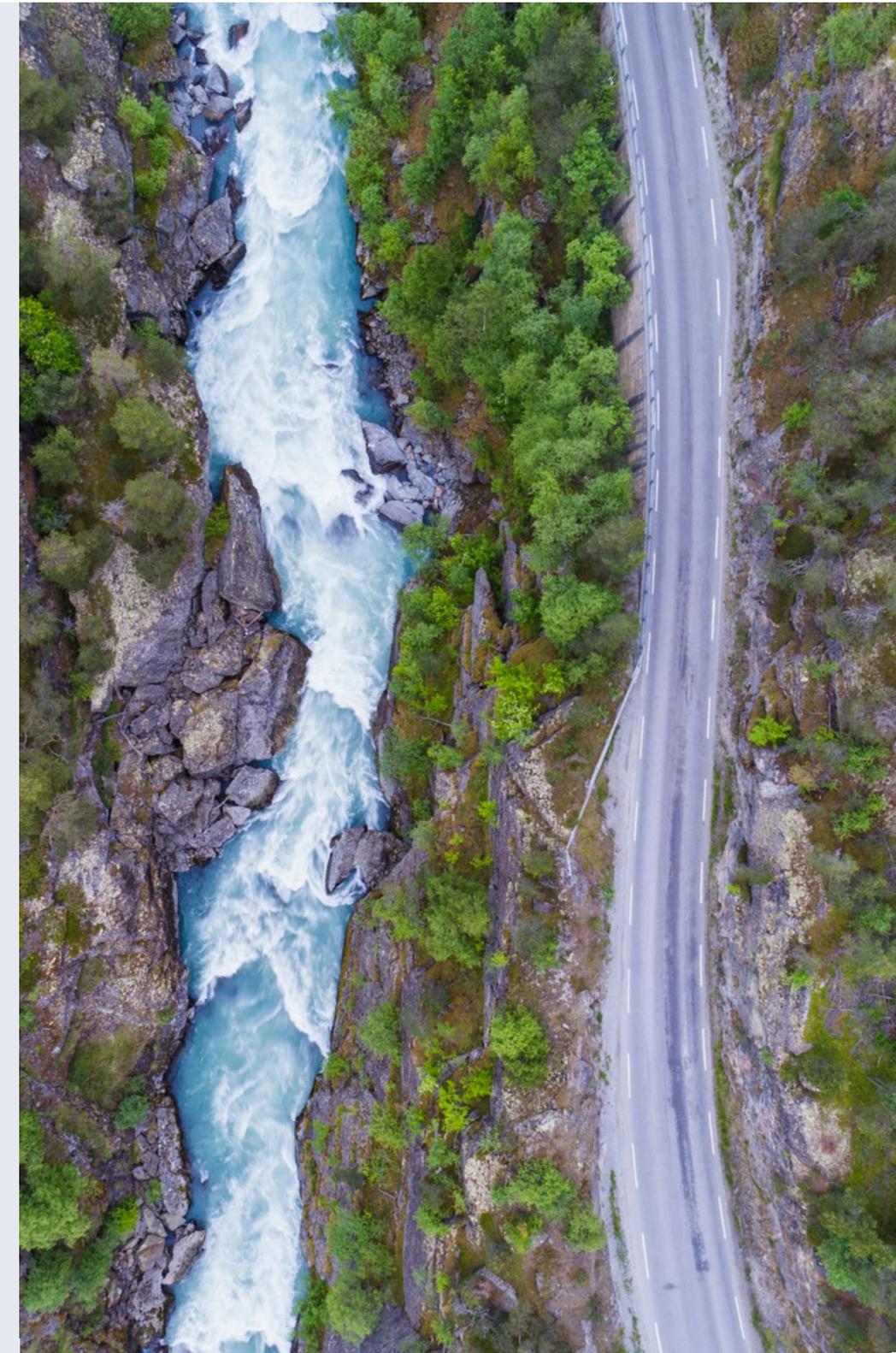
2030 Goal

Achieve a 15% reduction in CO₂* emissions per metric ton of product produced, compared with 2015. We are in the process of, and committed to, developing our climate ambition beyond 2030.

Related stories in this report

-  [Committed to Reducing Our Carbon Footprint](#)
-  [Family of Products Advances Circular Solutions](#)
-  [A Lighter, Greener Automobile of the Future](#)

*CO₂ refers to CO₂ equivalent throughout report



THRIVING SOCIETY

We understand the impact our work has on society, and we place great value on the people side of our business.

From getting all of our workers home safely every day, to diversity, equity and inclusion in the workplace, making products that improve quality of life, and aligning our suppliers' values with our own, we are committed to the betterment of society.

How we'll do it

- Keep our employees, contractors, customers and neighbors safe
- Build teams that reflect the communities where we operate
- Create and retain value in our surrounding neighborhoods
- Produce and market products that enable sustainable living

2030 Goal

Operate safely every day and with zero incidents, zero injuries and zero accidents

Related stories in this report

- 🔗 [Charting a New Path In Our Diversity, Equity and Inclusion Journey](#)
- 🔗 [Powering the Next Generation of Scientists](#)
- 🔗 [Advancing Opportunities for Women in STEM](#)
- 🔗 [Promoting Biodiversity](#)
- 🔗 [Resilient, Global Response to COVID-19](#)
- 🔗 [Commitment to Tackle Global Food Insecurity](#)



UNITED NATIONS FRAMEWORK ALIGNMENT



UN Global Compact

The UN Global Compact (UNGC) aims to mobilize a global movement of sustainable companies and stakeholders. The UNGC encourages companies to do business responsibly by aligning strategies and operations with Ten Principles on human rights, labor, environment and anti-corruption. LyondellBasell joined the UNGC in 2020. See our UNGC Communication on Progress on [page 79](#).

UN Sustainable Development Goals

The UNGC also encourages companies to advance broader societal goals such as the 17 UN Sustainable Development Goals (UN SDGs) that serve as a call for action to tackle global challenges by 2030.

We mapped the relevant UN SDGs to our sustainability strategy and identified them in the following stories of progress.

UN SDG GOALS



We support foodbanks in the communities where we operate through monetary donations, food collection drives and employee volunteerism.



We work every day to protect the health and safety of our employees, contractors and the communities where we operate.



We are committed to educating and training our current and future workforce. Our superior performance depends on the next generation of STEM professionals.



We strive to optimize energy use in our operations to reduce resource consumption and CO₂ emissions, and we are working to increase our use of renewable energy.



We believe in integrity, diversity and fairness, and a work environment that is safe, respectful and inspires employees to strive for excellence.



We believe transitioning to a circular economy will enable a more sustainable future. We are investing in mechanical and advanced (molecular) recycling to make plastics a valuable, reusable resource.



We are working to reduce the intensity of GHG emissions from our operations and delivering solutions that help advance a low-carbon economy.



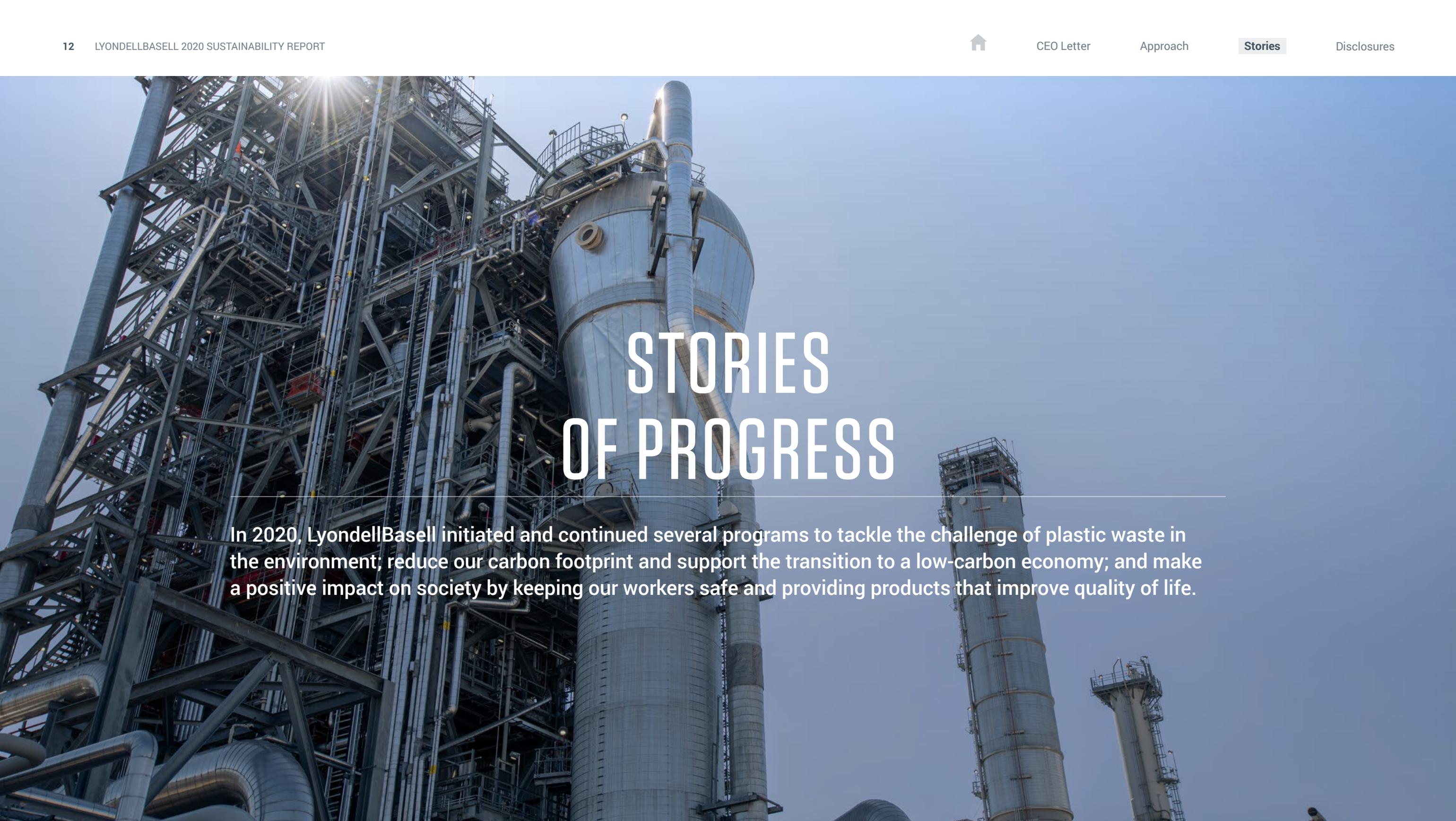
We are committed to helping eliminate plastic waste in the environment and participate in initiatives to reduce, recycle, reuse and repurpose plastic waste.



We support the partnerships required to reach the scale and impact needed to address global challenges.

[Learn more >>](#)

LYONDELLBASELL IS COMMITTED TO SUPPORTING THE TEN PRINCIPLES OF THE UNITED NATIONS GLOBAL COMPACT. THIS REPORT SERVES AS OUR FIRST COMMUNICATION ON PROGRESS.



STORIES OF PROGRESS

In 2020, LyondellBasell initiated and continued several programs to tackle the challenge of plastic waste in the environment; reduce our carbon footprint and support the transition to a low-carbon economy; and make a positive impact on society by keeping our workers safe and providing products that improve quality of life.

MAKING MORE SUSTAINABLE PLASTICS

We believe that transitioning to a circular economy will reduce resource use and enable a more sustainable future. It is our ambition to produce and market two million metric tons of recycled and renewable-based polymers annually by 2030.

Conversion of plastic waste into polymers suitable for food packaging and healthcare items

Our proprietary *MoReTec* advanced (molecular) recycling technology aims to return plastic waste to its molecular form for use as feedstock for new plastic materials. What makes this technology unique is that new polymers produced through this process can be used for food packaging and healthcare items, which must meet strict regulatory requirements.

LyondellBasell conducts base research to lead the polymers industry toward advanced plastics recycling. In 2018, we announced a collaborative effort with Germany's Karlsruhe Institute of Technology (KIT) to develop our advanced recycling efforts. This collaboration proved the efficiency of our *MoReTec* technology at laboratory scale. Construction of a pilot plant located at our site in Ferrara, Italy, began in 2019.

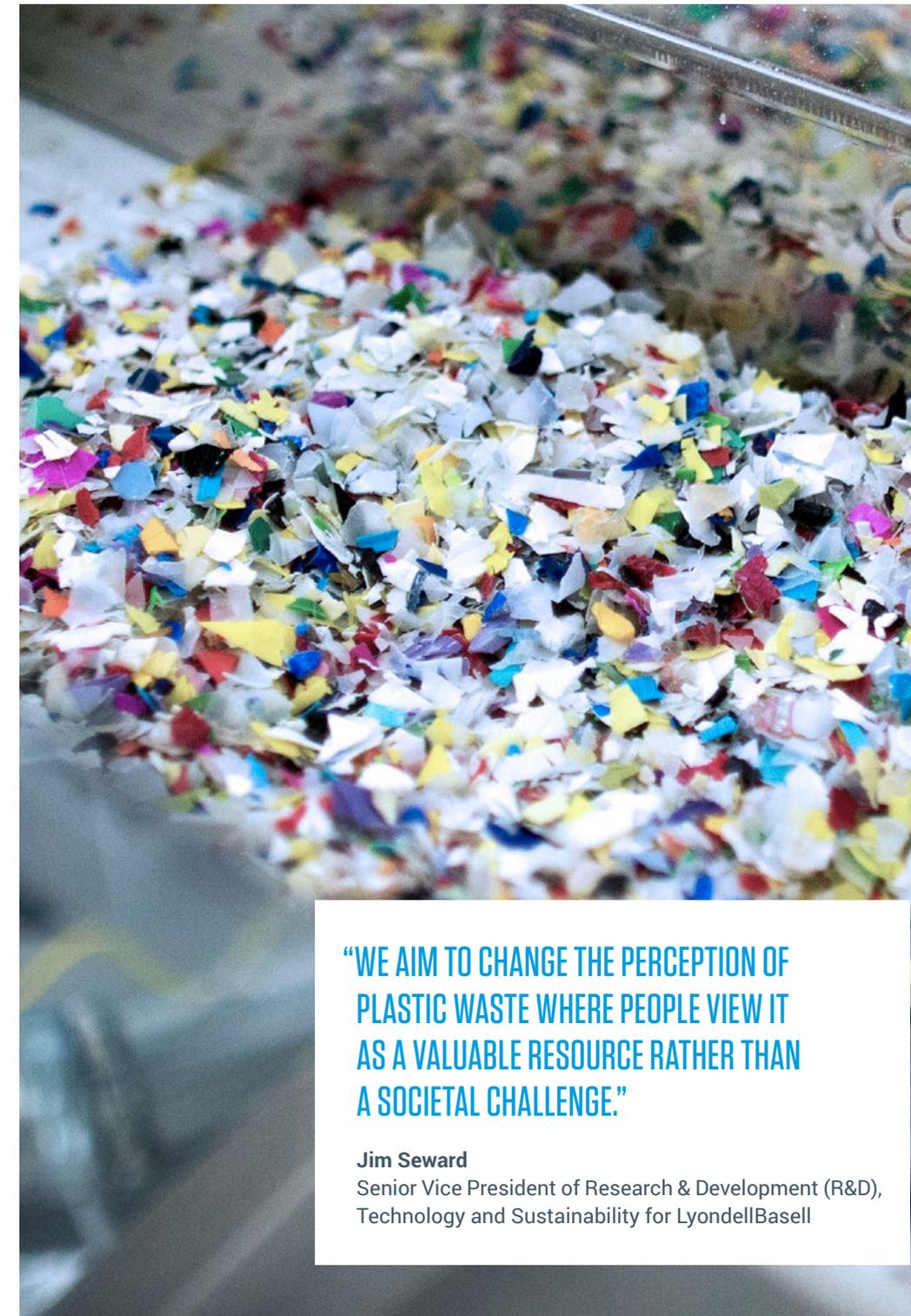
Start-up of the pilot plant in 2020 moves us one step closer to achieving industrial scale, which will enable us to use significantly larger volumes of plastic waste, instead of fossil-based feedstocks, to make our products.

START-UP OF THE *MORETEC* PILOT PLANT MOVES US ONE STEP CLOSER TO USING SIGNIFICANTLY LARGER VOLUMES OF PLASTIC WASTE TO REPLACE FOSSIL-BASED FEEDSTOCKS.

The pilot plant is capable of processing between 5 and 10 kilograms (kg) of household plastic waste per hour and builds on our research to date. The pilot aims to understand the interaction of various waste types in the molecular recycling process, test the various catalysts, and confirm the process temperature and time needed to decompose the plastic waste into molecules.

As we work to improve the efficiency and economics of our *MoReTec* technology, LyondellBasell is already manufacturing and marketing polymers made using feedstock from advanced recycling under the *CirculenRevive* brand name.





Increasing mechanical recycling capabilities through collaboration

IHS Markit estimates that global demand for mechanically recycled polyethylene and polypropylene will reach approximately 34 million metric tons by 2030, which is 11% of total polymer demand and more than double the demand in 2019. Through our Quality Circular Polymers (QCP) joint venture, LyondellBasell is working to meet this demand.

In 2018, we took 50% ownership of QCP, a mechanical recycling joint-venture with SUEZ. Located in Geleen, the Netherlands, the facility has the capacity to produce 35,000 metric tons of high-quality polymers from plastic waste.

With the acquisition of TIVACO in 2020, QCP increased production capacity of mechanically recycled material to approximately 55,000 metric tons per year. The TIVACO facility, located in Blandain, Belgium, operates five production lines, processing both post-industrial and post-consumer plastic waste into high-quality polymers and compounds.

The joint venture leverages the two partners' respective strengths. SUEZ utilizes its leading-edge technology solutions in sorting and recycling to improve the consistency and quality of waste materials utilized at QCP. LyondellBasell applies its long-standing leadership in innovative polymer production technology, experience in product development and knowledge of important end markets such as consumer goods.

QCP's mechanically recycled polymers are marketed by LyondellBasell under the *CirculenRecover* brand name and used by brand owners in a wide variety of industrial, household and consumer product applications.

RELATED UN SDG GOALS



“WE AIM TO CHANGE THE PERCEPTION OF PLASTIC WASTE WHERE PEOPLE VIEW IT AS A VALUABLE RESOURCE RATHER THAN A SOCIETAL CHALLENGE.”

Jim Seward
 Senior Vice President of Research & Development (R&D),
 Technology and Sustainability for LyondellBasell

MAKING MORE SUSTAINABLE PLASTICS

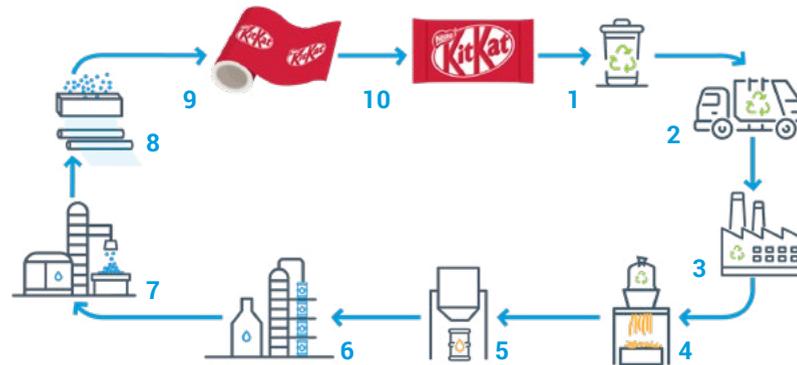
NEW FOOD PACKAGING PROTOTYPE MADE WITH RECYCLED CONTENT

LyondellBasell joined a group of companies to co-develop a prototype KitKat® wrapper made with 30% recycled soft (flexible) plastic. Developed in Australia, this innovative wrapper demonstrated a circular future for soft plastics.

The companies behind this shared vision include Nestlé Australia, LyondellBasell, CurbCycle, iQ Renew, Licella, Viva Energy Australia, REDcycle, Taghleef Industries and Amcor.

Soft plastics were collected from households using a dedicated bag which was placed inside the curbside recycling bin. The waste was collected, sorted and shredded. Using advanced recycling, the soft plastics were converted to oil feedstock for use in making the new soft plastic prototype wrapper.

LyondellBasell produced the new food-grade polypropylene made with recycled content, which was further processed into the KitKat® wrapper.



- 1. Bag in curbside bin
- 2. Collection
- 3. Sorting
- 4. Processing
- 5. Conversion to oil
- 6. Oil refinery
- 7. Food grade polypropylene made with recycled content using a mass balance approach
- 8. Processed to film
- 9. Wrapper created
- 10. Have a break!

THIS INNOVATIVE APPROACH CAN REDUCE THE AMOUNT OF FOOD WRAPPERS GOING TO LANDFILL AND PROVIDE A BETTER PATH FORWARD FOR SOFT PLASTICS.



TAKING CARE OF YOU, AND THE PLANET

Plastics are the material of choice for beauty and personal care manufacturers because they are strong and shatterproof, lightweight, and extremely hygienic. Plastics improve product dispensing and can be made into many shapes and colors.

LyondellBasell and our customers are identifying opportunities to provide more sustainable packaging for these products. We have set one of the most ambitious goals in the industry to produce and market two million metric tons of recycled and renewable-based polymers annually by 2030. Partnering with brand owners like Unilever, Wilkinson Sword and Laboratoires Sarbec, we are powering a circular economy by creating products that are made from post-consumer waste, use less new plastic and can be more easily recycled.

Recycled plastic used in Dove and Rexona deodorant packaging

LyondellBasell and our mechanical recycling joint venture Quality Circular Polymers (QCP) are working with Unilever, a leading global consumer goods company, to develop packaging materials made from recycled plastic waste for Unilever’s newly introduced Dove roll on and Rexona deodorant product lines. For these two applications alone, it is estimated that 940 metric tons of post-consumer resins will replace previously used fossil-based resins in 2021. The packaging for both deodorants can be recycled after use.

940 metric tons of post-consumer resins
are estimated to replace the fossil-based resins used in two Unilever product packages

LyondellBasell, QCP and Unilever have collaborated for several years to develop sustainable solutions that do not compromise quality and meet Unilever’s ambitious target to reduce use of virgin plastic in packaging by half; ensure 100% of plastic packaging is designed to be fully reusable, recyclable, or compostable by 2025; and help collect and process more plastic packaging than the company sells by 2025.



“A MORE CIRCULAR APPROACH IS NEEDED WHERE WE NOT ONLY USE LESS PACKAGING, BUT WE DESIGN THE PACKAGING IN SUCH A WAY THAT IT CAN EASILY BE REUSED OR RECYCLED. TOGETHER WITH LYONDELLBASELL, WE HAVE ACHIEVED THIS.”

Runzhou Jiang
Procurement Manager, Plastics Sustainability for Unilever

dry protectio.
anti-transpirant
0% alcohol

Wilkinson Sword razors incorporate recycled content

When Wilkinson Sword envisioned a razor that would be kind to the earth, they turned to LyondellBasell and QCP to develop a product made with recycled plastic. In 2020, Wilkinson Sword launched the Xtreme 3 Eco Green disposable razor made with up to 95% *CirculenRecover* content in the handle. We are exploring further innovations in circularity for this product.

up to **95%**

CirculenRecover content in the Wilkinson Sword Xtreme 3 Eco Green razor handle launched in 2020

CORINE DE FARME personal care products packaged in renewable-based plastic

In 2019, LyondellBasell achieved the first parallel production of polypropylene and low-density polyethylene made from renewable raw materials as an alternative to fossil-derived resources.

Since that time, we have expanded our renewable-based polymers to help our customers create packaging that appeals to consumers who prioritize sustainability, which is approximately 26% of the global marketplace according to a recent Harvard Business Review survey.

For Laboratories Sarbec whose purpose is to “allow everyone to take care of their body and protect it, while preserving the beauty of our planet,” our renewable-based polymers make sense for their brand CORINE DE FARME. In 2021, they will launch a baby & intimate product range, including shower gels and shampoos packaged in LyondellBasell’s *CirculenRenew* high density polyethylene polymers.

RELATED UN SDG GOALS



“THE MOST INNOVATIVE RESULTS COME FROM WORKING TOGETHER WITH OUR CUSTOMERS TO DESIGN EFFECTIVE SOLUTIONS. IT IS OUR AMBITION TO NOT ONLY OFFER A VAST RANGE OF MATERIALS, BUT ALSO SUSTAINABLE SOLUTIONS TO ADVANCE THEIR GOALS.”

Richard Roudeix
Senior Vice President of Olefins & Polyolefins, Europe, Middle East, Africa and India for LyondellBasell



RENEWING PLASTICS AND GHANAIAN WOMEN'S LIVELIHOODS

Ending plastic waste in the environment is an ambitious goal that can only be achieved through industry collaboration and partnering with non-profits like the Alliance to End Plastic Waste (the Alliance), who share our passion for harnessing the power of circularity. As a founding member of the Alliance, LyondellBasell provides project funding and leverages our industry network to engage the technical leaders, engineers, scientists and practitioners needed to advance innovative solutions around the world.

We are extremely proud of a pilot project in Africa called Closing the Loop which is run by the ASASE Foundation and supported by the Alliance. The project is empowering Ghanaian women in the city of Accra by turning the collection of plastic waste into meaningful job opportunities. These entrepreneurs sell the waste to the CASH IT! recycling facility, which regrinds what is collected and sells it to produce household and building materials.

The impact of the project is significant. Not only are women cashing in on the plastic waste in their community, but they are also contributing to a cleaner, circular economy. Collectors can sell their waste every day and provide for their families, waste management issues are alleviated, and over 100 new jobs in the local recycling sector have been created.

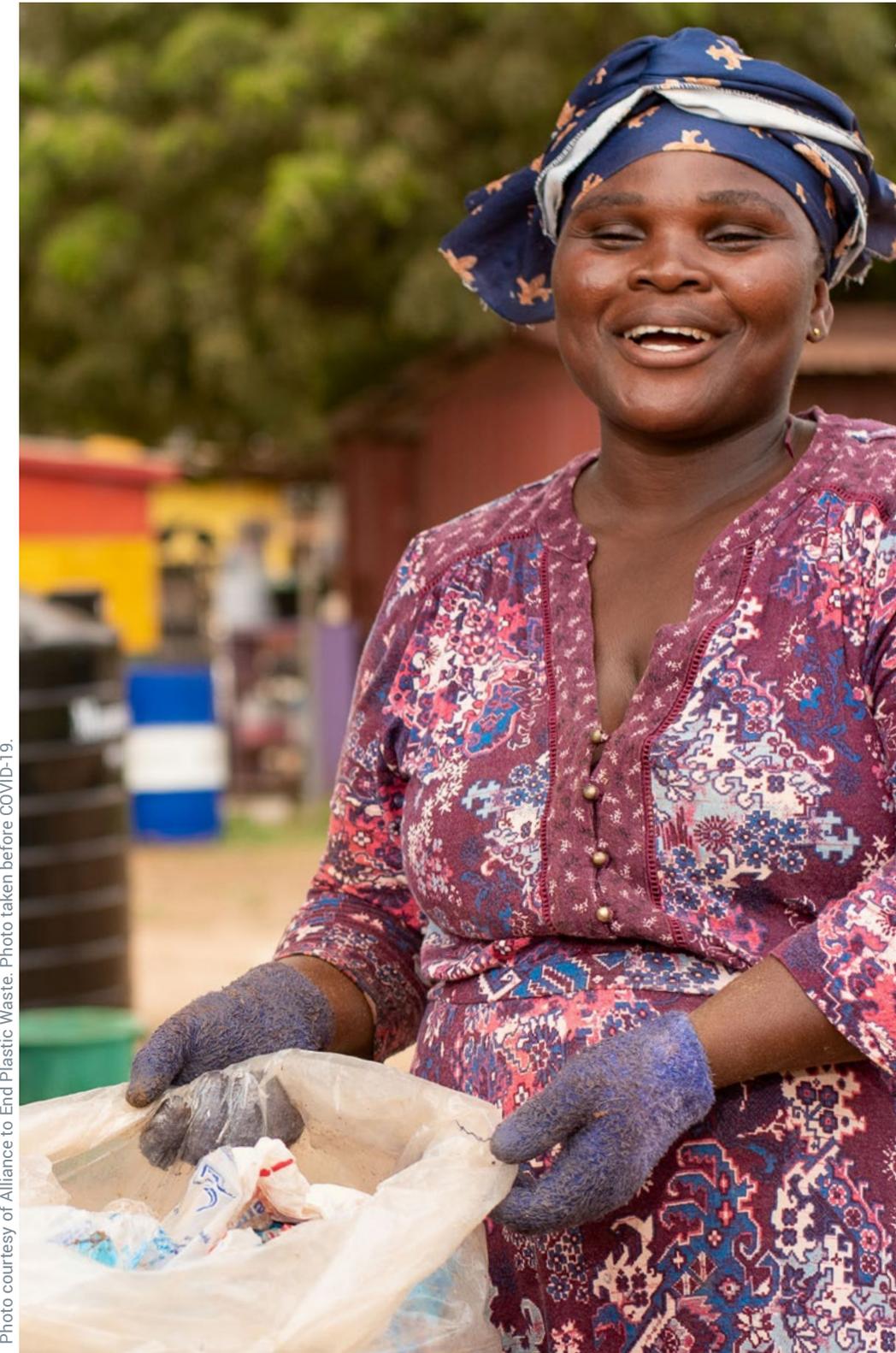
100

new jobs

created by the Closing the Loop project
in the recycling sector of Accra, Ghana

The support and knowledge provided by the Alliance has advanced their work beyond what CASH IT! thought was possible. When they started this project in 2019, they processed 35 metric tons of plastic waste annually.

Photo courtesy of Alliance to End Plastic Waste. Photo taken before COVID-19.



500+ metric tons of plastics

recycling capacity – nearly 15 times more than the previous year

Today, they have increased processing capacity to 500 metric tons of plastic a year, an almost 15-fold increase. Industry insight and guidance helped build and repair essential machinery sourced second-hand from scrap yards and markets, including shredders for hard and soft high density polyethylene (HDPE) plastics and a dehydrating unit for HDPE sachets.

“When we started our partnership with the Alliance, I could not have imagined how much we would benefit from the support,” said Dana Mosora, Co-Founder of ASASE Foundation. “Not only having the money to pursue our goals, but getting access to the world-class expertise held by the Alliance member companies made the difference. The hands-on support needed to optimize equipment built by local artisans and the tools to manage the CASH IT! operation helped us to efficiently go further and faster.”

The project secured additional funding in 2021 from the European Commission in Ghana and the Alliance, and is focused on an ambitious goal for 2023, to increase their recycling to 6,000 metric tons of plastic a year by replicating the model across Ghana.

RELATED UN SDG GOALS



Photo courtesy of Alliance to End Plastic Waste. Photo taken before COVID-19.



“NOW I WALK THROUGH THE STREETS AND I DON'T SEE PLASTICS AS TRASH, I SEE IT AS MONEY AND I PUT VALUE ON IT.”

Patricia Agyare
Operations Manager for CASH IT!



KEEPING PELLETS, FLAKES AND POWDERS OUT OF THE ENVIRONMENT

We sell our polymer products in the form of pellets, flakes and powders. They are handled at multiple points from creation to customer delivery. To meet our goal of zero loss of these materials into the environment, we are working with our employees, contractors, transportation partners and customers in a way that is collaborative and transparent.

We are a member of Operation Clean Sweep® (OCS), the plastics industry's global initiative that promotes collaboration, training, and education in controlling and reducing the loss of pellets, flakes and powders. In 2019, we committed to OCS Blue, a U.S. program that enhances management and reporting requirements.

LyondellBasell has 79 polymers manufacturing, research and technical sites that produce or handle pellets, flakes and powders, with a total production capacity of 12.2 million metric tons annually. In 2020, 100% of these sites met OCS Blue requirements.

Increasing our transparency

We are reporting offsite loss of pellets, flakes and powders for the first time in this year's report. Loss is defined as an unplanned release of polymeric solids from a site boundary in a quantity greater than 0.5 kilograms (equivalent to 1.1 pounds) in a 24-hour period. Monitoring and reporting are conducted in accordance with OCS Blue.

In 2020, a total of 12 kilograms was lost from two sites; severe weather conditions prevented the measurement of loss at a third site. We cleaned up the loss to the extent possible and conducted investigations at all three sites to determine the root cause and prevent similar incidents in the future.

Improving our processes

In 2020, we conducted more than 100 assessments of our operations to evaluate and improve pellet loss efforts, including monitoring, handling, recycling, safe disposal, cleaning and containment. We also implemented a tool to better identify opportunities to prevent pellet loss and emphasized educating and empowering our employees in their continuing support of this effort.

RELATED UN SDG GOALS





COMMITTED TO REDUCING OUR CARBON FOOTPRINT

LyondellBasell is working to reduce our operational CO₂ footprint and collaborating with our value chain partners to deliver more sustainable solutions, products and technologies to the market. In our 2018 sustainability report, we committed to a 15% reduction in CO₂ emissions per metric ton of product produced compared with 2015 levels. This represents our first step as we do our part to support the ambitions of the Paris Agreement and the transition to a low-carbon economy.

While we currently use the CDP Climate Change framework to report our climate risks and impacts, we will expand our approach using the Task Force on Climate-related Financial Disclosures (TCFD) recommendations beginning in 2021. TCFD provides a framework to further strengthen governance, create strategy, assess risk and establish metrics that will guide our efforts as we strive to improve our sustainability.

Beyond our operations, we aim to develop a range of products that contribute to a low-carbon economy through their use or how they are manufactured.

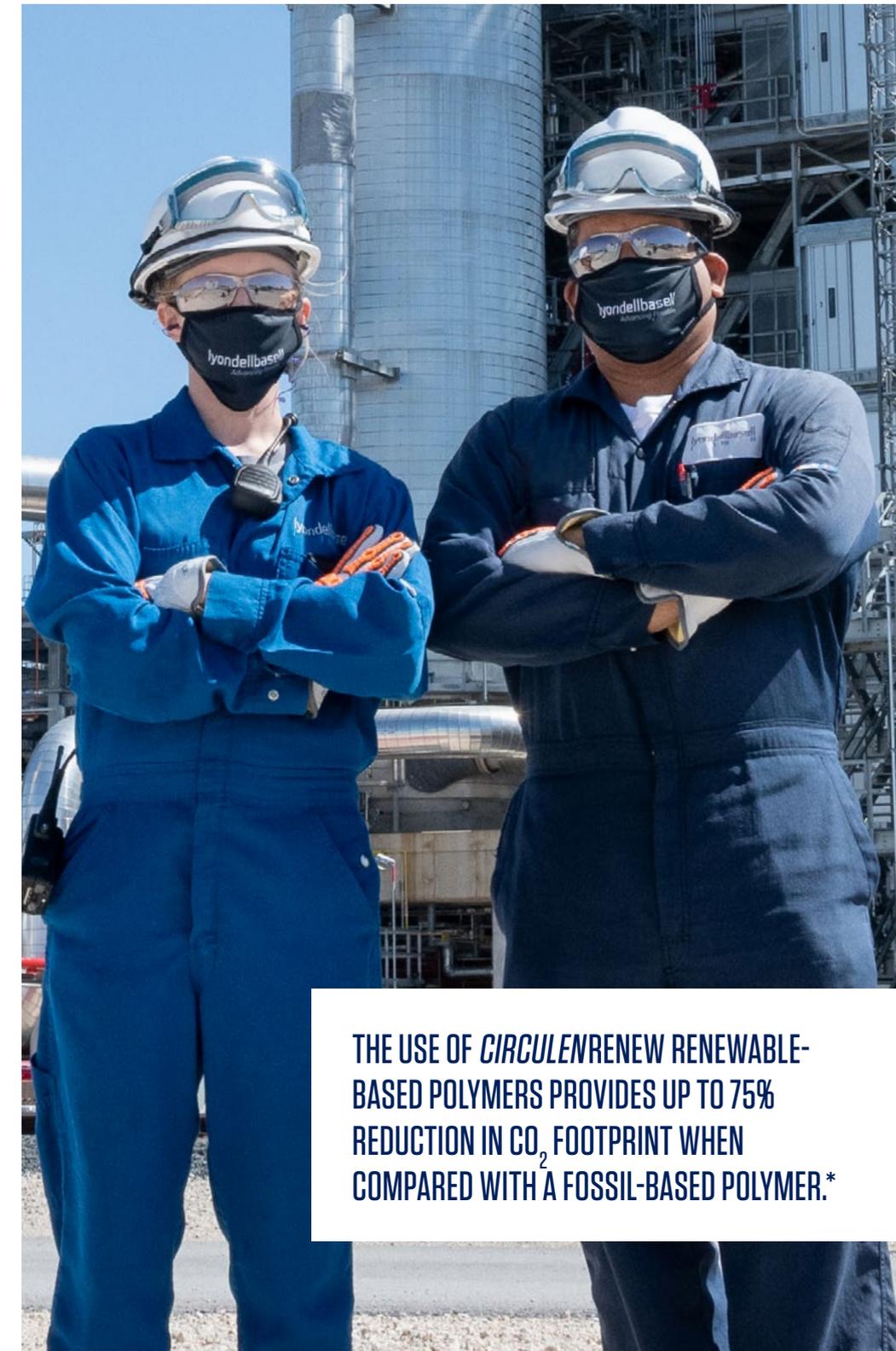
Products that lower GHG emissions across the life cycle

In 2019, LyondellBasell achieved the first parallel production of polypropylene and low-density polyethylene made from renewable raw materials, including bio-based wastes and

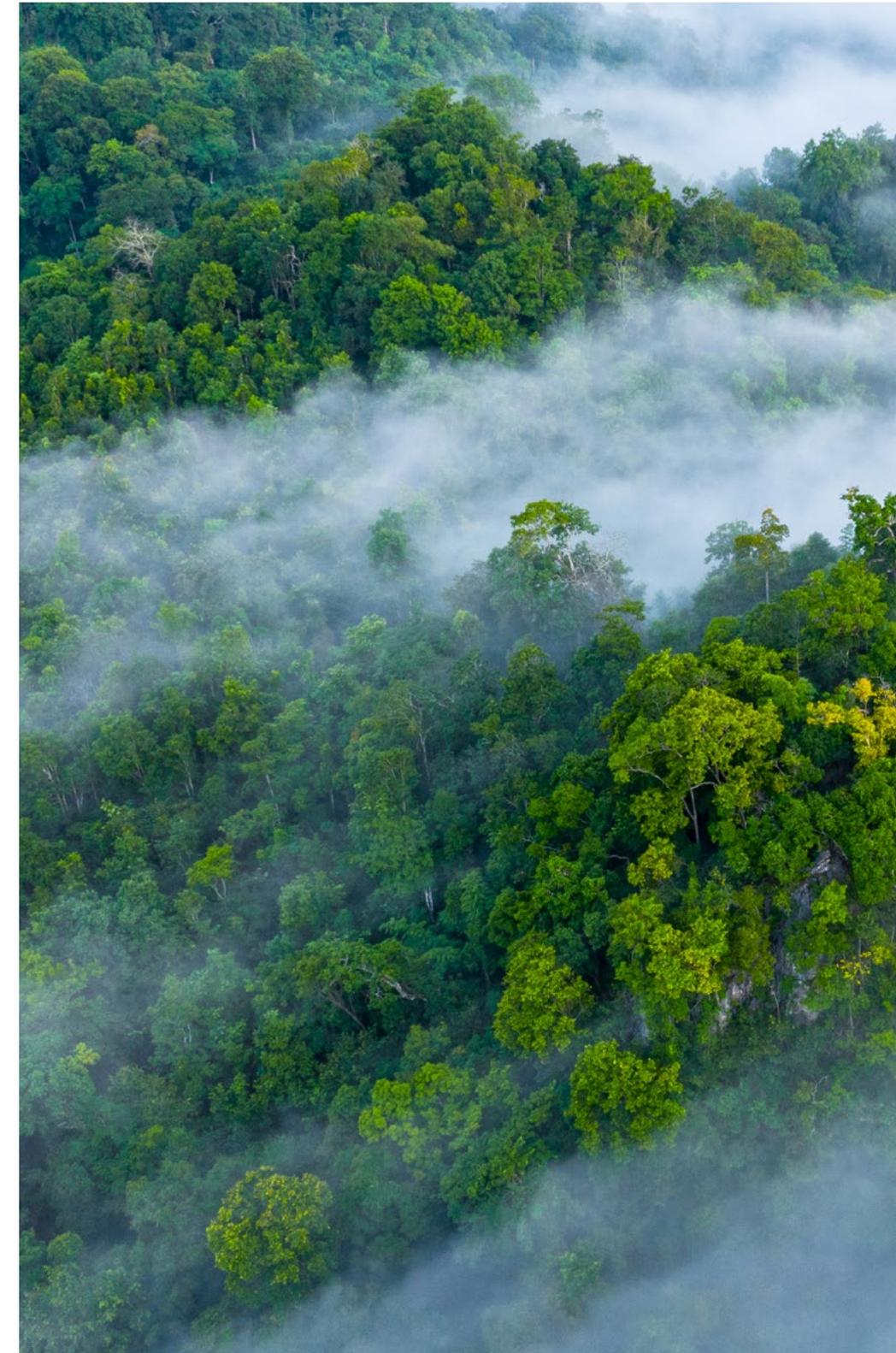
residue oils, as an alternative to fossil-derived resources. These renewable-based polymers are branded under our family of sustainable solutions called *Circulen* (read more on [page 23](#)). An independently reviewed life cycle assessment study demonstrated that the carbon footprint of these polymers is reduced by up to 75% when compared with a fossil-based polymer.*

We also offer products that help avoid emissions during their use phase. Our innovative low-density materials help make cars lighter, and our oxyfuels improve fuel efficiency and reduce vehicle emissions including GHGs (read more on [page 24](#).)

*When applying a waste-like approach to all raw materials of the feedstock, which implies that no upstream burdens have been allocated to these raw materials.



THE USE OF *CIRCULEN* RENEWABLE-BASED POLYMERS PROVIDES UP TO 75% REDUCTION IN CO₂ FOOTPRINT WHEN COMPARED WITH A FOSSIL-BASED POLYMER.*



Energy efficiency and fuel switching

We are evaluating and deploying solutions at our most energy intensive manufacturing sites to reduce carbon emissions, including the use of lower carbon-intensive fuels and process, and energy optimization.

In 2020, we expanded our assessment of flare systems at our major sites with the aim of optimizing our product recovery rates in flare gas recovery systems, minimizing steam and optimizing supplemental gas associated with flare operations. Projects implemented in our European and U.S. sites in 2020 resulted in a reduction in energy use of 1.27 million gigajoules and associated emissions reduction of approximately 79,500 metric tons of CO₂.

Securing a reliable supply of renewable energy

Increasing our use of renewable energy, both generated on-site and purchased from off-site projects, is an opportunity we continue to explore. Where it is feasible, we are looking to develop our on-site renewable energy production capacity. For example, installation of a 7-megawatt solar park is underway at our Tarragona site in Spain. And we are evaluating opportunities to capture the benefits of large-scale off-site wind and solar resources in the U.S. and Europe.

Emerging technologies

We are confident in the role emerging technologies will play in the reduction of GHG emissions in the chemical sector. Technologies such as carbon capture, storage and utilization (CCSU), process electrification, green hydrogen, and waste streams valorization, have the potential to drive the transformational changes needed to enable larger-scale reductions in emissions. We recognize the importance of active collaboration with our value chain partners in achieving the necessary development and scaleup of these technologies to reduce our carbon footprint.

Transportation

The transport of raw materials across our supply chain provides another opportunity to reduce GHG emissions. We are engaged in an industry consortium led by Cefic, the European Chemical Industry Council, and the Smart Freight Centre to develop a practical methodology to better account for GHG emissions from our logistics operations. We are also working with our transportation partners to identify low-carbon solutions for the transport of raw materials and products.

RELATED UN SDG GOALS





FAMILY OF PRODUCTS ADVANCES CIRCULAR SOLUTIONS

Taking the next step in reaching our sustainability targets, LyondellBasell launched a suite of products in April 2021 under the name *Circulen* which enable brand owners to improve the sustainability of consumer products.

These products support the reduction of plastic waste through the use of recycled content, and a lower carbon footprint through the use of renewable-based content when compared with feedstock from fossil-based sources. The *Circulen* product portfolio includes:



- **CirculenRecover** polymers made from plastic waste through a mechanical recycling process



- **CirculenRevive** polymers made using an advanced (molecular) recycling process that converts plastic waste into feedstock to produce new polymers*



- **CirculenRenew** polymers made from renewable feedstocks such as used cooking oil*

*Using a mass balance approach.

The LyondellBasell *Circulen* portfolio is currently available in Europe and will soon be introduced in North America and China.

CirculenRecover polymers are used in Samsonite’s new Magnum ECO suitcase collection. Designed in Europe, the suitcases are made from household plastic waste such as yogurt cups and plastic bottles. The polymers are from Quality Circular Polymers (QCP), our mechanical recycling joint venture. The project builds on the success of the S’Cure ECO suitcase collection, a collaboration of LyondellBasell, QCP and Samsonite launched in 2019.

RELATED UN SDG GOALS



“GROWING OUR SUSTAINABLE SOLUTIONS OFFERING IS A MAIN PILLAR OF OUR SUSTAINABILITY STRATEGY. WITH THE LAUNCH OF *CIRCULEN* PRODUCTS, WE ARE TAKING CONCRETE ACTION TODAY TO PROVIDE SOLUTIONS TO OUR CUSTOMERS, INNOVATE FOR THE FUTURE AND PARTNER ACROSS THE VALUE CHAIN.”

Ken Lane
Executive Vice President, Global Olefins & Polyolefins for LyondellBasell

A LIGHTER, GREENER AUTOMOBILE OF THE FUTURE

Today's automobiles are responsible for about one-fifth of all global CO₂ emissions, according to the U.S. Environmental Protection Agency. Between 80% and 90% of these emissions are due to fuel consumed, with the rest emitted during manufacturing, recycling and disposal. To enable greener vehicles, major manufacturers are seeking strategic partners like LyondellBasell to advance sustainable mobility.

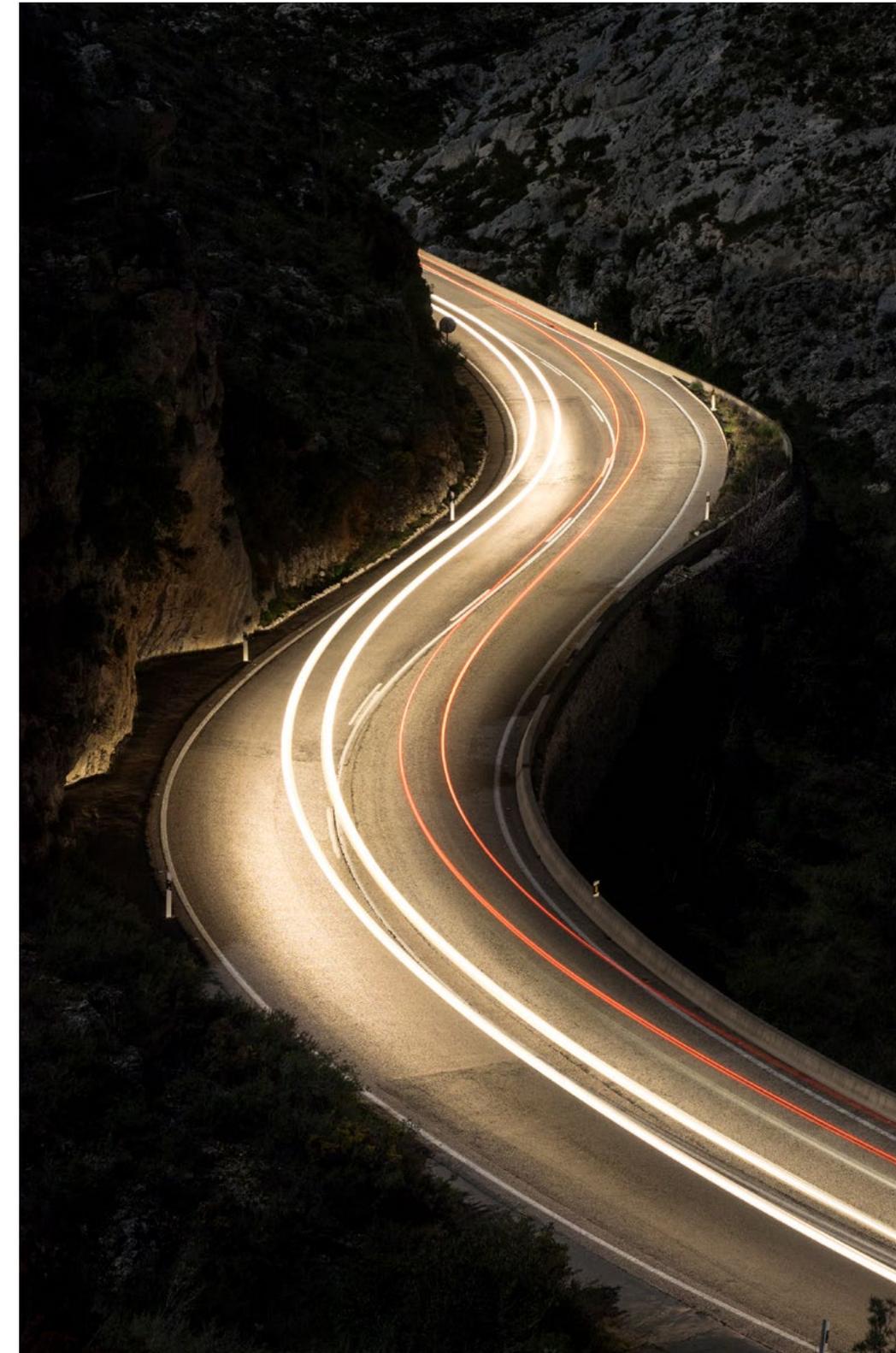
Establishing circular systems

Incorporating recycled materials can reduce the environmental footprint of an automobile. Polypropylene compounds are widely used in the automotive industry because of their low density; however, they are often painted or exposed to extreme sunlight and cannot be easily reused or recycled. We joined with Audi to develop a solution and establish smart circular systems in our supply chains.

USING ADVANCED RECYCLED MATERIALS IN VEHICLES CAN REDUCE THE NEED FOR NEW PLASTICS AND LOWER THE CARBON FOOTPRINT

Collaboration on a proof of concept using advanced (molecular) recycling to close the loop on automotive parts will begin in 2021. The process converts automotive mixed plastic waste into pyrolysis oil, a raw material used to create new plastic components. The use of advanced recycled materials in vehicles can reduce the need for new plastics and lower the carbon footprint.

Participants in the project include LyondellBasell; the Volkswagen Group's Audi brand and their original parts, accessories and services provider Original Teile Logistik GmbH & Co. KG (OTLG); the Karlsruhe Institute of Technology (KIT); and other partners.





Designing for sustainability and aesthetics

LyondellBasell joined with other suppliers to design a bumper for a new BMW 4 Series car model that would meet BMW Group’s performance, aesthetics and sustainability goals.

The project team comprised raw material, part design and molding, and ceramic coating experts. The team opted for a foamed part to achieve the necessary weight reduction.

LyondellBasell’s mission was to create a product grade that would be lightweight, scratch resistant and with excellent surface appearance. Our *Hifax* polypropylene compound offered the perfect solution.

OUR MISSION WAS TO CREATE A PRODUCT GRADE THAT WOULD PRODUCE A LIGHTWEIGHT, SCRATCH RESISTANT, ATTRACTIVE PART, AND MEET BMW GROUP’S SUSTAINABILITY GOALS.

Thanks to the expertise of the project team, the foamed part made with *Hifax* achieved the highest surface/quality ranking and passed a certificated test series with good results. This newly designed lower trim is now being manufactured in serial production.

RELATED UN SDG GOALS



A LIGHTER, GREENER CAR OF THE FUTURE

OXYFUELS PLAY IMPORTANT ROLE IN REDUCING GHG EMISSIONS

While automakers are adding more electric, hybrid and fuel cell models to their portfolio, gasoline-burning cars are expected to be on the road for several decades. Improvements in engineering and reliability have extended the average life of a new conventional car to more than 15 years.

Although mobility is rapidly changing, replacing the world's entire fleet of vehicles will occur gradually and at a differing pace in various parts of the world.

1.26 MM metric tons of
global CO₂
emissions

were estimated to be reduced with
use of LyondellBasell's bio-ETBE in
Europe and Japan in 2020

Oxyfuels can be used to reduce GHG emissions from conventional vehicles currently on the road.

LyondellBasell produces bio-ETBE, bio-MTBE and MTBE, which are low-carbon, high-octane oxygenated blend components for gasoline. These oxyfuels improve fuel efficiency and engine performance by improving overall combustion efficiency which, in turn, reduces vehicle emissions including GHGs, volatile organic compounds, particulates, carbon monoxide and other air pollutants.

Our bio-ETBE is produced using ethanol made from renewable raw materials and our manufacturing is compliant with International Sustainability and Carbon Certification (ISCC) in Europe. This product has a lower GHG impact across its life cycle compared with petroleum-based fuel ethers. We also produce bio-MTBE in Europe made from non-food biomass.

We estimate that use of LyondellBasell's bio-ETBE in Europe and Japan reduced global CO₂ emissions by more than 1.64 million metric tons in 2020. Mexico, and parts of Latin America and Africa are also benefitting from our oxyfuels.



“OXYFUELS CAN REDUCE THE EMISSIONS OF ALL VEHICLES CURRENTLY ON THE ROAD, INCLUDING OLDER MODEL CARS, TWO-WHEELERS AND HYBRIDS. THEIR USE PROVIDES AN IMMEDIATE REDUCTION IN AIR POLLUTANTS AND HELPS COMMUNITIES ACHIEVE THEIR CARBON REDUCTION GOALS.”

Torkel Rhenman
Executive Vice President, Intermediates & Derivatives,
and Refining for LyondellBasell



CHARTING A NEW PATH IN OUR DIVERSITY, EQUITY AND INCLUSION JOURNEY

LyondellBasell’s vision for DEI (diversity, equity and inclusion) is that it will be embedded within our culture as deeply as safety, where we own it and live it every day. To support this journey, we created a new senior-level position responsible for DEI and established an employee council to advise on strategy and implementation.

Chief Talent & DEI Officer Jeanne-Marie Bowman sat down with members of the DEI Leadership Council, Giorgia Paola Bisighin, Ritu Kohli Nandedkar and Lawrence Moreaux to discuss 2020 accomplishments and the path forward.

Why is it important for LyondellBasell to increase focus on DEI?

Giorgia: We strongly believe in diversity as a value and an opportunity. A diverse pool of talent is an extremely powerful resource because differing ideas foster innovation, and decisions are strengthened when all perspectives are considered.

Ritu: Equity and inclusion are key as well. Our programs and policies must ensure equality of opportunity, experience and pay. And everyone should feel as if they belong, their ideas and opinions matter, and they can reach their full potential at LyondellBasell.

Lawrence: Implementation of an effective DEI strategy will equip leaders with the knowledge and skillsets needed to advance our ambitious business goals and help LyondellBasell remain competitive.

What is the Council’s purpose?

Giorgia: The Council acts as an advisor to the CEO, the Leadership Team and the Chief Talent & DEI Officer in setting the DEI strategy for the company, and to drive accountability throughout the organization.

Lawrence: We also work to link the DEI strategy with business needs, helping leaders integrate DEI in their department planning and performance.

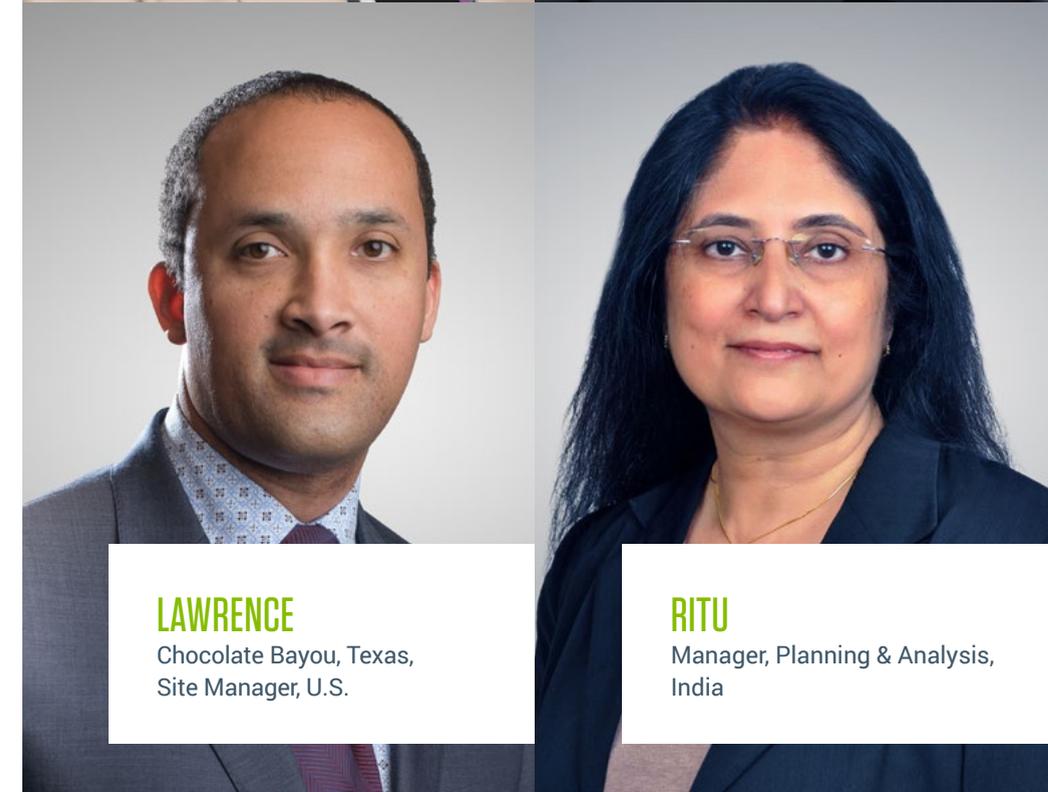
Ritu: Council members are the voice of our employees, and it is our job to continuously listen and communicate with employees across the world while developing our DEI strategy.



JEANNE-MARIE
Chief Talent & DEI Officer,
U.S.



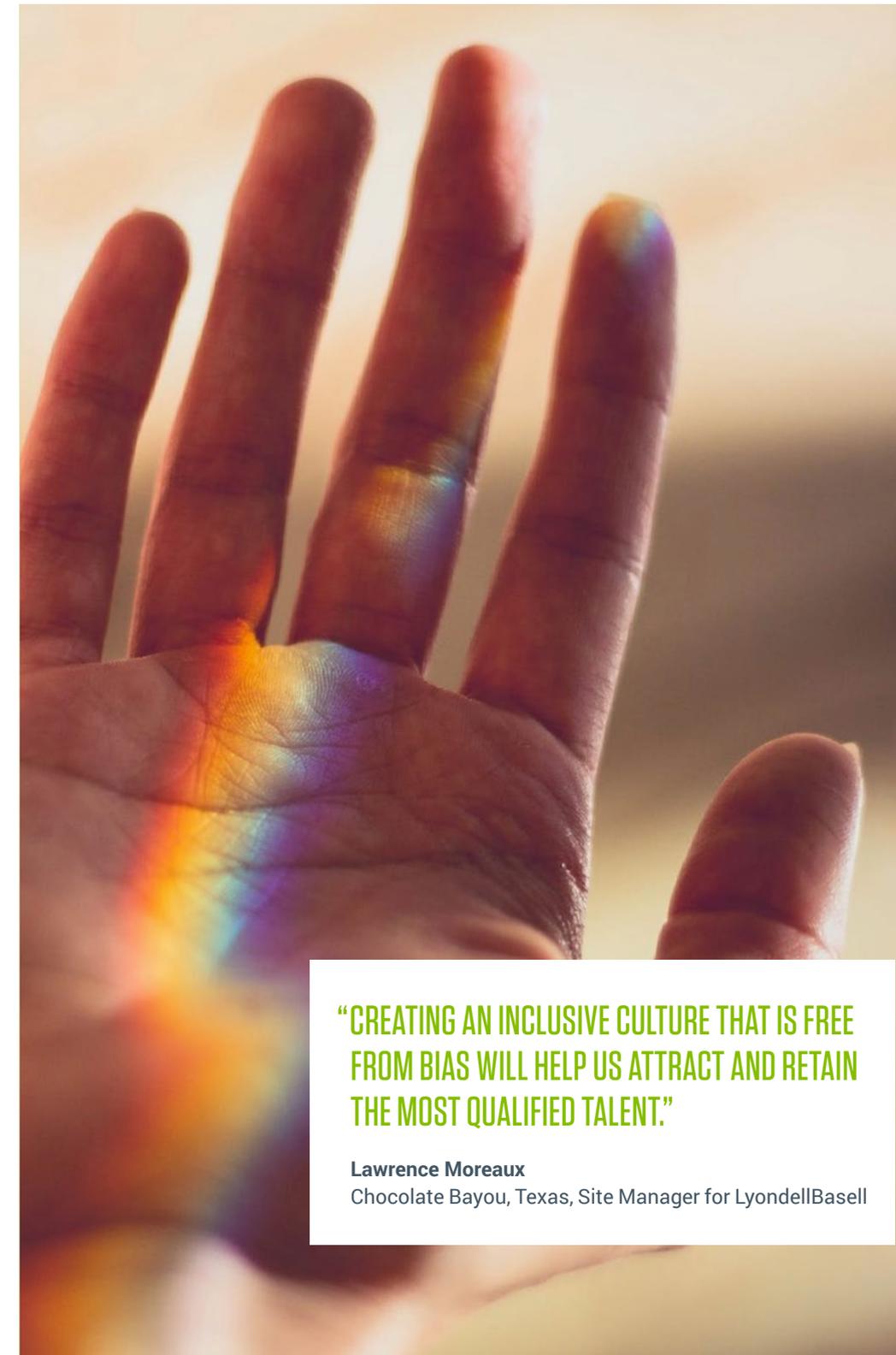
GIORGIA
Associate Director, Catalyst
Business Management, Italy



LAWRENCE
Chocolate Bayou, Texas,
Site Manager, U.S.



RITU
Manager, Planning & Analysis,
India



What impact will a DEI focus have on LyondellBasell over the next few years?

Lawrence: Creating an inclusive culture free from bias will help us attract and retain the most qualified talent.

Giorgia: We want LyondellBasell to be a workplace where we see diversity of people at all levels of the organization. We have the ambition to set the industry benchmark for DEI.

What are some of your key accomplishments?

Lawrence: Even with COVID-19 constraints, we facilitated several listening activities with open and honest discussions about a variety of DEI topics. We learned a great deal about the perceptions and values of our diverse employees. Additionally, we set a clear roadmap for the future, including goals and expectations for senior leaders.

Giorgia: One of our company values is “the power of many,” so in this initial phase we have been very focused on inclusion. We want everyone to show their true self at work, feel accepted and appreciated, and be offered the opportunity to contribute. With this goal in mind, we launched several initiatives including new, formalized

Employee Networks designed to improve employee connectivity, and support professional and personal growth.

Ritu: We also have a plan to build DEI awareness and capability. We developed training programs designed to equip our leaders and our people with the tools they need to advance our DEI vision and strategy. Additionally, our HR programs are being evaluated for bias and will be refined where needed. I am very proud of the strong foundation we laid this past year. Our leadership has demonstrated tremendous commitment and our Council has worked hard to achieve key milestones.

RELATED UN SDG GOALS



“CREATING AN INCLUSIVE CULTURE THAT IS FREE FROM BIAS WILL HELP US ATTRACT AND RETAIN THE MOST QUALIFIED TALENT.”

Lawrence Moreaux
Chocolate Bayou, Texas, Site Manager for LyondellBasell

POWERING THE NEXT GENERATION OF SCIENTISTS

Tomorrow’s chemical engineers and scientists will power the circular economy and innovate our business in new and creative ways. However, the pathways to achieving STEM (science, technology, engineering and math) degrees show there are too many roadblocks for women and minorities, and in particular for Black students. LyondellBasell provided scholarships to 10 students pursuing STEM education at Historically Black Colleges & Universities (HBCUs) through the Future of STEM Scholars Initiative (FOSSI).

According to the journal *Education Researcher*, 40% of Black and 37% of Latino STEM students switch majors before earning a degree, compared with 29% of white STEM students. Another 26% of Black STEM students and 20% of Latino STEM students drop out of college altogether — compared with 13% of white STEM students.

Access to financial support is a key factor limiting underrepresented students from continuing their STEM degrees. Our support of FOSSI is one effort to address these inequalities. “It is through partnerships like these, that Black and brown children nationwide can actualize their full potential at HBCUs while minimizing the burden of student debt,” said Ashley Christopher, Esq., President and CEO of HBCU Week Foundation.

FOSSI is an American Institute of Chemical Engineers initiative made possible through industry support. In addition to providing STEM scholarships, it facilitates internships, leadership development and mentoring opportunities.

HBCUs educated approximately 46% of Black women who earned STEM degrees between 2008 – 2012 and are the origin institution for 30% of Black doctorate graduates in the areas of science and engineering.

RELATED UN SDG GOALS



Photo taken before COVID-19.



“SUPPORTING STEM EDUCATION WILL BUILD A PIPELINE OF TALENT FOR OUR INDUSTRY. WHETHER THEY GO ON TO WORK FOR US OR ANOTHER COMPANY, IT IS CRITICAL TO PREPARE STUDENTS NOW.”

Yarelis Hernandez
Clinton, Iowa, Site Manager for LyondellBasell

ADVANCING OPPORTUNITIES FOR WOMEN IN STEM

LyondellBasell supports initiatives that advance education and careers for women in areas where they are often underrepresented, such as STEM. According to the U.S. National Science Board, less than one-third of the science and engineering workforce were female in 2015 despite accounting for one-half of the college-educated workforce.

Research attributes this gap to gender stereotypes, male-dominated cultures, fewer role models, math anxiety and financial challenges. In Texas, our STEM activities are implemented through partnerships with Wharton County Junior College, San Jacinto College and the University of Texas at Austin. Our support provides training facilities, scholarships and job opportunities.

Bobbie Jo Brown, a recipient of our Women in Process Technology Scholarship, is a single mom who worked seven days a week, 10 hours a day to make ends meet. “With help paying for school, I will be able to study more,” said Brown. Her career goal is to be a process operator in the petrochemical or refining industry. Now that she is not working as much overtime to pay for school, she spends more time with her young sons and is focused on securing a bright future for her family.

High-paying jobs and industry demand for diversity are placing the spotlight on STEM programs according to Jeff Pearce, Coordinator for Education and Workforce at the LyondellBasell Center for Petroleum, Energy & Technology (CPET) at San Jacinto College in Houston, Texas. A majority of the CPET students are Hispanic, and he notes that although female students are underrepresented, they are passionate and make up half of all student organization boards.

In Europe, LyondellBasell is one of the industrial partners of the PARACAT (Paramagnetic Species in Catalysis Research) Program, a program funded by the European Commission that trains talented students and researchers in the field of catalysts. In February 2021, our Ferrara, Italy, and Frankfurt, Germany, sites trained approximately 50 researchers.

RELATED UN SDG GOALS



Photo taken before COVID-19.



“THANKS TO THE COURSE WORK AND TRAINING I RECEIVED FROM LYONDELLBASELL, I AM NOW PREPARED IN A MORE COMPLETE WAY FOR THE APPLIED SCIENTIFIC WORLD.”

Leonora Podvorica
Program participant, PARACAT



PROMOTING BIODIVERSITY

Diverse and thriving ecosystems advance a healthy planet. LyondellBasell promotes biodiversity in the communities where we operate and live. Our approach to biodiversity includes understanding our business impact and continuing to support non-profit organizations focused on these issues.

Supporting World Wildlife Day projects

LyondellBasell sites and employees hosted conservation projects that impacted birds, bees and turtle communities in honor of World Wildlife Day in 2020.

Each year, employee volunteers from our Matagorda complex in Bay City, Texas, work with the Audubon Society to collect bird data needed to understand changes in migration trends, ranges and population, which can be used to advocate for change if warranted.

At our Wesseling site in Germany, a bee hotel and flower patch were installed to protect and feed wild bees and other insects. Employee bee keepers also maintain honey bee hives there. Bees are one of the most important species in an ecosystem, pollinating 85% of all cultivated crops. Their presence is having a direct benefit on the local habitat and in 2020, the honey bees produced 200 jars of honey.

Other examples are our partnerships with the Texas State Aquarium and Houston Zoo to protect turtle communities. In December 2020, support from LyondellBasell helped rescue sea turtles suffering from hypothermia on Cape Cod, Massachusetts beaches. Fourteen of the 118 rescued Kemp's Ridley sea turtles – which are the smallest and most endangered sea turtle species – were successfully released into the Gulf of Mexico in early 2021. Six other species were also released.

RELATED UN SDG GOALS





RESILIENT, GLOBAL RESPONSE TO COVID-19

Throughout the pandemic, LyondellBasell continued to ensure the health and safety of our people, and the security of our manufacturing facilities and offices across the globe. As a critical infrastructure company, maintaining business continuity is paramount.

Knowing the materials produced by our plants go into products like face masks, hand sanitizer and COVID-19 test kits, our team took immediate action to ensure our manufacturing sites would continue to supply our customers. We also applied our GoalZERO safety approach. Like an injury or incident, we thoroughly investigate every confirmed COVID-19 case to learn and adapt our response. We set a goal of zero workplace infections and implemented many processes and tools to mitigate virus spread.

LyondellBasell has approximately 19,200 employees in 34 countries. In 2020, we had zero cases of workplace COVID-19 transmission. Zero workplace infections are a testament to our rigorous prevention measures. Beyond the standard protocols, noteworthy actions included:

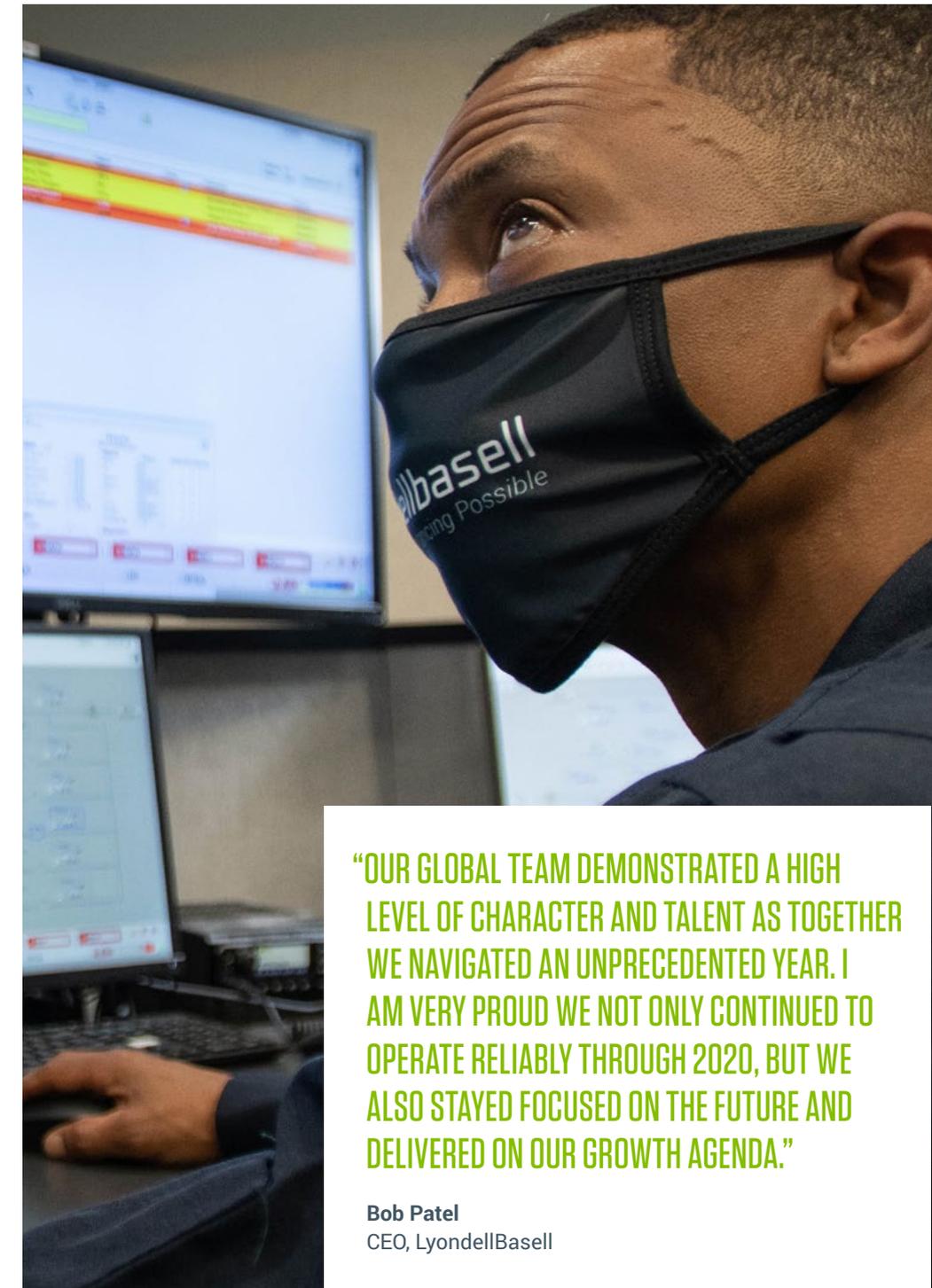
Externally

- Leveraged our global procurement network so that we experienced no shortages of masks, facial coverings or cleaning supplies at any of our sites.
- Collaborated with contractor organizations – from CEOs to employees – to share our processes across our industry for awareness and continuous improvement.

Internally

- Developed an intranet-based COVID-19 resource center allowing employees to track company performance relative to their local population of interest.
- Implemented digital Close Contact logs to expedite contact tracing, including installing automated logging systems at major project sites.
- Purchased COVID-19 antigen testing devices and established a vendor agreement to process PCR testing when appropriate.
- Created a call center for employees to share COVID-19-related concerns regarding symptoms, close contact situations, test results and travel.
- Encouraged use of our ethics reporting line for confidentiality or anonymity regarding COVID-19 concerns.

RELATED UN SDG GOALS



“OUR GLOBAL TEAM DEMONSTRATED A HIGH LEVEL OF CHARACTER AND TALENT AS TOGETHER WE NAVIGATED AN UNPRECEDENTED YEAR. I AM VERY PROUD WE NOT ONLY CONTINUED TO OPERATE RELIABLY THROUGH 2020, BUT WE ALSO STAYED FOCUSED ON THE FUTURE AND DELIVERED ON OUR GROWTH AGENDA.”

Bob Patel
CEO, LyondellBasell



COMMITMENT TO TACKLE GLOBAL FOOD INSECURITY

The pandemic highlighted social challenges throughout our communities including food insecurity. Across the globe, food bank organizations served an unprecedented number of families facing fewer resources and growing challenges.

Due to the overwhelming community need, LyondellBasell expanded existing partnerships with food bank organizations worldwide, donating \$1.3 million to provide food. The funds helped meet increased demand for food bank services while other funding sources decreased, non-profit staff hours were decreased, and logistics during the global pandemic became more complex. Advancing a more resilient, sustainable community is only possible when basic needs are met.

LyondellBasell employees also stepped up, contributing time and money as part of our annual Global Care Day. Despite the challenges of safely organizing and volunteering, over 80 manufacturing facilities and office sites hosted mobile food drives, built pop-up pantries, volunteered at food banks and delivered food in support of 87 non-profit organizations.

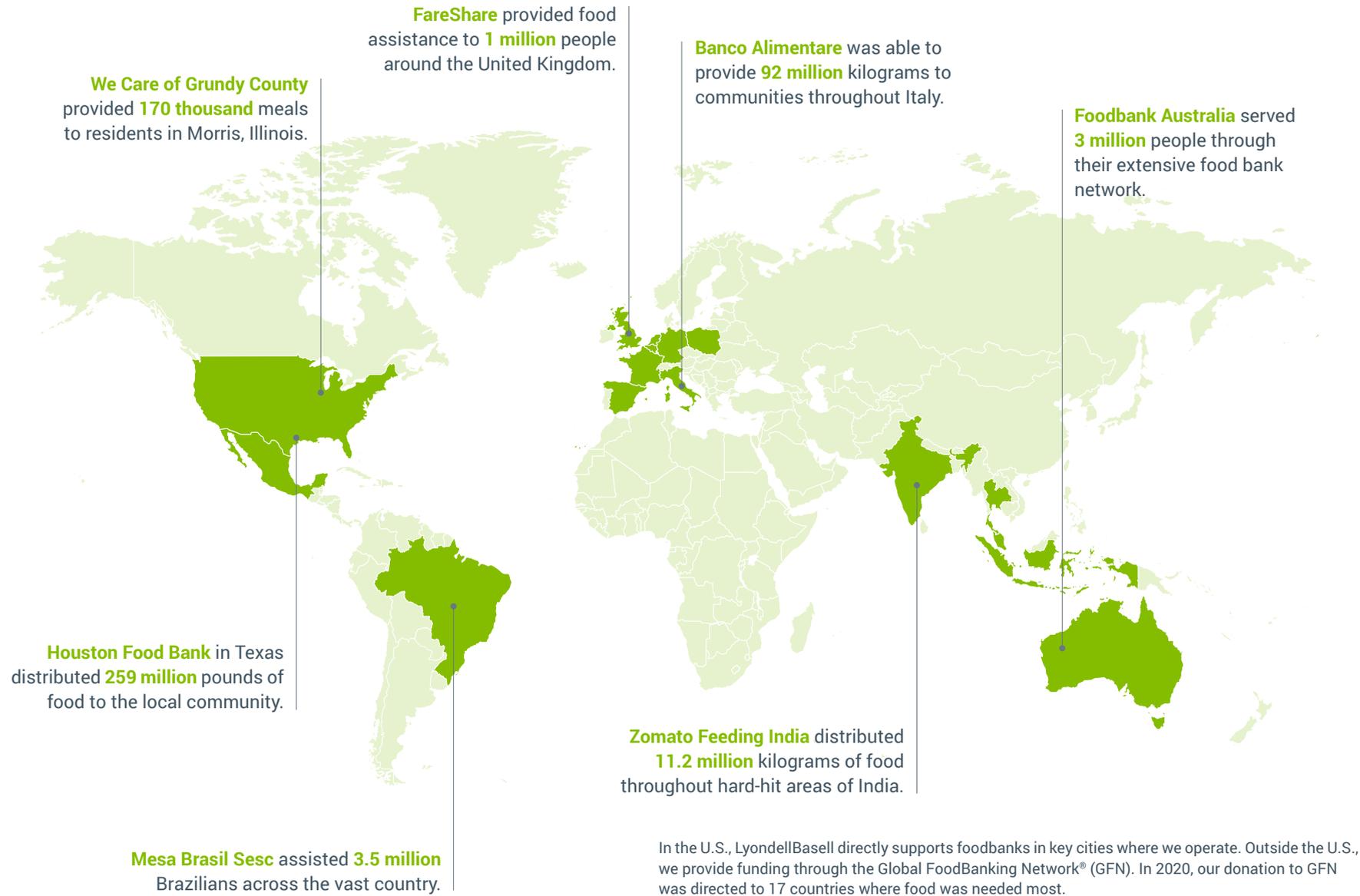
“Finding creative solutions to today’s challenges is what we do as a company, and our annual Global Care Day event is no different,” said Bob Patel, LyondellBasell CEO. “Cancelling our volunteer events in the communities where our employees live and work was not an option, especially when the need for a steady food supply are high and spirits are low. It was important to us to continue moving forward to help those who need it most.”

RELATED UN SDG GOALS



COMMITMENT TO TACKLE GLOBAL FOOD INSECURITY

LYONDELLBASELL'S PARTNER IMPACT AROUND THE WORLD IN 2020



“ADDRESSING THE GLOBAL FOOD CRISIS AND BUILDING COMMUNITY CAPACITY FOR A MORE RESILIENT FUTURE IS IMPORTANT TO US.”

Elizabeth Weiss
Head of Corporate Relations, LyondellBasell



GRI/SASB/UNGC DISCLOSURES



GRI GENERAL DISCLOSURES

Organizational profile

GRI 102-1

Name of the organization

LyondellBasell Industries N.V. (NYSE: LYB). Unless otherwise indicated, the “Company,” “we,” “our,” “us” and “LyondellBasell” are used in this report to refer to the businesses of LyondellBasell Industries N.V. and its consolidated subsidiaries.

GRI 102-2

Activities, brands, products and services

LyondellBasell is one of the largest plastics, chemicals and refining companies in the world.

Driven by its employees around the globe, LyondellBasell produces materials and products that are key to advancing solutions to modern challenges like enhancing food safety through lightweight and flexible packaging, protecting the purity of water supplies through stronger and more versatile pipes, improving the safety, comfort, and fuel efficiency of many of the cars and trucks on the road, and ensuring the safe and effective functionality of electronics and appliances.

We sell products into more than 100 countries and are the world’s largest producer of polypropylene compounds.

We participate globally across the petrochemical value chain and are an industry leader in many of our product lines. Our chemicals businesses consist primarily of large processing plants that convert liquid and gaseous hydrocarbon feedstocks into plastic resins and other chemicals.

Our customers use our plastics and chemicals to manufacture a wide range of products that people use in their everyday lives, including food packaging, home furnishings, automotive components, paints and coatings. Our refining business consists of our Houston refinery, which processes crude oil into refined products such as gasoline, diesel and jet fuel. We also develop and license chemical and polyolefin process technologies and manufacture and sell polyolefin catalysts.

For more information on our business, see our [2020 Annual Report on Form 10-K for the year ended December 31, 2020](#) (“2020 Form 10-K”), pages 4–21.

GRI 102-3

Headquarters location

London, United Kingdom
Rotterdam, Netherlands
Houston, Texas, United States

GRI 102-4

Location of operations

We maintain executive offices in London, the United Kingdom (U.K.); Rotterdam, The Netherlands; and Houston, Texas, in the United States (U.S.). We maintain research facilities in Lansing, Michigan; Channelview, Texas; Cincinnati, Ohio; Ferrara, Italy and Frankfurt, Germany. Our Asia-Pacific headquarters are in Hong Kong. We also have technical support centers in Bayreuth, Germany; Geelong, Australia and Tarragona, Spain. We have various sales facilities worldwide.

GRI 102-5

Ownership and legal form

LyondellBasell Industries N.V. is a global, independent chemical company and incorporated, as a Naamloze Vennootschap, under Dutch law.



GRI 102-6

Markets served

We manage our operations through six operating segments. Our reportable segments are:

Olefins and Polyolefins—Americas (“O&P—Americas”)

Our O&P—Americas segment produces and markets olefins and co-products, polyethylene (“PE”) and polypropylene (“PP”).

Olefins and Polyolefins—Europe, Asia, International (“O&P—EAI”)

Our O&P—EAI segment produces and markets olefins and co-products, PE and PP.

Intermediates and Derivatives (“I&D”)

Our I&D segment produces and markets propylene oxide (“PO”) and its derivatives; oxyfuels and related products; and intermediate chemicals, such as styrene monomer, acetyls, ethylene oxide and ethylene glycol.

Advanced Polymer Solutions (“APS”)

Our APS segment produces and markets compounding and solutions, such as PP compounds, engineered plastics, masterbatches, colors and powders, engineered composites and advanced polymers, which includes *Catalloy* and polybutene-1.

Refining

Our Refining segment refines heavy, high-sulfur crude oil and other crude oils of varied types and sources available on the U.S. Gulf Coast into refined products, including gasoline and distillates.

Technology

Our Technology segment develops and licenses chemical and polyolefin process technologies and manufactures and sells polyolefin catalysts.



CHEMICALS

We produce the chemical building blocks for:

- ▮ Furniture / household goods
- ▮ Coatings / adhesives / cleaners
- ▮ Cosmetics / personal care products
- ▮ Industrial fluids
- ▮ Fuel additives

POLYMERS

Our versatile plastic resins are used to create a variety of products including:

- ▮ Rigid and flexible packaging
- ▮ Textiles
- ▮ Automotive parts
- ▮ Healthcare
- ▮ Pipe
- ▮ Agricultural films/irrigation

ADVANCED POLYMERS

Our diverse portfolio is used to create customizable products including:

- ▮ Automotive parts
- ▮ Differentiated packaging
- ▮ Electronics/appliances
- ▮ Building and construction materials
- ▮ Oil field services
- ▮ Aerospace
- ▮ Pipe
- ▮ Agriculture
- ▮ Wire and cable

FUELS

Our refinery in the U.S. produces:

- ▮ Gasoline / fuel components
- ▮ Low-sulfur diesel
- ▮ Jet fuel

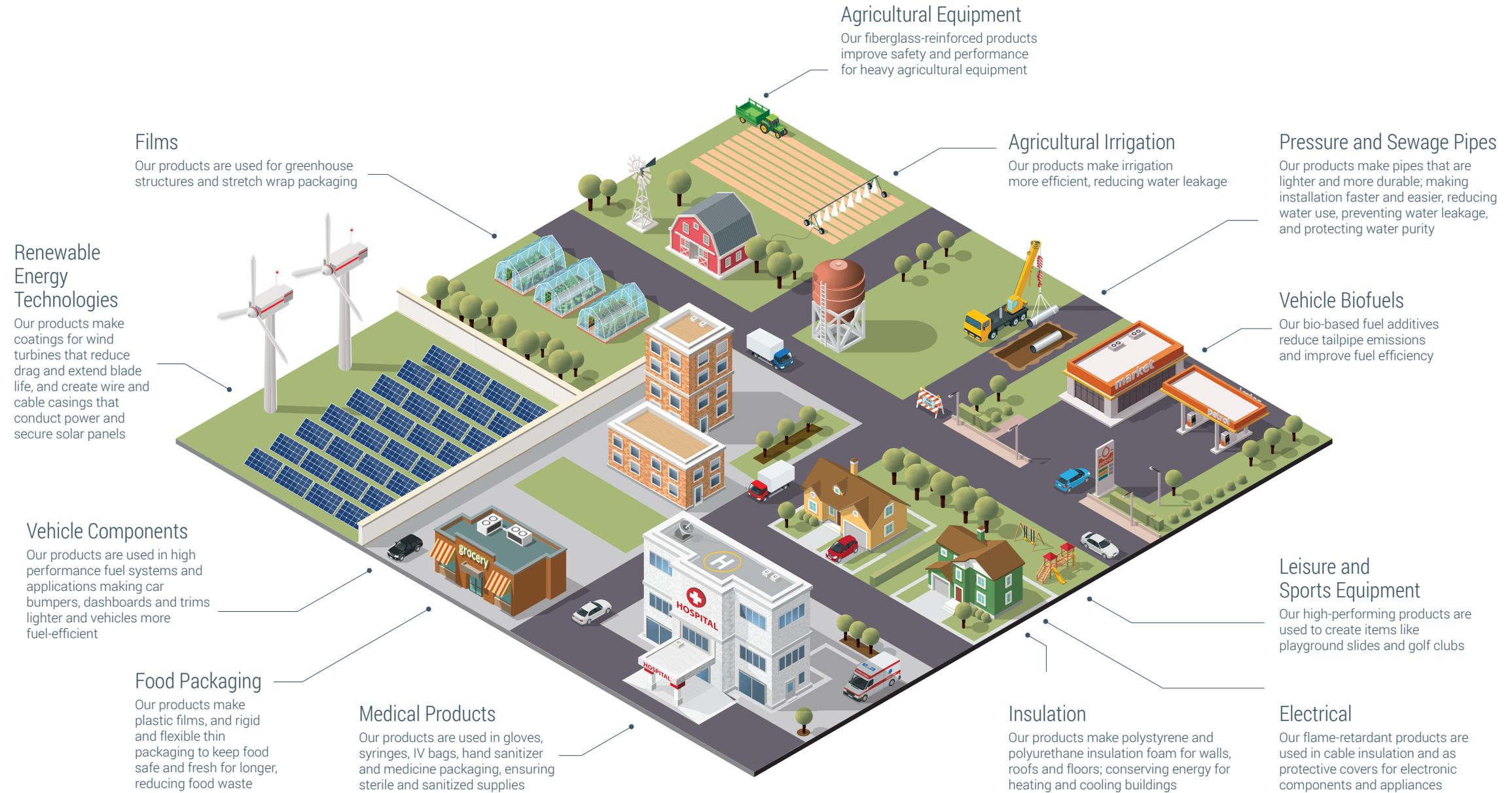
TECHNOLOGIES

We license our state-of-the-art manufacturing and process technologies

- ▮ Polyolefin catalysts
- ▮ Petrochemical process licenses

Our Products Advance Sustainable Living

Many of the chemicals and plastics we supply help create innovative products that meet the needs of modern society and contribute to sustainable development. Our products are found in nearly every sector of the economy.



**GRI 102-7****Scale of the organization**

Based on published capacity data and including our proportionate share of our joint ventures, we believe as of December 31, 2020, we were the:

- Second largest producer of ethylene in North America, with ethylene capacity of 6.2 million tons per year, including our share of our Louisiana-based joint venture capacity
- Third largest producer of PE in North America with 4.1 million tons per year including our share of our Louisiana-based joint venture capacity
- Largest producer of PP in North America, with 1.9 million tons per year, including our share of our Mexican joint venture capacity and approximately 280 thousand tons of *Catalloy* capacity reported within our Advanced Polymer Solutions segment
- Fifth largest producer of ethylene in Europe with an ethylene capacity of 1.9 million tons per year
- Largest producer of PE in Europe with 2.2 million tons per year of capacity, including our share of our joint ventures in Poland and The Netherlands
- Largest producer of PP in Europe with 2.7 million tons per year of capacity, including our share of our joint ventures in Poland, Belgium and The Netherlands, and approximately 265 thousand tons of *Catalloy* capacity reported within our Advanced Polymer Solutions segment
- Second largest producer of PO worldwide
- Second largest producer of oxyfuels worldwide
- Largest producer of PP compounds worldwide

For more information on our business, see our [2020 Form 10-K, pages 4–21](#). In our 2020 Form 10-K, tons refers to metric tons. For a synopsis of our financials for 2020, see [GRI 201 on page 49](#) of this report. For information on our significant shareholders, see our [2021 Proxy Statement, page 85](#). For information on our employee figures, see [GRI 102-8 on page 39](#) of this report.

GRI 102-8**Information on employees and other workers**

As of December 31, 2020, we employed approximately 19,200 full-time and part-time employees around the world. Of this total, 8,600 were in the U.S. and Canada and another 8,100 were in Europe. The remainder of our employees are in other global locations.

As of December 31, 2020, approximately 900 of our employees in the U.S. were represented by labor unions. Most of our employees in Europe and Latin America, and some of our employees in Asia Pacific, are subject to staff council or works council coverage or collective bargaining agreements.

In addition to our own employees, we use the services of contractors primarily to assist with non-core business functions.

Employees

	2020	2020
Global	19,190	Latin America (including Mexico) 797
Full-time	18,822	Full-time 796
Men	15,586	Part-time 1
Women	3,602	Asia Pacific 1,677
Undisclosed	2	Full-time 1,666
Part-time	368	Part-time 11
Men	136	Middle East & Africa 26
Women	232	Full-time 26
U.S./Canada	8,552	Part-time 0
Full-time	8,541	
Part-time	11	
Europe	8,138	
Full-time	7,793	
Part-time	345	

Data as of December 31, 2020. Part time is based on employment percentage (capacity utilization level). Anything less than 100% is reflected as part time.

GRI 102-9**Supply chain**

For information on our supply chain, see [GRI 102-2 on page 36](#), as well as [GRI 102-6 on page 37](#).

GRI 102-10**Significant changes to the organization and its supply chain**

In 2020, we formed a 50/50 joint venture with China's Liaoning Bora Enterprise Group (Bora). The joint venture operates under the name Bora LyondellBasell Petrochemical Co. Ltd. (BLYB). Located in Panjin, China, the BLYB facility includes a 1.1 million tons per year flexible naphtha / liquefied petroleum gas cracker and associated PE production capacity of 0.8 million tons per year and 0.6 million tons per year of PP. The materials produced at the facility serve various industries in China, including packaging, transportation, building and construction, healthcare and hygiene. The complex utilizes LyondellBasell's *Spheripol* and *Spherizone* PP technologies along with the Company's *Hostalen* ACP PE technology. We market all the PP and high-density polyethylene ("HDPE") produced. LyondellBasell hired 70 employees, most of whom are in Shanghai, to handle the commercial side of this joint venture.



Additionally, we formed a joint venture with Sasol in December 2020. The joint venture operates a 1.5 million ton ethane cracker, 0.9 million ton low density polyethylene (“LDPE”) and linear low density polyethylene (“LLDPE”) plants and associated infrastructure located in Lake Charles, Louisiana (U.S.). Each joint venture partner will prorate its share of ethane feedstocks and off-takes pro-rata shares of cracker and PE products. We operate the joint venture assets and market all the PE off-take through our global sales team. Approximately 400 Sasol employees who directly support the joint venture assets are now employees of LyondellBasell.

For more information, see our [2020 Form 10-K, page 92](#).

GRI 102-11

Precautionary principle or approach

As a signatory of the United Nations Global Compact, LyondellBasell affirms Principle 15 of the 1992 Rio Declaration that states “... where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.”

GRI 102-12

External initiatives

LyondellBasell subscribes and/or endorses the following environmental and social charters, principles or initiatives:

- Sustainability Accounting Standards Board
- United Nations Global Compact
- United Nations Sustainable Development Goals

We participate in initiatives across our industry and wider value chain that promote safe operations and address the reduction, recycling, reuse and repurposing of plastic waste including:

- Operation Clean Sweep (OCS) and OCS Blue
- Responsible Care®
- Alliance to End Plastic Waste
- Circular Plastics Alliance
- Sustainable Packaging Coalition
- New End Markets Opportunities (NEMO) for Film
- Materials Recovery for the Future (MRFF)
- The Recycling Partnership’s Polypropylene Recycling Coalition
- Pacific Northwest Secondary Sorting Demonstration Project

GRI 102-13

Membership of associations

LyondellBasell is a member of approximately 180 trade associations that provide a venue for the chemical, plastic and refining industries to lend our voices to issues that impact our industry. Dues paid to U.S.-based trade associations to which we contribute \$50,000 or more annually are disclosed in our [U.S. Political Activity Report](#).

We also participate in a variety of issue advocacy coalitions and alliances that seek to advance policy proposals focused on key priorities for the chemical and refining industries and the Company. We review these memberships annually to assess their business value and alignment with our policies and priorities. The Director of Government Relations has oversight over memberships in U.S. trade associations.

While we may not always agree with the positions taken by an association or its members, corporate memberships enable us to voice our concerns, perspectives and positions on proposed legislation and regulations.

The following is a partial list of the industry associations in which we are engaged:

- American Chemistry Council
- American Fuel & Petrochemical Manufacturers
- BusinessEurope
- Cefic (The European Chemistry Industry Council)
- China Petroleum and Chemical Industry Association
- European Petrochemical Association
- International Council of Chemical Associations
- National Association of Manufacturers
- PlasticsEurope
- Plastics Industry Association (U.S.)
- World Plastics Council

GRI 102-14

Statement from senior decision-maker

For the annual letter from our CEO regarding our sustainability strategy and approach, see [pages 3-11](#) of this report.

GRI 102-15

Key impacts, risks and opportunities

LyondellBasell’s priority environmental, social and governance (“ESG”) issues were refreshed in 2021. We conducted a materiality review to identify the sustainability issues of significance to our stakeholders, business and value chain.

For details of the materiality refresh, see [page 47](#) of this report.

For more information regarding our risk factors, see our [2020 Form 10-K, pages 21-32](#).

Ethics & Integrity

GRI 102-16

Values, principles, standards and norms of behavior

LyondellBasell upholds high ethical standards and is committed to complying with applicable laws and regulations. Our Code of Conduct sets out our expectations on topics such as respecting fellow employees, anti-corruption, conflicts of interest, trade compliance, anti-trust and competition law, insider trading, sanctions, misconduct and political donations. For more information, see our [Code of Conduct](#).

In 2020, we launched our Supplier Code of Conduct, in which we outline our environmental, health, safety, social, governance and ethical expectations for those with whom we do business. For more information, see our [Supplier Code of Conduct](#).

We also implemented a Human Rights Policy. This policy is guided by common principles found within the United Nations Universal Declaration on Human Rights and Guiding Principles for Business and Human Rights, and the International Labor Organization’s Declaration on Fundamental Principles and Rights at Work, among others, and it sets forth our commitment to respecting human rights throughout our global operations. For more information, see our [Human Rights Policy](#).

Minerals including tin, tantalum, tungsten and gold, known as conflict minerals, can be associated with human rights risks, if they are sourced from war-torn countries such as the Democratic Republic of Congo (DRC). We comply with conflict minerals laws and regulations and our Conflict Minerals Policy outlines our approach to sourcing responsibly. We outline the risks and report due diligence actions taken to manage risks with our suppliers in our annual [Conflict Minerals Report](#), filed with the U.S. Securities and Exchange Commission.

We currently have two products manufactured by our polyolefins business and three products manufactured by our APS business that contain tin which could be a conflict mineral if sourced from the DRC or an adjoining country. During 2020, we sourced tin from two suppliers, one of which was potentially sourced from a smelter with feedstock that originates in the DRC or an adjoining country.

GRI 102-17

Mechanisms for advice and concerns about ethics

We encourage employees to speak up if they have concerns about violations of Company policies or the law by reporting the issue to their supervisor or manager, human resources representative, or any member of the Legal or Compliance Department.

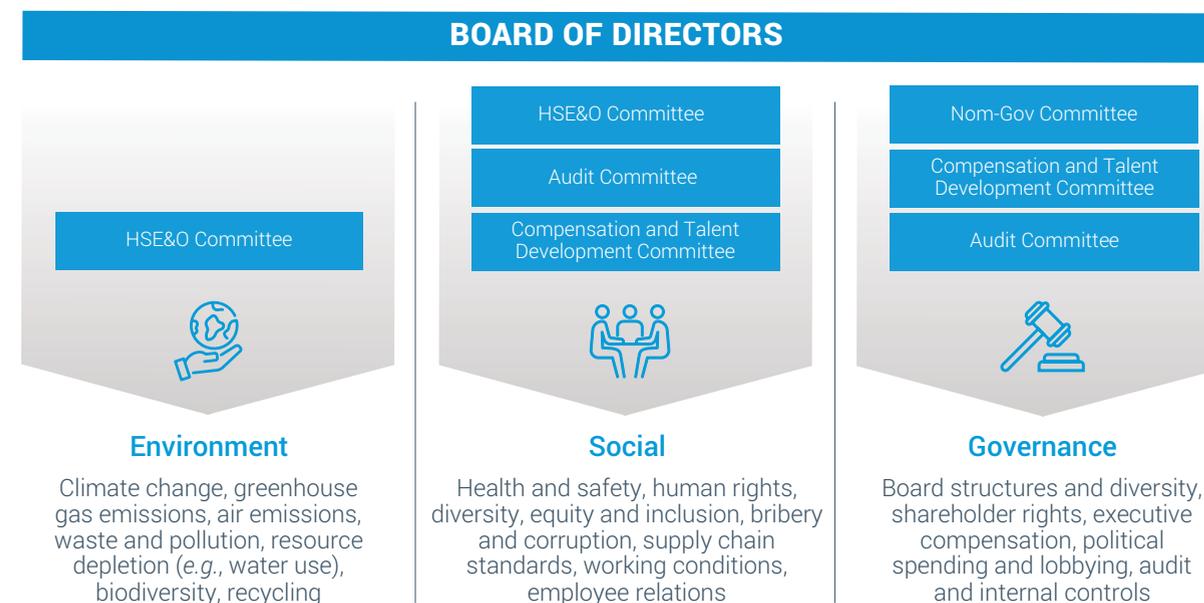
We also offer an independent whistleblower telephone helpline and website, which is available 24-hours a day and in multiple languages. It is operated by EthicsPoint, a company providing third-party reporting for many global companies. The whistleblower telephone helpline is available to any stakeholder. LyondellBasell prohibits retaliation against people raising concerns.

In 2020, we received a total of 82 reports through EthicsPoint, of which 83% were submitted anonymously and 32% were substantiated. Concerns reported included discrimination (including harassment and retaliation), misconduct or inappropriate behavior, conflicts of interests and environmental protection, health or safety law.

Governance

GRI 102-18

Governance structure



Our Board leads our commitment to sustainability and maintains oversight of the Company’s ESG profile. At the management level, our CEO oversees our ESG profile through regular reporting from his leadership team, including our Sustainability Steering Committee. For more information on our governance structure, see our [2021 Proxy Statement, pages 27-28](#).

GRI 102-19
Delegating authority

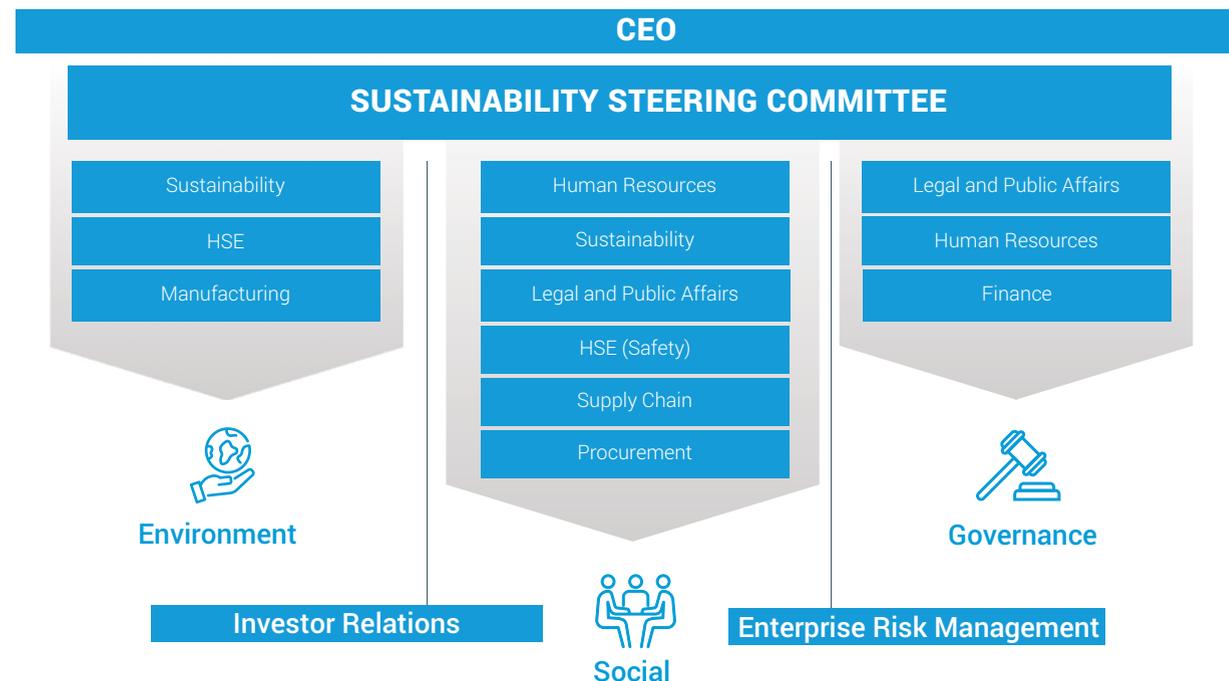
For governance structure and delegating authority, see our [2021 Proxy Statement, pages 27-28](#).

GRI 102-20
Executive-level responsibility for economic, environmental, and social topics

At the management level, our CEO oversees LyondellBasell’s ESG profile through regular reporting and discussion on key topics and initiatives with his direct reports.

The Sustainability Steering Committee, a subset of the CEO’s leadership team, meets monthly throughout the year and serves to align and embed the sustainability strategy within our corporate strategy, including by assessing progress toward the Company’s 2030 sustainability ambitions. The Committee is chaired by the Senior Vice President of R&D, Technology and Sustainability, who also functions as our Chief Sustainability Officer, and its membership includes the heads of each business segment as well as our finance, legal, public affairs, and Health, Safety and Environmental (HSE) functions.

The Chief Sustainability Officer is supported by a global group of employees, led by our Director, Global Sustainability, who is responsible for the management of sustainability programs. This group collaborates with leaders across the organization to bring together the functional expertise and skills needed to achieve our sustainability and ESG objectives.



GRI 102-21
Consulting stakeholders on economic, environmental, and social topics

Our Board welcomes investor and stakeholder input on environmental, social, governance, executive compensation, and other matters.

Specifically, in 2020, we discussed the Company’s strategy and ESG profile with investors representing at least 75% of our outstanding shares. This engagement effort included one-on-one meetings with investor ESG stewardship groups or portfolio managers. Our CEO and other members of senior management participate in these discussions, and our independent Board Chair makes himself available for discussion when appropriate. Investor concerns are integrated into our assessment of sustainability and climate issues where applicable.

GRI 102-22
Composition of the Board and its committees

For composition of the Board, see our [2021 Proxy Statement, pages 12-18](#). Board structure can be found on [pages 19-21](#). For committee information, see [pages 30-33](#).

GRI 102-23
Chair of the highest governance body

Our Board is led by an independent Chair. For information on our Board structure, see our [2021 Proxy Statement, pages 19-21](#).

GRI 102-24
Nominating and selecting the highest governance body

For information on our Board process and 2021 Nominees to the Board, see our [2021 Proxy Statement, pages 12-21](#).

GRI 102-25
Conflicts of interest

The Company has a Related Party Transaction Approval Policy that requires Audit Committee approval of certain transactions between the Company and related parties. During 2020, no transactions occurred that could have given the appearance of conflicts of interests or that effectively involved conflicts of interests. The Company also has a Conflicts of Interest Policy that governs the approval process for relationships of officers, directors and employees, that might conflict, or appear to conflict with the best interests of the Company.

For more information on Related Party Transactions, see our [2021 Proxy Statement, pages 34-35](#).

**GRI 102-26****Role of highest governance body in setting purpose, values, and strategy**

Our Board is responsible for overseeing the overall course of our business and achievement of our strategy. Each year, the Company's management develops both an annual financial operating plan and a multi-year strategic business plan, each of which are reviewed by the Board. Members of the Board are updated regularly by our management regarding the Company's progress in achieving its financial and strategic goals.

GRI 102-27**Collective knowledge of highest governance body**

Information about our Board's experience and expertise can be found in our [2021 Proxy Statement, pages 10-11](#).

GRI 102-28**Evaluating the highest governance body's performance**

Information about our Board's annual self-assessment process can be found in our [2021 Proxy Statement, page 20](#).

GRI 102-29**Identifying and managing economic, environmental, and social impacts**

Information on our Enterprise Risk Management organization can be found in our [2021 Proxy Statement, pages 24-25](#).

GRI 102-30**Effectiveness of risk management processes**

Information on the effectiveness of risk management can be found in our [2021 Proxy Statement, pages 24-25](#).

GRI 102-31**Review of economic, environmental, and social topics**

The results of risk management processes and updates on material risks are reported to the Board and its committees on a regular basis. The Audit Committee is responsible for ensuring that an effective risk assessment process is in place, and reports are made to the Audit Committee in accordance with NYSE requirements.

GRI 102-32**Highest governance body's role in sustainability reporting**

The HSE&O Committee of the Board reviews and approves our Sustainability Report annually.

GRI 102-33**Communicating critical concerns**

Shareholders and other interested parties may communicate with the Board or any individual director. Communications should be addressed to our Corporate Secretary at corporatesecretary@lyondellbasell.com or by mail:

LyondellBasell Industries, 4th Floor, One Vine Street, London W1J 0AH, United Kingdom.

GRI 102-34**Nature and total number of critical concerns**

No disclosure due to confidential nature of information.

GRI 102-35**Remuneration policies for the Board and senior executives**

Information on director and executive compensation can be found in our [2021 Proxy Statement, pages 36-59](#).

GRI 102-36**Process for determining remuneration**

Information on director and executive compensation can be found in our [2021 Proxy Statement, pages 36-59](#).

GRI 102-37**Stakeholders' involvement in remuneration**

Information regarding our annual say-on-pay and shareholder outreach can be found in our [2021 Proxy Statement, page 46](#).

GRI 102-38**Annual total compensation ratio**

Information on the annual total compensation of the global median employee and compensation of our CEO can be found in our [2021 Proxy Statement, page 70](#).

GRI 102-39**Percent increase in annual total compensation ratio**

Information on the annual total compensation of the global median employee and compensation of our CEO, can be found on [page 70 of our 2021 Proxy Statement](#) and [page 59 of our 2020 Proxy Statement](#).



Stakeholder Engagement

GRI 102-40

List of stakeholder groups

We engage with a broad range of stakeholders

- Customers
- Community
- Employees
- Government and regulators
- Industry associations
- Investors and shareholders
- NGOs
- Suppliers

GRI 102-41

Collective bargaining agreements

As of December 31, 2020, approximately 900 of our employees in the U.S. were represented by labor unions. Most of our employees in Europe and Latin America, and some of our employees in Asia Pacific, are subject to staff council or works council coverage or collective bargaining agreements.

GRI 102-42

Identifying and selecting stakeholders

Identifying and selecting stakeholders is based on an evaluation of those that impact or are impacted by our business.

GRI 102-43

Approach to stakeholder engagement

Our success depends on building relationships with our stakeholders. We engage with employees and external stakeholders through formal and informal channels to build trust and understanding. Through the exchange of information and collaboration on common goals, we aim to be a responsible, good neighbor in the communities where we operate and contribute to the betterment of society.

Onset of the COVID-19 pandemic required a greater focus on the ESG topics of employee health and safety, the safety and security of our operations, business continuity, and our role in addressing a human and societal crisis. We developed new tools to engage and inform our employees, including a series of special employee Town Hall meetings hosted by the CEO and the senior vice president of HSE. We used video calls to engage with all stakeholders including customers, suppliers, members of the community, our Community Advisory Panels (CAPs), and investors. Through our global corporate citizenship program *Advancing Good*, we invested in food banks across the world to address growing food insecurity. And we donated critical healthcare supplies such as hand sanitizer and personal protective equipment to healthcare workers and communities in need globally. Many of these activities are continuing in 2021.

The tables that follow provide an overview of our engagement with key stakeholders. Progress made in our sustainability activities can be found in Stories of Progress and related GRI/SASB disclosures in this report.

Local communities

We regularly meet with community members where we operate to share information about the Company and listen to concerns. At some of our manufacturing sites we engage through formal Community Advisory Panels. We also hold site tours for community leaders, elected officials, educational institutions, and the public. Through our philanthropic program and annual Global Care Day, the Company and our employee volunteers have a positive impact on hundreds of communities across the world.

Community Advisory Panels (CAPs)

Our CAPs are comprised of local residents who represent a cross-section of the community, including those living in nearby neighborhoods, and industry peers, local academia, and healthcare, business, and civic leaders. We organize our own CAPs to address stakeholder questions and concerns, as well as share information about our activities in the area. We also participate in community advisory groups with other companies. We currently engage with a total of 13 CAPs in the U.S. and Europe.

Below are key topics expressed by our CAPs in 2020:

Safety

- COVID-19 precautions
- How fire suppression systems work
- Rust and/or corrosion inspection procedures
- Understanding when public notification systems are utilized

Emergency management

- Freeze preparedness
- Flood precautions and preparedness
- Hurricane preparedness
- Shelter-in-place procedures
- Site safety



Emissions and air quality	<ul style="list-style-type: none"> • Controlling and mitigating fugitive air emissions • Controlling and mitigating flare emissions • Fence-line monitoring • How air emission exceedances are managed and reported
Water quality	<ul style="list-style-type: none"> • Groundwater quality, analysis, and reporting hazardous materials and storage • Methods of fighting fires, and managing environmental impacts of firewater runoff • Storage tank design, inspection, and maintenance and fire prevention
Other	<ul style="list-style-type: none"> • Managing post-consumer plastic waste and the Alliance to End Plastic Waste • Workforce development and apprenticeships

Government and regulators

We communicate with government, legislative and regulatory officials through issue-specific meetings, industry events and visits to our sites. We respond to public consultations to provide input and share expertise on future legislation or regulation.

Industry associations

We collaborate with industry and value chain partners to advance sustainable solutions. We belong to 180 industry associations worldwide, most of which are in the U.S. and Europe. Senior executives and more than 320 employees participate in industry association boards, committees and working groups.



Listening to our people

The voice of our employees informs many of the decisions made at LyondellBasell. We seek and receive input from our employees in many ways, including through the MyVoice biennial employee engagement survey.

In 2020, 68% of employees responded to the survey, which for the first time included the employees who joined the Company in connection with the A. Schulman acquisition in 2018. Of those responding:

- 84% feel proud to work for LyondellBasell
- 76% are excited about the Company's future
- 82% would recommend LyondellBasell as a good place to work

While we saw more favorable responses overall, employees pointed to the need for a more focused approach to diversity, equity and inclusion (DEI) and greater workplace flexibility.

In mid-2020, we appointed a Chief DEI Officer and engaged external experts to help us better assess our current workforce trends, collect feedback from our employees globally, and benchmark our employment practices and processes to gain an evidence-based understanding of improvement opportunities. See our Diversity & Inclusion disclosures on [page 58](#), [pages 64-66](#).

Employees whose jobs are suitable for telecommuting are eligible to work from home or an alternate work site up to two days per month, but the COVID-19 pandemic mandated that all employers, including LyondellBasell, provide more workplace flexibility. We are reviewing our current flexibility practices for the post-pandemic workplace and intend to implement changes that better promote wellness and balance for all employees.

The MyVoice employee engagement survey will be conducted again in 2022.



GRI 102-44

Key topics and concerns raised

Stakeholder Group

	Method of Engagement	Top ESG issues:
Customers	<p>We regularly speak with customers to improve our products, respond to their needs, and support sustainability commitments along the value chain. Customer surveys help us find ways to improve our products and customer service. Our sales representatives and technical experts work closely with customers to address concerns and provide product stewardship guidance. Customers regularly visit our manufacturing sites to review our operations and observe our compliance with international standards, such as ISO and International Automotive Task Force (IATF), and applicable laws and regulations.</p>	<ul style="list-style-type: none"> • Business continuity during COVID-19 • Circular economy, circular design and recycled content • Convenience for shoppers • Healthy, safe and sustainable products • Life cycle assessments, GHG footprint and environmental externalities • Plastic waste • Renewable feedstocks • Sustainable packaging solutions • Shift from “best-looking” products to “most sustainable”
Employees	<p>Employees have regular conversations with managers, and we also gather employee feedback through a company-wide employee engagement survey every two years, with our most recent survey in 2020. Employee-wide communications include regular news updates on our intranet site and a weekly global employee newsletter, quarterly newsletters at the major manufacturing sites, and social media updates. In early 2020, we created a special intranet site dedicated to COVID-19 topics to ensure employees have easy access to valuable information, including key local statistics, governmental requirements, vaccination information and Company protocols. Senior leaders regularly updated and communicated with employees online, including through virtual town hall events.</p> <p>In 2020, we created an Employee & Labor Relations group within Human Resources that is well positioned to receive employee feedback or concerns. And, in addition to contacting management or Human Resources (either their Business Partners or Employee & Labor Relations), employees can anonymously report concerns at any time through EthicsPoint, our third-party ethics helpline.</p>	<ul style="list-style-type: none"> • COVID-19 precautions • Diversity, equity, and inclusion • Energy consumption • Health and safety • Project announcements • Recruiting • Recycling • Remote work • Single-use plastic and plastic waste • State of the business • Water use
Investors and Shareholders	<p>We directly communicate our ESG progress with investors on a regular basis. We also provide periodic updates on our progress through investor conferences, Investor Day events, our website, and quarterly earnings communications.</p>	<ul style="list-style-type: none"> • Business continuity during COVID-19 • Circular economy • Climate risk disclosures and TCFD • Corporate governance and Board structure • Energy efficiency • Executive compensation • GHG commitments and science-based targets • Plastic waste • Renewable energy • Single-use plastics
NGOs	<p>We regularly engage with non-governmental organizations. These engagements take place through one-on-one discussions with senior leaders, as well as through coalitions that bring together stakeholders on sustainability topics that we advance.</p>	<ul style="list-style-type: none"> • Circularity • Community support in response to the COVID-19 pandemic • GHG commitments and science-based targets • Global threats to forests, marine plastics, freshwater ecosystems, wildlife, and climate • Human rights • Opportunities for underrepresented groups • Plastic waste • Public policy engagement
Suppliers	<p>We regularly engage with our suppliers to achieve our GoalZERO ambitions, with a particular focus on people, product and process safety. For example, we support contractors with comprehensive safety training at sites and hold annual contractor HSE forums where our CEO participates.</p>	<ul style="list-style-type: none"> • Biodiversity • Effluents and waste • Fossil fuel alternatives • Greening of the value chain • Impacts of COVID-19 on supply chain • Water use

Reporting Practice

GRI 102-45

Entities included in financial statements

For a listing of our consolidated subsidiaries and joint ventures included in our financial statements, see our [2020 Form 10-K, Exhibit 21](#).

GRI 102-46

Defining report content and topic boundaries

In this report we describe our approach to sustainability, and how we are developing products and solutions for a more sustainable future, protecting and investing in our people, managing our environmental footprint, and demonstrating our commitment to being a responsible, good neighbor in the communities where we operate.

The environmental, safety and employee data in this report relates to global operations at our majority-owned or operated manufacturing sites, pipelines, and large offices for 2020, unless stated otherwise. Financial data and narrative include our joint ventures to the extent appropriate under Generally Accepted Accounting Principles in the U.S. We report on our sustainability performance on an annual basis. Our 2019 Sustainability Report can be found on our website at www.lyondellbasell.com/sustainability.

GRI 102-47

Material aspects included

Our materiality assessment identifies the sustainability issues of significance to our stakeholders, business and value chain. We conducted our first materiality assessment in 2018, evaluating input from leaders across the Company. We identified 15 issues important to our stakeholders and businesses. In 2019, we tested this assessment with a variety of external stakeholders. Results of this engagement can be found in our 2019 Sustainability Report.

In January 2021, we refreshed our materiality assessment using Datamaran, a business analytics tool that identifies and monitors environmental, social and governance (ESG) external risks. In conducting this assessment, we considered the materiality of risks and opportunities that influence our financial performance and long-term enterprise value, as well as our impact on the economy, environment and society.

We also updated our topic mapping to increase granularity and capture emerging issues related to our business. In the chart that follows, we track topic changes from 2018 to 2021, and indicate the scale of impact as high, medium or low.



2018 Material Topics	2020 Material Topics	Summary of Change	Scale of Impact
Biodiversity and land	Biodiversity and land	No change	Low
Clean air	Clean air	No change	Medium
Climate change	Climate change	Now distinct topic	Medium
	Energy	Now distinct topic	Medium
Community development	Community development	No change	Low
Effluents & waste	Effluents & waste	No change	Medium
Employee engagement	Employee rights	Now distinct topic	Low
	Employee wellbeing	Now distinct topic	Low
	Fair & inclusive workplace	Now distinct topic	Medium
	Finding & nurturing talent	Now distinct topic	High
Health & safety	Health & safety	No change	High
Human rights	Human rights	No change	Medium
Plastic waste in the environment	Plastic waste in the environment	Now distinct topic	High
	Water pollution	Now distinct topic	Medium
Product responsibility	Product responsibility	No change	High
Socioeconomic value creation	Socioeconomic value creation	No change	Low
Sustainable & circular products	Innovation & technology	Now distinct topic	Medium
	Circular economy & sustainable solutions	Now distinct topic	High
Sustainable procurement	Sustainable procurement	No change	Low
Transparent & responsible business practices	Business ethics & compliance	Now distinct topic	High
	Critical incident risk management	Now distinct topic	Medium
	Customer privacy	Now distinct topic	Low
	Data security	Now distinct topic	High
	Governance structures & mechanisms	Now distinct topic	Low
	Responsible business practices	Now distinct topic	Medium
	Responsible investment	Now distinct topic	Low
	Responsible marketing and sales	Now distinct topic	Low
Transparency	Now distinct topic	Medium	
Water use	Water use	No change	Low

■ High ■ Medium ■ Low

**GRI 102-48****Restatements of information**

We enhanced our energy and greenhouse gas (GHG) emissions reporting systems in 2020, which included changes to CO₂ calculation methodologies with respect to types of fuels combusted, standardized emissions factors and reporting boundaries. We also corrected and expanded our GHG reporting to be more inclusive of sources and improve consistency. For these reasons, we are restating our CO₂ and energy performance data for 2019 and our baseline year 2015.

Additionally, adjustments to reportable waste quantities were made for 2017, 2018 and 2019 due to the addition of a new data reporting system and changes in effluent.

GRI 102-49**Changes in reporting**

Employees associated with our new joint ventures in China and Louisiana, U.S., are included in this report. As operator of the Louisiana facility, LyondellBasell will report environmental data associated with this joint venture in our 2021 Sustainability Report. For more information on these joint ventures, see [GRI 102-10, pages 39-40](#).

In 2019, we reported environmental data for the former A. Schulman sites acquired in 2018 separately. The 2019 and 2020 environmental data in this report includes these sites.

GRI 102-50**Reporting period**

Disclosures are based on the 2020 calendar year. Narrative may include relevant activities that took place during the 2021 calendar year.

GRI 102-51**Date of most recent report**

Our last report was released in September 2020.

GRI 102-52**Reporting cycle**

We report annually on our environmental, social and governance policies, progress and performance.

GRI 102-53**Report contact**

More information can be found at www.lyondellbasell.com/sustainability or you may contact us by email at sustainability@lyondellbasell.com.

GRI 102-54**Claims of reporting in accordance with the GRI Standards**

This report has been prepared in accordance with the GRI Standards: Core option.

GRI 102-55**GRI content index**

For our GRI Content Index, see [page 72 of this report](#).

For our SASB Standard: Resource Transformation – Chemicals, see [page 77 of this report](#).

For our UNGC Communication on Progress, see [page 79 of this report](#).

GRI 102-56**External assurance**

Our Scope 1 GHG emissions for sites operating under the European Union Emissions Trading System (EU ETS) are externally assured. Our 2020 Sustainability Report is not externally assured.



Economic

GRI 201-1

Direct economic value generated and distributed

Highlights of Consolidated Financial Statements

2020 Financials (\$ in millions)

	2018	2019	2020
Sales and other operating revenues	\$39,004	\$34,727	\$27,753
Operating income	\$5,231	\$4,116	\$1,559
Net income	\$4,690	\$3,397	\$1,427
Diluted weighted average share count (millions)	389	353	334
Diluted EPS (\$/share)	\$12.01	\$9.58	\$4.24
Diluted EPS excluding LCM and impairment (\$/share)	\$12.01	\$9.65	\$5.61
EBITDA	\$6,867	\$5,692	\$3,285
EBITDA excluding LCM and impairment	\$6,867	\$5,725	\$3,883
Cash flow from operating activities	\$5,471	\$4,961	\$3,404
Capital expenditures	\$2,105	\$2,694	\$1,947

2020 Sales by Region

U.S./Canada	45%
Europe	34%
Latin America (including Mexico)	6%
Rest of the World	15%

2020 EBITDA by Segment (\$ in millions)

O&P Americas	\$1,810
O&P EAI	\$826
I&D	\$833
APS	\$378
Refining	(\$871)
Technology	\$324
Other	(\$15)

For information about our financial performance, see our 2020 Form 10-K.

INFORMATION RELATED TO FINANCIAL MEASURES – This report makes reference to certain “non-GAAP” financial measures as defined in Regulation G of the U.S. Securities Exchange Act of 1934, as amended. EBITDA, as presented herein, may not be comparable to a similarly titled measure reported by other companies due to differences in the way the measure is calculated. We calculate EBITDA as income from continuing operations plus interest expense (net), provision for (benefit from) income taxes, and depreciation & amortization. EBITDA should not be considered an alternative to profit or operating profit for any period as an indicator of our performance, or as an alternative to operating cash flows as a measure of our liquidity.

We also present EBITDA and diluted EPS exclusive of adjustments for lower of cost or market (“LCM”) and impairment. LCM is an accounting rule consistent with GAAP related to the valuation of inventory. Our inventories are stated at the lower of cost or market. Cost is determined using the last-in, first-out (“LIFO”) inventory valuation methodology, which means that the most recently incurred costs are charged to cost of sales and inventories are valued at the earliest acquisition costs. Fluctuation in the prices of crude oil, natural gas and correlated products from period to period may result in the recognition of charges to adjust the value of inventory to the lower of cost or market in periods of falling prices and the reversal of those charges in subsequent interim periods as market prices recover. Property, plant and equipment are recorded at historical costs. If it is determined that an asset or asset group’s undiscounted future cash flows will not be sufficient to recover the carrying amount, an impairment charge is recognized to write the asset down to its estimated fair value.

Reconciliation of Net Income to EBITDA, including and excluding LCM and impairment (\$ in millions)

	2018	2019	2020
Net income	\$4,690	\$3,397	\$1,427
Loss from discontinued operations, net of tax	\$8	\$7	\$2
Income from continuing operations	\$4,698	\$3,404	\$1,429
Provision for (benefit from) income taxes	\$613	\$648	(\$43)
Depreciation and amortization	\$1,241	\$1,312	\$1,385
Interest expense, net	\$315	\$328	\$514
add: LCM charges, pre-tax	\$0	\$33	\$16
add: Impairment of long-lived assets, pre-tax	\$0	\$0	\$582
EBITDA excluding LCM and impairment	\$6,867	\$5,725	\$3,883
less: LCM charges, pre-tax	\$0	(\$33)	(\$16)
less: Impairment of long-lived assets, pre-tax	\$0	\$0	(\$582)
EBITDA	\$6,867	\$5,692	\$3,285

**Reconciliation of Diluted EPS to Diluted EPS excluding LCM and impairment (\$/share)**

	2018	2019	2020
Diluted EPS	\$12.01	\$9.58	\$4.24
add: LCM charges	\$0	\$0.07	\$0.03
add: Impairment of long-lived assets	\$0	\$0	\$1.34
Diluted EPS excluding LCM and impairment	\$12.01	\$9.65	\$5.61

GRI 201-2**Financial implications and other risks and opportunities due to climate change**

Capital expenditures or operating costs for environmental compliance, including compliance with potential legislation and potential regulation related to climate change, cannot be predicted with certainty, but we do not believe they will have a material effect on our competitive position.

While there can be no assurance that physical risks to our facilities and supply chain due to climate change will not occur in the future, we do not believe these risks are material in the near term.

We are expanding our climate risk and opportunity assessment and will include disclosures aligned with Task Force for Climate-Related Financial Disclosures (TCFD) beginning in 2021. TCFD provides a framework to further strengthen governance, create strategy, assess risk, and establish metrics that will guide our efforts as we integrate sustainability into our business strategy.

For more information on our climate-related risks and opportunities, see [pages 29-30 of our 2020 Form 10-K](#) and our CDP response.

GRI 201-3**Defined benefit plan obligations and other retirement plans**

We have defined benefit pension plans that cover employees in the U.S. and various non-U.S. countries. We also sponsor post-retirement benefit plans other than pensions that provide medical benefits to certain of our U.S., Canadian and French employees. In addition, we provide other post-employment benefits, such as early retirement and deferred compensation severance benefits to employees of certain non-U.S. countries.

As of December 31, 2020, the projected benefit obligation for our pension plans exceeded the fair value of plan assets by \$1,482 million. Subject to future actuarial gains and losses, as well as future asset earnings, we, together with our consolidated subsidiaries, will be required to fund the discounted obligation of \$1,482 million in future years. We contributed \$74 million and \$97 million to our pension plans in 2020 and 2019, respectively. We pay other unfunded postretirement benefits as incurred.

We estimate a contribution of \$135 million to our pension plans in 2021.

For more information on our pension and other post-retirement benefits see our [2020 Form 10-K, page 51](#) and [pages 109-121](#).

Anti-Corruption**Management Approach**

LyondellBasell places the highest value on integrity and ethical conduct. We view compliance with all applicable laws as the responsibility of all employees and business partners.

Our Anti-Corruption Policy makes clear our commitment to detecting and preventing corruption by our employees and those acting on our behalf. For more information about our approach to anti-corruption, see our [Anti-Corruption Policy](#).

GRI 205-1**Operations assessed for risks related to corruption**

We utilize the Transparency International Corruption Perceptions Index, the Resource Guide to the Foreign Corrupt Practices Act published by the U.S. Department of Justice and the Securities and Exchange Commission, the U.K. Bribery Act Guidance, various guidance provided in the U.S. Department of Justice settlement documents, and Evaluation of Corporate Compliance Programs published by the U.S. Department of Justice Criminal Division to assess risks related to corruption in the countries in which we operate.

We periodically conduct internal and external audits of the books and records of every subsidiary, joint venture, and affiliate to ensure compliance with the anti-corruption, anti-bribery, and commercial bribery laws.

GRI 205-2**Communications and training on anti-corruption**

New employees receive ethics and compliance training which includes the Company's Code of Conduct, and Anti-Corruption and Antitrust/Competition Law policies and procedures, and all employees are required to complete annual refresher training. In 2020, 100% of LyondellBasell employees received training on the Code of Conduct. Additionally, some contractors receive Code of Conduct training based on their job function in the Company.



Anti-Competitive Behavior

Management Approach

LyondellBasell must avoid any agreements with other companies that limit competition between them. This policy applies to all persons and entities acting for or on behalf of LyondellBasell, including but not limited to our employees. For more information, see our [Antitrust/Competition Law Policy](#).

GRI 206-1

Anti-competitive behavior

In 2020, LyondellBasell had no legal actions pending or completed regarding anti-competitive behavior, violations of antitrust, or monopoly legislation in which the Company was identified as a participant.

Tax

GRI 207-1

Approach to tax

We are a tax resident in the United Kingdom and are subject to the United Kingdom corporate income tax system. LyondellBasell Industries N.V. has little or no taxable income of its own because, as a holding company, it does not conduct any operations. Through our subsidiaries, we have substantial operations world-wide. Taxes are primarily paid on the earnings generated in various jurisdictions where our subsidiaries operate, including the U.S., The Netherlands, Germany, France, and Italy. For more information, see our [U.K. Tax Strategy](#).



Environmental

Management Approach

LyondellBasell is one of the largest plastics, chemicals and refining companies in the world. We produce products that are the basic materials used to manufacture countless goods and products that people use every day. Our conventional products are made from fossil-based feedstocks and we also make products from recycled and renewable-based resources.

We provide stewardship of our processes and products, practice pollution prevention and optimize resource use across the product life cycle.

Because our business is dynamic and subject to change based on production volumes, feedstocks and other business factors, our environmental metrics are reported in absolute (total) and intensity (rate per metric ton of product) terms to more clearly reflect our performance.

In 2021, our Wesseling, Germany, cracker and European polymer sites obtained the International Sustainability and Carbon Certification (ISCC) PLUS certification. As a result of this certification, LyondellBasell will offer mass balance certificates for its advanced (molecular) recycled and renewable-based *Circulen* polymers. The ISCC PLUS certification is well-recognized for its global certification of recycled and renewable-based materials and provides traceability along the supply chain. With the mass balance method, we track how much advanced recycled and renewable-based source material goes into the production process of our *Circulen* products and can attribute it to the final polymer via a Sustainability Declaration.

In addition to the ISCC PLUS certification, LyondellBasell can also offer a Carbon-14 analysis for certain products. Carbon-14 analysis is a reliable method to determine the percentage of renewable content in a physical product.

GRI 301-1

Materials used by weight or volume

Non-renewable materials

We produce ethylene and propylene at our olefins plants. The primary raw materials used in our Americas olefin facilities are natural gas liquids or NGLs (ethane, propane and butane) and heavy liquids. Heavy liquids include crude oil-based naphtha and other refined products, as well as condensate, a very light crude oil resulting from natural gas production. The primary raw material used in our European olefin facilities is naphtha; however, we also use liquified petroleum gases or LPGs (propane, butane and heavier hydrocarbons), condensates and other advantaged feedstocks.

We use ethylene and propylene to make a variety of chemical products and derivatives, including polymers such as PE and PP, intermediates and derivatives such as PO, and convert PP into PP compounds.

Propylene, butanes, ethylene and benzene are the primary raw materials used in the production of PO and its co-products. A co-product of our PO production is tertiary butyl alcohol (“TBA”) which is used to manufacture methyl tertiary butyl ether

(“MTBE”) and ethyl tertiary butyl ether (“ETBE”), also called oxyfuels. Our ETBE is partly made from renewable feedstocks and we are evaluating and testing additional renewable feedstocks for oxyfuel production. See story on [page 26](#) of this report. We consume a significant portion of our internally-produced PO in the production of PO derivatives.

The principal materials used in the production of our compounding and solutions products are PP, PE, polystyrene, nylon and titanium dioxide. The principal raw materials used in the production of our advanced polymers are ethylene, propylene and butene-1.

We operate one refinery, located in Houston, Texas. It is a full conversion refinery designed to refine heavy, high-sulfur crude oil. U.S. production is predominantly light sweet crude and much of the heavy crude has generally been imported from Canada, Mexico and other global producers, which has at times been subject to supply disruptions.

Renewable-based materials

In 2019, we launched production of polymers made from feedstock derived from renewable materials such as bio-based waste and residue oils, which can be used in our existing crackers around the world. An independently reviewed life cycle assessment study demonstrated that the carbon footprint of these polymers is reduced by up to 75% when compared with a fossil based polymer*.

Our APS segment utilizes renewable raw materials that include bio-based polymers such as PE and polylactic acid, as well as bio-based additives. We offer ISCC certification and Carbon-14 analysis for APS renewable-based products.

Recycled materials

Feedstock for Quality Circular Polymers (QCP), our 50/50 joint venture with SUEZ, is supplied by SUEZ. QCP converts plastic waste into recycled PP and recycled HDPE. SUEZ is a leader in the collection, separation and preparation of waste materials. In 2020, QCP increased production capacity of recycled material to approximately 55,000 metric tons per year. See story on [page 23](#) of this report.

Advanced (molecular) recycling is an emerging technology that is complementary to mechanical recycling. In the advanced recycling process, plastic waste is broken down into its basic chemical building blocks through a pyrolysis process. We are developing a proprietary molecular recycling technology, called *MoReTec*, that uses a catalyst in the pyrolysis process to improve the breakdown of plastic waste. The resulting chemicals can be used to make new polymers for use in a wide variety of applications. See story on [page 13](#) of this report.

Our APS segment utilizes post-industrial and post-consumer recycled raw materials. These raw materials include various recycled polymers such as PE, polyamides, polycarbonates and polystyrene that comprise several product offerings.

* When applying a waste-like approach to all raw materials of the feedstock, which implies that no upstream burdens have been allocated to these raw materials.



Energy

Management Approach

We strive to optimize energy use in our operations, reducing both our resource consumption and resulting CO₂ emissions in line with our climate goal and in compliance with legal requirements. We are deploying solutions at our most energy intensive manufacturing sites to reduce carbon emissions, including the use of lower carbon-intensive fuels, and process and energy optimization.

In 2020, our energy consumption decreased by 4%, primarily due to a COVID-19 pandemic-related decrease in production volumes at some sites. These manufacturing slowdowns also led to a decreased energy efficiency across the company.

GRI 302-1

Energy consumption within the organization (Scopes 1 + 2)

GRI 302-3

Energy intensity

Energy use (million gigajoules)

	2015	2019	2020
Energy use	402	398	382
Energy intensity (Scopes 1 & 2) Gigajoules per metric ton of product	9.99	9.53	9.69

Our energy data encompasses manufacturing facilities, major pipelines and large regional offices.

In 2020, we enhanced our energy and GHG reporting systems, which included changes to CO₂ calculation methodologies with respect to types of fuels combusted, standardized emissions factors and reporting boundaries. We also corrected and expanded our GHG reporting to be more inclusive of sources and improve consistency. For these reasons, we are restating our CO₂ and energy performance data for 2019 and our baseline year 2015.

GRI 302-4

Energy reductions

In 2020, we expanded our assessment of flare systems at our major sites with the aim of increasing our product recovery rates in flare gas recovery systems, minimizing steam, and optimizing supplemental gas associated with flare operations. Projects implemented in our European and U.S. sites in 2020 resulted in a reduction in energy use of 1.27 million gigajoules and associated emissions reduction of approximately 79,500 metric tons of CO₂.

Water

Management Approach

Water is an essential resource for our operations. We use water both in operations (primarily cooling towers and steam production) and as potable water for drinking and sanitary use at our sites and offices.

Our refining and manufacturing sites reuse water to reduce the amount of ground and freshwater withdrawn. For example, the majority of our large sites use recirculating water systems for cooling.

We manage water in accordance with permitted limits for discharge destination and water quality, and our Operational Excellence systems support ongoing compliance. Many of our larger sites operate their own wastewater treatment facilities, which allows for increased control over our water efficiency and quality of our discharges.

GRI 303-1

Water as a shared resource

More than half of the water we use comes from surface water and the remainder is split between groundwater and potable water. The source of water we use in operations varies by region. We use a small amount of potable water and source a small amount of recycled water from some industrial providers located close to our manufacturing sites. Some of our sites use sea water for cooling, while others draw water from freshwater sources, such as rivers, aquifers or local water supplies.

We recycle our supply of water, when possible, to limit the amount we draw from regional supplies.

GRI 303-3

Water withdrawal

Water stress refers to the ability, or lack thereof, to meet the human and ecological demand for water while considering water availability, water quality and accessibility of water. We used the WRI Aqueduct Water Risk Atlas tool to conduct a baseline water stress assessment of our manufacturing sites. Sites were classified on a scale from low to extremely high water stressed based on several of the tool's indicators, including water quantity, quality and geographic location.

According to the WRI Aqueduct Water Risk Atlas tool, the majority of our sites are classified as low water stress. Our sites located in extremely high or high water stressed areas of the world are PP compounding facilities. These sites use very little water relative to our olefin and propylene oxide/styrene monomer operations, which require large amounts of water and are in low or medium water-stressed areas. Approximately 10% of our sites are in extremely high water stressed areas, representing less than 1% of our water consumption in 2020.

We aim to develop a sustainable water management strategy which will consider a variety of factors including results from the tool, knowledge of our sites and specific watershed challenges, and the impact of our water withdrawal and consumption on the local watershed and community. In 2021, we plan to participate in a water stewardship program in the U.S. to better understand our local water bodies, impacts, and opportunities.

**Water withdrawal (million m³)**

	2017	2018	2019	2020
Total	232.0	243.8	253.4	259.3
Fresh surface water	98.8	107.7	104.6	115.8
Groundwater	26.4	26.4	26.9	23.2
Potable water	9.1	9.7	23.6	20.2
Seawater/brackish water	73.3	73.3	73.2	73.0
Other water	24.4	26.7	25.1	27.1

GRI 303-4**Water discharge****Water discharge (million m³)**

	2017	2018	2019	2020
Total	134.7	150.3	155.8	177.3
Fresh surface water	35.4	53.5	52.2	40.0
Groundwater	0	0	0.2	0.2
Offsite treatment	5.0	6.3	10.6	18.4
Seawater/brackish water	75.9	73.8	77.5	77.0
Other sources	18.4	16.7	15.3	41.7

GRI 303-5**Water consumption****Water consumption (million m³)**

	2017	2018	2019	2020
Total	97.3	93.5	97.6	82.0
of which evaporative losses			72.8	75.1

Emissions**Management Approach**

Climate change is one of the most important global challenges both now and for future generations. We support the ambitions of the Paris Agreement and are working to reduce the intensity of GHG emissions from our operations and deliver solutions that help advance a low-carbon economy. We are also working to meet customer demand for products with a lower carbon footprint.

We intend to update our 2030 CO₂ reduction goal on an ongoing basis and expect it to evolve as we begin to see the results of the current program. We are also in the process of, and committed to, developing our climate ambition beyond 2030.

We are dedicated to preventing pollution, complying with all laws and the terms of our permits, evaluating and adopting appropriate pollution controls, and closely monitoring and controlling our emissions.

CO₂ Reduction Program

Our goal is to achieve a 15% reduction in CO₂ emissions per metric ton of product produced by 2030, as compared with 2015 levels. To achieve this, we organized a global CO₂ team comprised of experts from manufacturing, R&D, technology, procurement, risk management and sustainability. This team is responsible for identifying capital investments, research and development needs, and technology requirements to reduce carbon emissions.

Our CO₂ Reduction Program includes:

- Increasing our use of renewable energy, both generated on-site and purchased from off-site projects, and recovering and reusing waste heat to produce electricity
- Improving operational energy efficiency and reducing energy consumption
- Introducing lower carbon feedstocks made from renewable resources and plastic waste
- Working with our transportation partners to accurately measure CO₂ emissions from freight operations, and to identify low-carbon solutions for the transport of raw materials and products
- Offering products that reduce emissions such as biofuels and materials that make vehicles lighter and more fuel efficient, and building materials that improve energy efficiency
- Exploring break-through technologies that advance low-carbon production processes

Our program focuses on assessing and implementing carbon reduction initiatives at two of our six largest sites in Europe. We will take a similar phased approach at our U.S. sites, and in the future evaluate our other global operations.

Projects currently underway include a circular steam project with our joint venture partner Covestro at our shared site in Maasvlakte, the Netherlands, which is expected to reduce 140,000 metric tons of CO₂ emissions and save 0.9 petajoule of energy annually. A renewable energy project is under construction at our site in Tarragona, Spain, where a 7-megawatt solar park is being installed.

In 2020, approximately 20% of our R&D budget was used to invest in the development of innovative lower-carbon products and technologies.



GRI 305-1 Direct GHG emissions (Scope 1)

GRI 305-2 Indirect GHG emissions (Scope 2)

GRI 305-4 GHG emissions intensity

GHG emissions (million metric tons of CO₂e)

	2015	2019	2020
Scope 1 emissions	14.4	15.3	15.4
Scope 2 emissions	8.7	8.7	8.7
Total emissions	23.1	24.0	24.1
GHG intensity (metric tons of CO₂e per metric ton of product)	0.575	0.575	0.611

Scope 1: Direct emissions from sites operated by LyondellBasell

Scope 2: Indirect emissions from external electricity and steam suppliers

In 2020, we enhanced our energy and GHG reporting systems, which included changes to CO₂ calculation methodologies with respect to types of fuels combusted, standardized emissions factors and reporting boundaries. We also corrected and expanded our GHG reporting to be more inclusive of sources and improve consistency. For these reasons, we are restating our CO₂ and energy performance data for 2019 and our baseline year 2015.

To compile our GHG emissions, we use the following methodologies:

- The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
- American Petroleum Institute Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Natural Gas Industry, 2009
- IPIECA's Petroleum Industry Guidelines for reporting GHG emissions, 2nd edition, 2011

Our energy and CO₂ data currently encompasses manufacturing facilities, major pipelines and large regional offices. Small offices are not included as they have been determined to be non-material (less than 0.5% of our emissions). LyondellBasell uses vehicles at some manufacturing sites for internal site transportation. They are excluded from CO₂ reporting as the amount of fuel consumed is negligible in comparison to fuel consumed by fired equipment (e.g., steam boilers or furnaces) and represents less than 0.1% of total emissions.

In Europe, our operations participate in the European Union Emissions Trading System (ETS) and we purchase annual emission allowances to meet our obligations. The EU sites subject to ETS represent approximately 30% of our total Scope 1 emissions.

GHG emissions increased slightly in 2020. The marginal increase in emissions mostly reflects the altered manufacturing profile of our businesses due to COVID-19, with changes to the product mix and overall drop in manufacturing volumes also contributing to a 6% increase in GHG intensity. A decrease in flaring and process emissions helped to reduce our total emissions.

GRI 305-6 Ozone-depleting substances (ODS)

In 2020, we emitted 160 kg of ODS. We measure and report ODS as kg of CFC-11 equivalent and use emission factors as stipulated in the Montreal Protocol.

GRI 305-7 NO_x, SO_x and other emissions

Nitrogen oxides (NO_x)

NO_x are by-products of combustion that are generated while burning fuels to produce heat, steam or electricity. Boilers and furnaces in our chemical and refining operations are the source of most of our NO_x emissions. In 2020, we emitted 7,378 metric tons of NO_x.

Sulfur oxides (SO_x)

In our operations, SO_x emissions come from burning fuel that contains small amounts of sulfur, and from the process of removing sulfur from fuel products at our Houston, Texas, refinery. In 2020, we emitted 1,021 metric tons of SO_x.

Volatile organic compounds (VOCs)

VOCs are associated with the chemicals and fuels we handle and produce and are released into the atmosphere during chemical and fuel production. VOCs can be released from point sources or through fugitive emissions from pump seals, valves and other equipment. We have extensive programs in place to identify and repair leaks, including using infrared camera technology. In 2020, we emitted 7,154 metric tons of VOCs.

Carbon monoxide (CO)

CO is produced when fuels are burned to produce heat, steam or electricity. The majority of our CO emissions come from burning natural gas at our chemical and refining operations. In 2020, we emitted 5,722 metric tons of CO.

Particulate matter (PM)

PM refers to small airborne particulates emitted during production, primarily from cooling towers and burning fuel. Since 2012, we have worked to reduce these emissions by improving heaters and furnace operations. In 2020, we emitted 1,005 metric tons of PM.

Air emissions (metric tons)

	2017	2018	2019	2020
NO_x	8,057	7,766	7,475	7,378
SO_x	1,589	1,348	1,338	1,021
VOCs	8,098	7,453	7,189	7,154
CO	5,301	5,231	5,563	5,722
PM	1,305	1,197	1,173	1,005
ODS (kilograms of CFC-11 equivalent)	59	74	160	160

ODS reported excludes ODS destroyed, recycled or reused.

Air emissions intensity (metric tons per million metric tons of product)

	2017	2018	2019	2020
NOx intensity	201	188	179	187
SOx intensity	40	33	32	26
VOC intensity	202	180	172	182
CO intensity	132	127	133	145
PM intensity	33	29	28	26

Waste

Management Approach

We take every opportunity to avoid generating waste, reusing it in our operations wherever possible. Most of the waste we produce is dilute hazardous liquid aqueous waste from chemical plant operations. Our operations also produce non-hazardous solid waste including general plant trash and construction and demolition debris. All waste disposal is managed in accordance with applicable regulations. In 2020, 76% of waste was disposed to land, including landfills and permitted injection wells.

GRI 306-3 Waste generated

Waste by type (thousand metric tons)

	2017	2018	2019	2020
Total waste	1,870	1,999	1,881	1,966
Non-hazardous waste	113	687	672	739
Hazardous waste	1,757	1,312	1,209	1,227

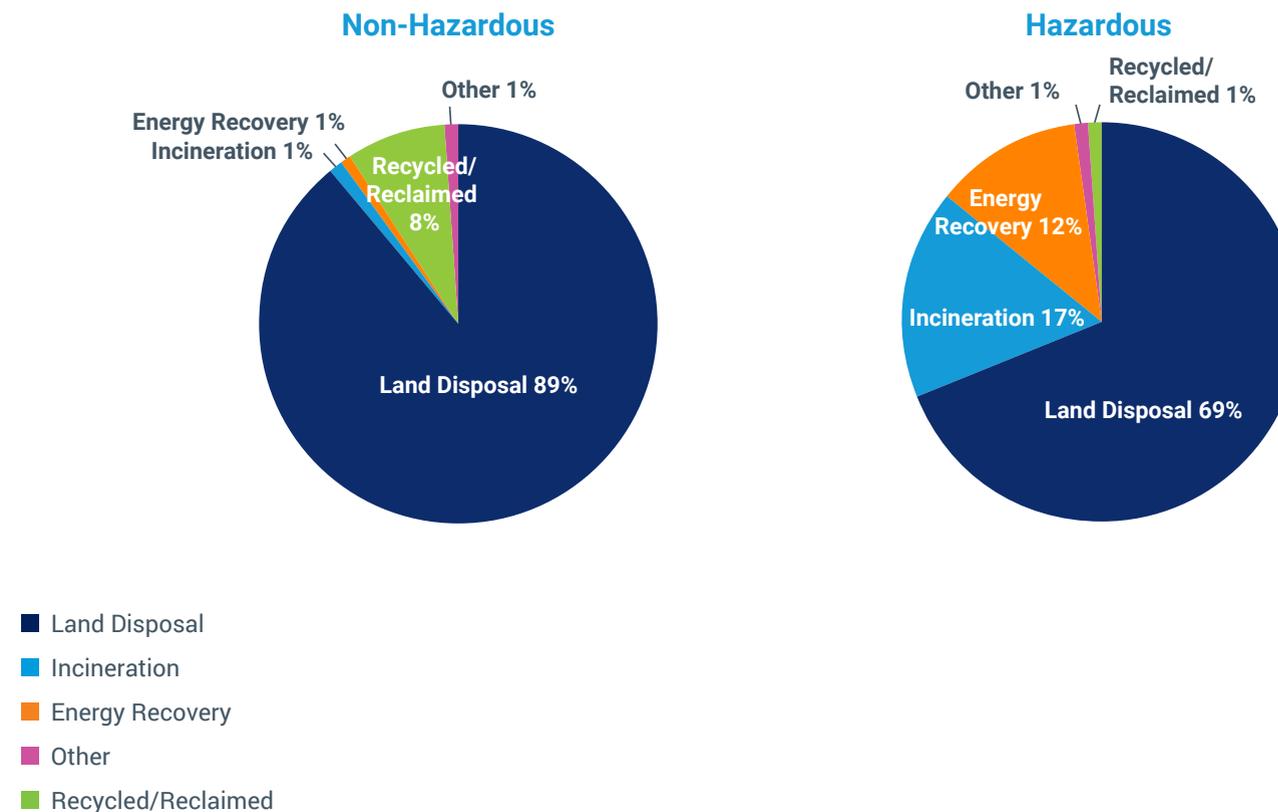
Waste intensity (metric ton per metric ton of product)

	2017	2018	2019	2020
Total waste	0.046	0.048	0.045	0.050
Non-hazardous waste	0.002	0.017	0.016	0.019
Hazardous waste	0.044	0.031	0.029	0.031

Adjustments to reportable waste quantities were made for 2017, 2018 and 2019 due to the addition of a new data reporting system and changes in effluent.

GRI 306-4 Waste diverted from disposal

GRI 306-5 Waste directed to disposal



Volumes are production and maintenance-dependent. In 2020, non-hazardous land disposal increased primarily due to permitted demolition projects and hurricane debris in Louisiana.



Environmental Compliance

Management Approach

We carefully manage a range of environmental impacts including energy and GHG emissions, other emissions to air, water use and waste. We are granted our license to operate from multiple regulatory authorities that oversee our facilities, and we seek to earn the trust of our communities by operating safely and responsibly.

Our environmental management system standard, part of our Operational Excellence system, provides a mechanism for compliance assurance and continuous improvement. This extends not only to our employees but also our contractors and suppliers.

We constantly monitor and manage environmental risk and are committed to complying with all regulations and permits. We aim to operate efficiently, which means using valuable resources responsibly, producing less waste and generating fewer emissions. Because our business is dynamic and subject to change based on production volumes, feedstocks and other business factors, our environmental metrics are reported in absolute (total) and intensity (rate per metric ton of product) terms to more clearly reflect our performance.

Management system certifications

The majority-owned and operated legacy LyondellBasell sites in Australia, China, Europe and Thailand are certified to the Environmental Management System ISO 14001:2015, as is the Altamira site in Mexico, Pindamonhangaba site in Brazil and Cerkezkoy site in Turkey. In the U.S., sites with ISO 14001:2015 certification are Edison, New Jersey; Jackson, Tennessee; and Mansfield, Texas. Additionally, Rio Claro, Brazil; Gempol, Indonesia; Dongguan, China; Kerpen, Germany; Astorp, Sweden; and Crumlin, U.K. are ISO 14001:2015 certified. The remaining sites in the Americas comply with our Operational Excellence requirements and have management systems in place that are ISO 14001:2015 certifiable. We aim to certify the remaining acquired A. Schulman sites in Europe, Asia and Australia by the end of 2023, and the former A. Schulman sites in the Americas will be ISO 14001:2015 certified by 2025.

Additionally, the LyondellBasell sites in Germany, Spain and the Berre site in France are certified to the Energy Management Standard ISO 50001:2018, and ISO 50001:2011 at our Fos-sur-Mer site in France.

GRI 307-1

Non-compliance with environmental laws and regulations

Although we work hard to reduce our environmental impact, sometimes incidents can occur. We manage our environmental obligations and work diligently to investigate each incident and understand the cause. We then develop action items and share learnings throughout the organization to prevent future incidents.

We classify incidents on a scale from 0 to 5, with 5 having the highest impact. We report on environmental incidents that are Level 2+, indicating a failure to meet a policy, standard or applicable law due to an unplanned release or discharge into the environment. Information on fines and penalties paid to resolve environmental, health and safety enforcement actions is also provided below.

Environmental incidents

	2015	2016	2017	2018	2019	2020
Number of incidents	93	99	79	94	65	73

Environmental, health and safety enforcement actions

Fines and penalties paid	\$173,496	\$387,696	\$643,038	\$984,640	\$210,165	\$280,615
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For more information on legal proceedings related to environmental matters, see our [2020 Form 10-K, page 32](#).



Social

Employment

Management Approach

Our success as a company is tied to the passion, knowledge and talent of our global team. We believe in integrity, diversity and fairness, and we focus on creating a work environment that is safe, respectful and inspires employees to strive for excellence.

We recognize that individuals cannot succeed alone; we believe in the power of many and place a strong emphasis on teamwork. LyondellBasell provides all workers with fair wages and upholds all applicable fair wage laws, wherever we work. We pay wages that meet or exceed the legally required wage or local industry standard. We reward performance based on personal, team and company results.

We engage in open and ongoing dialogue with employees and their representatives to ensure a proper balance between the best interests of the Company and its employees. In several of our locations, we partner with employee representatives on initiatives such as health and safety.

We use the services of contractors, primarily to assist with non-core business functions, and we require that all contractors adhere to our Operational Excellence standards and GoalZERO, a comprehensive program to protect the health and safety of our employees and contractors.



GRI 401-1

New employee hires and turnover

	2020	2020	
New employee hires		Employee turnover	
Global (#)	1,896	Global (#)	1,705
Rate	9.9%	Rate	8.9%
Average headcount	19,067	Average headcount	19,067
U.S./Canada	1,036	U.S./Canada (#)	919
Rate	12.4%	Rate	11%
Europe (#)	604	Europe (#)	621
Rate	7.4%	Rate	7.6%
Latin America (#)	91	Latin America (Including Mexico)	57
Rate	11.3%	Rate	7.1%
Asia Pacific (#)	164	Asia Pacific (#)	108
Rate	9.9%	Rate	6.5%
Middle East & Africa (#)	1	Middle East & Africa (#)	0
Rate	3.9%	Rate	0%
Age group		Age group	
<30 (#)	753	<30 (#)	455
Rate	30.3%	Rate	18.3%
Average headcount	2,486	Average headcount	2,486
30–50 (#)	955	30–50 (#)	613
Rate	9.4%	Rate	6%
Average headcount	10,157	Average headcount	10,157
>50 (#)	188	>50 (#)	637
Rate	2.9%	Rate	9.9%
Average headcount	6,422	Average headcount	6,422
Gender		Gender	
Men (#)	1,461	Men (#)	1,337
Rate	9.4%	Rate	8.6%
Average headcount	15,493	Average headcount	15,493
Women (#)	435	Women (#)	368
Rate	12.2%	Rate	10.3%
Average headcount	3,572	Average headcount	3,572

Data as of December 31, 2020.

**GRI 401-2****Benefits provided to full-time employees**

We want to attract the brightest and most qualified employees and doing so requires competitive compensation and benefits packages. Full-time and part-time employees receive a wide variety of benefits based on geographic location, applicable local and national law, and labor, or works council agreements.

Full-time employees at our major offices and manufacturing sites receive competitive benefits which may include, depending on location, the following: basic health and welfare benefits, including medical coverage; life and accident insurance; business travel accident insurance; disability protection; retirement, savings and pension plans; share programs; and paid vacation, holidays and personal leave. Counseling for personal and work-related concerns is available in many regions. Beginning January 1, 2021, the Employee Assistance Plan was expanded and is now available to all employees globally. The program helps employees be more successful meeting their responsibilities at home and at work. It offers tools and resources on a variety of topics, including resiliency, emotional wellness, workplace success, work-life balance, personal and family goals and good health. The Employee Assistance Plan also helps with referrals to financial or legal resources. Services are available at no cost to employees 24 hours a day, 7 days a week.

Employees whose job is suitable for telecommuting are eligible to work from home or an alternate work site up to two days per month. During the COVID-19 pandemic, the Company encouraged non-location critical employees to work from home even where not required by local law. As of the publication of this report, some employees may continue to work from home for various pandemic-related reasons, including back-to-school and childcare challenges as well as personal or health-related reasons.

In the U.S., employees can purchase additional health benefits and insurance coverage at lower group rates. U.S. employees can contribute to a tax-free Health Care Flexible Spending Account for reimbursement of certain medical expenses as well as a Dependent Day Care Flexible Spending Account for child-care costs.

Reward and recognition

Exceptional performance, dedication to safety, attendance and years of service are recognized in many ways, including annual bonuses and special cash awards; share points that may be redeemed for merchandise; awards based on years of service; and our corporate Excellence Awards, which are the highest honor an employee can receive.

Global family-friendly programs

We are dedicated to family-friendly practices and recognize the need for work-life balance. Our Global Family-Friendly programs include paid parental leave, an adoption reimbursement, and providing all employees globally with a minimum of 10 paid vacation or personal leave days.

GRI 401-3**Parental leave**

Employees across the world who bring a child into their family by birth, adoption or foster care are eligible for parental leave, as allowed by applicable local and national law. In the U.S., we have a parental leave policy that offers paid leave for the birth

of an employee's child, the placement for adoption of an employee's child, and foster care or adoption of a child. In addition to short-term disability benefits, as applicable, eligible employees who are the primary caregiver receive up to seven weeks of paid parental leave per 12-month period; those who are the secondary caregiver receive up to one week of parental leave. Employees who are the spouse or domestic partner of an employee who has given birth or who is adopting or fostering a child receive up to one week per 12-month period. Primary and secondary caregiver and spouse/domestic partner leave is available regardless of gender. The benefit is paid at 100% of the employee's regular base pay (less withholdings and excluding overtime, shift differential, premiums, bonuses, commissions or other allowances) on the date leave begins.

The Global Adoption Reimbursement Policy provides employees who have adopted a child or had a child placed with them for adoption with a financial reimbursement of up to \$10,000 or equivalent in the employee's local currency at the time of the reimbursement, less any applicable withholdings and deductions, per adopted child.

Occupational Health & Safety

Management Approach

We are committed to the safety of our people and our operations. Our safety standards apply to everyone involved in our business, including employees, contractors and suppliers.

GoalZERO is our commitment to operating safely and with zero incidents, zero injuries and zero accidents. This core value guides our HSE function. We cultivate a GoalZERO mindset with clear standards, regular communication, training, and targeted campaigns and events, including our annual Global Safety Day. Health, safety and environmental indicators are monitored continuously using a performance dashboard. Every manufacturing site sets goals to improve process safety and the safety of our people, and reduce environmental incidents.

Goals:

- Zero injuries
- Zero process safety incidents
- Zero product safety incidents
- Zero environmental incidents
- Zero plastic pellet loss to the environment

Operational Excellence is the framework we use to deliver our GoalZERO objectives. It is our management system designed to deliver safety, environmental responsibility and reliability in everything we do. It sets out clear requirements for how we work and applies to our employees and contractors.

The Operational Excellence management system contains nine key elements that help identify and manage risks, and ensure our employees and contractors understand their roles and responsibilities. It is further supported by detailed standards and preferred practices that support our GoalZERO objectives.

**LyondellBasell Operational Excellence Management System Framework**

Leadership and personal accountability	We are committed to achieving excellence in every aspect of our performance. We set high expectations and hold each other accountable. We operate our businesses with the highest principles of integrity ethics and corporate responsibility.
Organizational competency	We acquire and maintain the highest possible levels of competency. We empower people to deliver superior performance. We create a culture where employees have the freedom to act with agility and urgency while balancing the need for appropriate process and governance. We embrace diversity and inclusion, and promote learning and development.
Compliance	We manage our businesses with the highest standards of corporate ethics and with strict corporate governance systems that support compliance with all laws, regulations and internal requirements.
Technology and knowledge management	We document our operating practices and continually keep them updated. Knowledge management allows for safe, reliable operations through the sharing and combined efforts of people, processes and technology.
Risk management	We identify, prioritize, mitigate and manage risks to provide for the safety and health of employees, contractors, customers and the public, and for the protection of the environment.
Operations	We strive for flawless execution in our operations.
Product stewardship	We operate a worldwide product stewardship program to make health, safety and environmental protection an integral part of the development, manufacture, distribution, use, recycle and disposal of our products.
Community and stakeholder relations	We maintain strong relationships with our communities, employees, customers, suppliers, shareholders and other key stakeholders.
Assessment and improvement	We regularly review and take action regarding our systems, processes, metrics and stakeholder feedback to assure continuous improvement in our performance.

We conduct internal audits at our manufacturing sites to verify compliance with Operational Excellence standards and perform periodic reviews to drive continuous improvement.

GRI 403-1**Occupational health and safety management system**

Our Operational Excellence program sets out the standards and management approach we use to achieve GoalZERO. This includes clear requirements for people, process and product safety. We closely monitor safety risks, thoroughly investigate incidents and near misses, and take corrective action to prevent reoccurrence.

Recognizing and mitigating potential hazards in the workplace is a critical part of our approach to preventing incidents and injuries. Risk assessments are conducted for any potentially hazardous work. These range from completing safety checklists to a formal documented job hazard analysis process.

Sites undergo internal audits to verify compliance with Operational Excellence systems and procedures. Lessons learned and best practices are shared across the business. Onsite contractors, including logistics companies that handle and transport our products, are expected to comply with our HSE policies and support GoalZERO.

Our commitment to GoalZERO is championed at every level of the company. Excellent safety culture starts at the top with senior leaders, including the CEO.

Managers at each manufacturing site meet regularly to review safety performance and discuss issues relevant to their plant. HSE awareness teams evaluate injuries and find ways to prevent them in the future. Group meetings at offices and sites typically start with a safety message.

In 2020:

- We completed 11 audits in five countries using COVID-19 safety protocols
- 21 sites achieved more than one million safe work hours
- 79 locations reached at least one year without a recordable injury

GRI 403-2**Hazard identification, risk assessment and incident investigation**

Our process safety program establishes how we safely design, operate and maintain our manufacturing processes to prevent or mitigate the unplanned or uncontrolled release of process material.

This program aims to prevent serious incidents and protect local communities and the environment.

We have clear standards for identifying and managing process safety risks within our Operational Excellence framework. Regular turnarounds — during which we shut down plants and carry out essential maintenance, upgrades and safety checks — are a key part of our safety program.

In 2020, we introduced the Process Safety Fundamentals program. In this program, 18 principles are used to support process safety discussions for front line operations staff. The Process Safety Fundamentals program increases awareness and



understanding of the potential process safety impact of critical tasks that front line operations perform on a routine basis. The program also supports discussions on good practices to perform the job safely and correctly.

We also introduced a Reactive Chemistry Hazards Program to reduce risks associated with the handling of reactive chemicals. This program is focused on analyzing technologies with reactive chemistry hazards to enhance knowledge of these hazards and to embed this knowledge in our systems and processes.

In addition, we rolled out an enhancement to a program to minimize the impact from potential loss of primary containments. This program will evaluate additional methods to isolate process equipment if a leak were to occur and install enhanced mitigation.

**GRI 403-3
Occupational health services**

We are committed to providing a safe workplace free from recognized hazards, and we comply with all applicable health and safety laws and recognized standards. Information on occupational health services is provided globally throughout the new hire on-boarding process and offered in various languages dependent on the site location. Employees at our large sites have access to health services at an on-site clinic on paid worktime.

Medical surveillance is designed to detect potential workplace hazards before irreversible health effects can occur. We provide a comprehensive medical monitoring service to assess employees exposed, or potentially exposed, to occupational hazards.

**GRI 403-4
Worker participation, consultation and communication on occupational health and safety**

Health and safety committees at the facility and site-level help drive our GoalZERO culture. They provide a representative forum to communicate, encourage and increase employee involvement in identifying and resolving health, safety and environmental concerns. Committees typically meet on a monthly or bimonthly basis and rotate members every two years. Members participate in identification of hazards, assessment of risks, investigation of incidents, implementation of corrective measures and audits.

**GRI 403-5
Worker training on occupational health and safety**

LyondellBasell provides required health and safety training to workers. Training differs between locations according to the role and tasks of each worker. Best practices and safety moments are shared before each meeting to reinforce the value of safety.

In 2020, we introduced SOURCES, a centralized Health & Safety resource center accessible to all employees through our intranet site. SOURCES offers training presentations, best practices, reference materials and a variety of other tools to educate employees about health and safety at work.

**GRI 403-6
Promotion of worker health**

Employees receive a wide variety of health benefits based on geographic location, applicable local and national law, and labor, or works council agreements.

Full-time employees at our major offices and manufacturing sites receive competitive benefits which may include, depending on location, basic health and welfare benefits, including medical coverage; life and accident insurance; business travel accident insurance; and disability protection. Counseling for personal and work-related concerns is available in many regions.

Beginning January 1, 2021, the Employee Assistance Plan was expanded and is now available to all employees globally. The program helps employees be more successful meeting their responsibilities at home and at work. It offers tools and resources on a variety of topics including resiliency, emotional wellness, workplace success, work-life balance, personal and family goals and good health. The Employee Assistance Plan also helps with referrals to financial or legal resources. Services are available at no cost to employees 24 hours a day, 7 days a week.

**GRI 403-8
Workers covered by an occupational health and safety management system**

All employees and contractors whose work and/or workplace is controlled by LyondellBasell are required to comply with all health and safety management system requirements.

**GRI 403-9
Work-related injuries**

Process safety incident rate

	2016	2017	2018	2019	2020
Process safety incident rate	0.032	0.030	0.018	0.019	0.030

Represents number of Level 3 and above process safety incidents per 200,000 hours worked. We classify process safety incidents on scale of 0 to 5, with Level 5 having the highest impact.

Process safety	2020
Process safety incidents count (PSIC)	10
Process safety total incident rate (PSTIR)	0.03
Process safety incident severity rate (PSISR)	0.082

Assessed using the definition and weighting of Tier 1 PSI per ANSI/API RP 754.

**Worker safety**

	2016	2017	2018	2019	2020
Employees:					
Fatalities as a result of work-related injuries (number and rate)	0 0	0 0	0 0	1 0.005	0 0
High-consequence work-related injuries (number and rate)	3 0.022	2 0.015	3 0.019	3 0.016	0 0
Recordable work-related injuries (number and rate)	29 0.21	33 0.24	36 0.22	39 0.20	33 0.18
Number of hours worked	27,600,000	27,200,000	32,300,000	38,100,000	36,920,000
Contractors:					
Fatalities as a result of work-related injuries (number and rate)	0 0	0 0	0 0	1 0.006	0 0
High-consequence work-related injuries (number and rate)	7 0.040	1 0.008	1 0.006	0 0	0 0
Recordable work-related injuries (number and rate)	38 0.22	24 0.18	23 0.14	38 0.22	31 0.22
Number of hours worked	35,000,000	26,000,000	33,100,000	34,050,000	28,710,000
Combined workforce:					
LyondellBasell total recordable injury rate	0.21	0.21	0.18	0.21	0.20

Rates are calculated on the basis of 200,000 hours worked. High consequence injuries are LyondellBasell's Level 3 injuries (hospitalization required) and do not include fatalities. Recordable Injury counts and Recordable Injury rate include all injuries and fatalities.

Transport incidents

Our ability to transport and handle products safely is an essential component of who we are. Products are moved by railcar, tank trucks, pipeline, marine vessels and air freight. We own or lease railcars, tank trucks and pipelines. We utilize third-party service providers for all transportation modalities. Transport incidents are defined in accordance with applicable laws, regulations and standards related to hazardous materials transportation and distribution which include, but are not limited to, those under the U.S. Occupational Safety and Health Administration, U.S. Department of Transportation, American Chemistry Council and the Europe Chemical Industry Council. In 2019, we experienced one Level 2+ transportation incident and zero incidents in 2020. The 2019 event was a truck incident which resulted in a minor injury to the driver, but no loss of product.



Training & Education

Management Approach

Employee growth and development are key elements supporting our vision of superior performance. Employees play an active role in their own development. They are encouraged and empowered to create plans for their development and to discuss those plans and goals with their managers on a regular basis. Having these conversations helps managers ensure that employees have opportunities to receive developmental experiences on the job, including learning from others. We also offer more formal and structured development opportunities for our employees via in-class and online learning.

Training needs are determined as part of individual employee assignment and development, on an equal employment opportunity basis.

GRI 404-1 Average hours of employee training

Employee training (average hours)

	2020
Average per person	15
Executive	9
Manager	9
Professional and technical	21
Administrative	7

We offered a total of 3,260 classes in 2020 compared with 4,311 in 2019. This training decrease was largely attributable to the COVID-19 pandemic and resulted in four fewer average training hours per person in 2020. Even with the pandemic, 82% of our workforce completed career and skills training classes.

GRI 404-2 Programs for upgrading employee skills and transition assistance programs

Upgrading skills. Our targeted leadership development programs are designed to equip our current and future leaders with the necessary tools and skills to lead in any business environment. Through a blend of rigorous business and technical projects as well as a focus on personal mastery and career development, participants of these programs:

- Gain insight on leadership strengths, gaps and development needs through assessment and coaching
- Build individual career and development plans
- Participate in in-depth discussions with senior executives

- Obtain insights into strategic global leadership skills from internal and external experts
- Work across the enterprise to create and implement solutions for identified business initiatives

Education benefits

To encourage employee self-development, we offer a Global Educational Assistance Program that provides financial aid to those pursuing an associate, bachelor's or graduate degree. Any regular full-time, active employee with a minimum of one year of service and a current performance rating of "successful performance" or greater is eligible for educational assistance unless otherwise stipulated under a labor or works council agreement.

The Global Accelerated and Executive Graduate Degree Program offers additional financial assistance and modification in work schedule for those employees participating in an executive master's degree program, which typically requires an intense period of study over a shortened duration of time and carries substantially higher costs.

Transition assistance program

Employees whose positions are eliminated from the Company receive transition assistance provided by a leading outplacement services company. The program includes career assessments, resume writing, LinkedIn profile updates, skills training, personal coaching and access to online research tools, job search platforms and networking events.

GRI 404-3 Percentage of employees receiving regular performance reviews

In 2019, we shifted from a traditional performance review process that required managers to discuss individual performance with their direct reports at two set times a year to a continuous performance management system throughout the year. This shift is intended to ensure that managers are equipped to provide continual, on-going and effective feedback to create a culture of ownership for our work and success, support a culture of recognition and accountability, and promote personal and professional growth for each employee.

Our performance management system is designed to:

- Align all employees across the organization with the Company's business strategy and objectives
- Enhance individual, team and corporate performance, creating a culture of continuous improvement
- Motivate employees by including support for day-to-day performance as well as for medium- to long-term career growth
- Establish strong "performance relationships" characterized by frequent feedback in real time and open, two-way communication
- Strive to "keep it simple" wherever possible, reducing administration and re-investing management time into building meaningful performance discussions

Performance reviews

While all employees receive continuous feedback on their performance, the number of employees participating in our corporate performance appraisal program is determined by local country employment laws and collective bargaining agreements. Performance reviews of non-exempt and hourly employees are voluntary by site. A total of 11,518 performance reviews were conducted in 2020, which represents 64% of employees participating in the program.



Diversity & Equal Opportunity

Management Approach

We are committed to creating a workforce that represents and reflects our local communities; developing programs and policies that ensure equality of opportunity, experience and pay; and fostering a culture of belonging, empowerment and equality.



Our vision for the future is that LyondellBasell is a place where DEI (diversity, equity and inclusion) is embedded within our culture as deeply as safety, where we own it and live it every day. To do this, we will adhere to three pillars with clear expectations to guide us.

Diversity

We already have a diverse workforce, where our employees are different in many ways including multiple generations, social, ethnic and national backgrounds, disabilities, genders and sexual orientations. We recognize and appreciate how this makes us stronger collectively. Our workforce should reflect the external population including a robust pipeline of diverse leaders advancing to more senior roles.

Equity

Equity is fairness. It ensures everyone has access to the same treatment, opportunities, and advancement. Employees should believe they are treated fairly and have equal opportunity to advance their careers. This includes ensuring our people systems—how we hire, promote and reward—are designed to mitigate bias.

Inclusion

It is our aspiration to be seen as an inclusive employer, where leaders embrace a culture of belonging, where you can bring your entire self to work, and where all employees feel a part of our LyondellBasell family.

In mid-2020, we appointed a Chief Talent & DEI Officer and formed a DEI Leadership Council, comprised of global leaders representing employees across the company designed to assist with DEI strategy. Council members actively sought feedback from our employees through listening activities and set a clear roadmap for the future. We also engaged external experts to help us better assess our current workforce and trends, collect feedback from our employees globally, and benchmark our employment practices and processes to gain an evidence-based understanding of improvement opportunities.

We used this feedback to develop a multi-year plan to drive diversity, equity and inclusion at LyondellBasell, with a strong initial focus on inclusion to ensure we are providing a positive experience for our employees. We also created a platform for employees to discuss challenges and obstacles, and our DEI Leadership Council will monitor performance and drive progress.

We are committed to:

- Valuing and respecting each other's backgrounds, experience and ideas
- Enabling everyone to be themselves and achieve their potential
- Creating an environment in which people of all backgrounds want to work
- Making people decisions on merit and without bias
- Driving measurable change in the diversity of our workforce at all levels, including leadership

We recognize the need to increase the number of women and people from minority groups in our engineering ranks. Our U.S. University Recruiting Program is working to do just that. In 2020, 40% of full-time university recruits hired were women and 44% were from minority groups.

Additionally, our Board considers diversity a priority and seeks representation across a range of attributes, including race, ethnicity, nationality and gender. Our Board is committed to increasing the representation of women in its membership. In accordance with our Corporate Governance Guidelines, the Nominating and Governance Committee and any outside consultants engaged to assist in identifying potential director candidates include women and minority candidates in each pool from which a director candidate is selected. For more information on Board nomination process, see our [2021 Proxy Statement, pages 10-12](#).

For more information about our approach to diversity, equity and inclusion, see [pages 27-28](#) of this report.

**GRI 405-1****Diversity of governance bodies and employees****Employees/Board Diversity**

	2020
Employees	
Men	81.2%
Women	18.8%
Age group (<30, 30-50, >50)	
<30	12.7%
30–50	53.8%
>50	33.5%
Ethnicity (U.S. only)	
Black	9% (766)
Hispanic	13.5% (1,152)
Asian/Pacific Islander	4.6% (397)
American Indian/Alaskan	0.4% (34)
Native Hawaiian/Other Pacific Islander	0.1% (9)
Two or more races	1.3% (114)
White	69.6% (5,948)
Non-U.S. employee	0% (4)
Undisclosed	1.4% (121)

	2020
Executive	16
Men	87.5%
Women	12.5%
Management	303
Men	82.5%
Women	17.5%
Professional and Technical	5,585
Men	67.9%
Women	32.1%
Board	
Men	73%
Women	27%

Data as of December 31, 2020.



GRI 405-1 Diversity of governance bodies and employees

U.S. EEO-1 Data as of December 31, 2020

Job Categories	Male								Female								Total
	White	Hispanic or Latino	Black or African American	Native Hawaiian or Pacific Islander	Asian	American Indian or Alaskan Native	Two or More Races	Undisclosed	White	Hispanic or Latino	Black or African American	Native Hawaiian or Pacific Islander	Asian	American Indian or Alaskan Native	Two or More Races	Undisclosed	
Executive/Senior Officials & Managers	121	5	3	0	17	0	0	7	38	2	4	0	1	0	1	1	200
First/Mid Level Officials & Managers	536	58	50	0	45	3	5	7	120	24	22	0	16	0	1	1	888
Professionals	1446	210	121	2	166	7	27	34	478	127	95	1	101	6	15	9	2,845
Technicians	318	38	50	0	9	1	2	4	75	19	23	0	6	0	4	0	549
Sales Workers	76	6	1	0	2	0	1	0	21	3	0	0	1	0	1	0	112
Administrative Support	11	5	4	0	0	0	0	0	104	27	17	0	1	0	2	2	173
Craft Workers	2295	574	325	6	29	11	43	56	186	33	31	0	2	4	8	3	3,606
Operatives	100	1	12	0	0	2	3	0	14	1	5	0	0	0	1	0	139
Laborers & Helpers	7	14	3	0	1	0	0	1	0	1	0	0	0	0	0	0	27
Service Workers	1	3	0	0	0	0	0	0	1	1	0	0	0	0	0	0	6
Total	4,911	914	569	8	269	24	81	109	1,037	238	197	1	128	10	33	16	8,545



Child, Forced or Compulsory Labor

Management Approach

We prohibit child labor. For purposes of employment, we define “child” as anyone under sixteen years of age, unless national or local law stipulates a higher mandatory school leaving or minimum working age, in which case the higher age applies. We do not hire people under the applicable mandatory minimum.

We forbid the use of forced, bonded (including debt bondage), indentured, or involuntary labor, exploitative prison labor, slavery, or trafficking in our operations. We prohibit harsh or inhumane treatment of all workers, including actual or threatened corporal punishment. We will not retain passports or other original employee documents unless required by law and will not restrict employee access to such documents. Neither we nor the recruitment partners we work with charge any fee for employment, and we do not ask for any refundable security deposit to be paid for employment purposes.

We publish an annual [Human Trafficking and Anti-Slavery Statement](#) in accordance with the U.K. Modern Slavery Act of 2015 and the California Transparency in Supply Chains Act of 2010 in the U.S.

Human Rights

Management Approach

We have a responsibility to respect and protect human rights. Our [Human Rights Policy](#) makes clear our commitment to workplace health and safety; equal opportunity; prevention of discrimination, harassment and retaliation; diversity and inclusion; workplace security; just and favorable conditions of work; fair wages; freedom of association; freely chosen employment and child labor protections.

Our [Code of Conduct](#) embodies our dedication to conducting business ethically and responsibly by obeying the law and enabling a safe and productive work environment.

GRI 410-1

Security personnel trained in human rights

We promote the security of our workers and premises and take affirmative steps to maintain a workplace that is free from violence, intimidation, or other disruptive conditions. We strive for a security response that is respectful of human rights, consistent with international standards and proportional to the threat identified.

GRI 412-2

Employee training on human rights policies and procedures

New employees receive ethics and compliance training which includes the Company’s Code of Conduct, and all employees are required to complete annual refresher training. In 2020, 100% of LyondellBasell employees received training on the Code of Conduct. Additionally, some contractors receive Code of Conduct training based on their job function in the Company.

Local Communities

Management Approach

Being a responsible, good neighbor in the communities where we operate is embedded in our mission. We provide jobs that create economic value, and we hire locally where possible. We also support economic growth and job creation throughout our supply chain by purchasing goods and services locally.

Additionally, we contribute to charities in cash or in-kind, and our employees volunteer in the communities where we operate through our annual Global Care Day and other activities.

GRI 413-1

Operations with local community engagement, impact assessment and development programs

Through our global corporate citizenship program, *Advancing Good*, we invest in three program areas:



We are passionate about **being a responsible, good neighbor** and we invest in programs creating **healthy, diverse and dynamic communities**.



We are committed to being leaders in the efforts to end plastic waste and develop sustainable solutions to **protect our planet** for future generations.



We are **dedicated to educating, training and preparing tomorrow's workforce** to be our future leaders.

In 2020, our community investments included:

- A total of \$10.8 million in grants to more than 900 charities in the communities where we live and work worldwide
- \$1.3 million in 17 countries to address food insecurity in response to the COVID-19 pandemic
- More than \$1.5 million to 35 United Way chapters across the U.S. The Company matches money raised by employees on a dollar-for-dollar basis



Our employees are active volunteers and leaders within their communities. LyondellBasell supports and encourages employee engagement:

- The Company matched 600 employee gift requests totaling more than \$417,000 through the employee Matching Gift program
- Employees from 83 sites around the world volunteered more than 6,000 hours to help address food insecurity as part of LyondellBasell's 21st annual Global Care Day
- U.S. employees supported 897 schools across the nation through DonorsChoose
- The Company matched the generous contributions from employees around the world who gave a total \$108,000 to the LyondellBasell Disaster Relief Fund to help fellow colleagues affected by hurricanes in Louisiana, U.S.



GRI 413-2

Operations with significant potential and actual negative impacts on local communities

For information on our engagement with local communities see [Stakeholder Engagement](#) on page 44 of this report.

Public Policy

Management Approach

We are committed to high standards of transparency in our advocacy, public policy work and political contributions. We report U.S. federal, state and local lobbying activities and political expenditures as required by law. For more information about our approach to political contributions, see our [U.S. Political Activity Report](#).

In Europe, we support transparency in relations between EU institutions and interest representatives. We joined the voluntary European Transparency Register and abide by its Code of Conduct. We do not make political contributions in any country other than the U.S.

Our advocacy work includes supporting public policy that seeks to:

- Advance waste management systems, infrastructure and recycling standards. We believe policy efforts should further develop and integrate global and local waste management systems and infrastructure. We support the harmonization of disparate local recycling standards, definitions, procedures and processes into simpler, more streamlined national and international recycling frameworks.
- Apply Extended Producer Responsibility (EPR) or similar recycling infrastructure funding programs to all materials. Collected fees should be managed by a Product Stewardship Organization (PSO) or Producer Responsibility Organization (PRO). We also support EPR and recycling infrastructure funding programs designed specifically for plastic packaging if fee revenues are directed exclusively towards plastics recycling infrastructure and programs.
- Strengthen demand for recycled plastics through government mandates. Targets for recycled plastic content should be ambitious yet technically feasible, and consistent with overall policy objectives. Both mechanical and advanced (molecular) recycling should be recognized as qualified sources of recycled content.
- Enhance the ability to reliably access high-quality post-consumer and post-industrial plastic waste, as well as renewable resources, that can be reprocessed into feedstock for new products.
- Support the expansion of targeted tax incentives designed to encourage the rapid growth of research and development in next generation mechanical and advanced (molecular) recycling, as well as the development of alternative feedstocks from renewable sources. Once a technology is proven, we support policies that promote the availability and effective implementation at scale.
- Increase transparency and develop uniform standards for a mass balance approach for advanced recycling that includes adoption by the plastic value chains. This should include tracing and attributing credits of plastics processed using advanced recycling techniques, transparent certification by an independent party at each step of the value chain, and development of standards which include clear and credible rules on feedstock qualification, mass balance calculation and appropriate product claims.
- Acknowledge the important role plastics play in reducing GHG emissions across the global economy. We support efforts that encourage the uptake of products (i.e., packaging, automotive, building materials) that more effectively enable society to reduce net emissions over their life cycle.



- Support a market-based approach to reducing carbon emissions in an effective, administratively feasible manner while preserving the competitiveness of energy-intensive industries. To be most effective, we believe this approach can neither mandate a particular technology nor discriminate against a particular country, sector of the economy or industry.
- Encourage and support the development of public-private partnerships designed to accelerate development of integrated waste management and recycling systems.

GRI 415-1**Political contributions****Monetary value of financial contributions:**

	2016	2017	2018	2019	2020
	\$146,586	\$166,586	\$151,673	\$142,500	\$130,000

Contributions are disclosed in our filings with the Federal Election Commission (FEC), as required by law. No in-kind political contributions were made.

Customer Health & Safety

Management Approach

As part of our commitment to improving product stewardship practices, we worked closely with other American Chemistry Council members to develop a Responsible Care® Product Safety Code. This code has been incorporated into our Operational Excellence Product Stewardship Standard. Our Product Stewardship Standard is applied across the product life cycle, including raw material sourcing, product development, manufacture, distribution, use, recycling and disposal of all products we produce. Additionally, all business units and manufacturing sites are audited against these standards on a three- to five-year cycle.

We have chemical control procedures in place to comply with applicable regulations and we regularly monitor these requirements for changes. Relevant regulations include the Toxic Substances Control Act in the U.S. (TSCA), the European Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), the Act on the Registration and Evaluation of Chemicals in Korea (Korea REACH), and many more. We monitor the movement of materials, and we block transactions for materials, uses or customers that do not meet our safety requirements.

We manage the human health and environmental risks which may be involved with our products throughout their life cycle. In addition to screening new products in the research and development pipeline, we regularly monitor product end-use applications to anticipate any potential health and safety risks. Each year, we review the human health and environmental risks associated with existing and emerging applications in our polymer and chemicals business. Based on these assessments, we may replace raw materials used in production processes with safer alternatives or prohibit or place conditions on the sale of products into certain end-use applications.

Information regarding end-uses that are prohibited or require further review is published on our website to ensure complete transparency for our customers.

We measure our performance by tracking product safety performance, reviewing customer feedback and communicating product safety information both internally and externally.

Our global product safety team communicates information about our products to customers.

Public information we provide includes:

- Safety Data Sheets: In 2020, we published approximately 175,000 safety data sheets that include information on product hazards and precautions to ensure safe use.
- Product Stewardship Bulletins: We issue declarations for customers on regulatory clearances for our products and their end uses. In 2020, we answered more than 66,000 requests from customers, distributors and other stakeholders for regulatory information about our products.
- Global Product Strategy (GPS) Safety Summaries: As a member of the International Council of Chemical Associations (ICCA) we take part in the GPS voluntary program to improve the safety of chemical products during their use and handling. The GPS safety summaries provide information about safe uses and applications of our products including:
 - Uses and applications
 - Physical and chemical properties
 - Human health and environmental effects
 - Potential exposure routes
 - Risk management measures
 - Regulatory information
 - Classification and labeling

These summaries can be found on our website under [Product Stewardship](#).

Each business conducts an annual management review to assess products and uses for risk to human health and the environment, and to drive continuous improvement and ensure that any critical gaps are closed by an action plan. Further, we conduct Storage and Handling Assessments at customers site for relevant high hazard products. Despite the limitations of travel due to COVID-19, we managed to continue these assessments virtually in 2020. We also partner closely with research and development teams to assess the potential human health and environmental hazards and anticipated end-use clearances of new products in the development pipeline. This evaluation includes a review of raw materials used in the production process and any associated potential byproducts.

**Use of animals in product safety testing**

LyondellBasell is committed to the safety and regulatory compliance of our products, and the transition to animal-free chemical safety assessments.

We are actively engaged with research consortia to develop accepted alternative testing strategies and we advocate the use of sound scientific principles to minimize the number of animal tests required by regulatory authorities. These include using existing data to evaluate chemicals, categories to assess similar families of chemicals, and read-across from data on one substance to satisfy the requirements of another substance.

Currently, animal testing of our products is only performed when there is no accepted or validated non-animal method available. We utilize toxicology laboratories accredited by the Association for Assessment and Accreditation of Laboratory Animal Care (AAALAC) International, a private, non-profit organization that promotes humane animal care and use in science, and follow the Organisation for Economic Co-operation and Development (OECD) Principles of Good Laboratory Practice.

Where animal testing is required, LyondellBasell is committed to following the “3Rs” established by the National Centre of the Replacement, Refinement & Reductions of Animals in Research (NC3Rs):

- Replacement or avoiding the use of animals in testing
- Reduction of the number of animals used per experiment
- Refinement of methods to ensure required studies are conducted humanely

GRI 416-1**Assessment of the health and safety impacts of product and service categories****Product Stewardship Through the Life Cycle****Product portfolio safety assessment**

Our product stewardship team is involved at the initial stage of researching and developing new products. We assess HSE and product safety risks before new products, raw materials or processes are approved for production. Product safety aspects are reviewed for each stage of the development process.

Raw materials sourcing

Every business function utilizes a global raw material evaluation and approval standard. Policies prohibit the use of some substances and restrict the use of others. If a safety issue is flagged, our procurement teams will not buy the raw materials in question. Changes to raw materials or their sources are also reviewed for product safety.

Manufacturing

Our product stewardship standards help ensure that substances are handled properly during manufacturing to prevent harm to our people and contractors. We conduct internal audits to confirm regulatory compliance and that risks are managed according to our standards when manufacturing, storing and loading our products.

Distribution and customer use

We promote safe transport and storage of our products by customers, and we work closely with our suppliers, carriers and distributors. We have standards for equipment used to transport and store products and our logistics compliance team visits customers’ sites to help ensure our products are handled safely. We communicate safety information to customers through safety data sheets, safety bulletins and global product safety strategy summaries.

Consumer end-use and disposal

Certain end-uses for our products may require review and approval or may be prohibited. Compliance information about our products is available on our website and product end-of-life considerations are addressed on safety data sheets.

GRI 416-2**Incidents of non-compliance concerning the health and safety impacts of products and services**

In 2020, we had no product recalls and no incidents of non-compliance with regulations and/or voluntary codes concerning the health and safety impacts of our products.

Customer Privacy

Management Approach**Data Privacy**

LyondellBasell collects and uses personal data for the purpose of selecting and administering our workforce, managing business transactions, running our operations, marketing to current and potential customers, and managing vendors and service providers. As a result, it maintains a global privacy program. This program includes policies and practices to ensure the protection of such personal data through appropriate technical, physical, and organizational measures and through compliance with global personal data protection laws.

As part of its global privacy program, the Company established a Data Privacy Committee (the “Committee”), which is charged with guiding, monitoring and staying accountable for data privacy compliance efforts globally. While the Committee assures that the global privacy program and the Company’s Personal Data Privacy and Protection Policy comply with all applicable privacy laws and regulations, including, but not limited to, the EU General Data Protection Regulation (GDPR), the practical implementation of the program is the responsibility of respective leadership of each business segment and functional unit.

The Committee meets quarterly and reports to the Company’s Chief Legal Officer, who reports directly to our CEO. All employees receive annual training on data privacy procedures, as well as their rights and obligations.

Personal Data protection laws and regulations continue to evolve and change, with regulators continuing to tighten up requirements and levy large fines. We are well positioned to adapt to these changes, primarily because we have developed and continue to improve upon our global program based on the GDPR. For more information regarding how the Company processes personal data, see the [LyondellBasell Privacy Statement](#).



Cybersecurity

We recognize that sophisticated global cybersecurity threats and targeted computer crime pose a continuously evolving risk to the confidentiality, availability, and integrity of our data, operations, and infrastructure.

LyondellBasell has implemented comprehensive practices to minimize these risks. Our cybersecurity program is certified to the ISO 27001 standard for information security management, which covers key areas of management, technical and physical controls, legal, compliance and business continuity management.

The Director of Cybersecurity leads our cybersecurity program and reports to the Senior Vice President of Global Business Services, who serves on the Leadership Team and reports to the CEO. The Audit Committee of the Board oversees the Company's information technology and cybersecurity risks. The Committee reviews our programs and practices and receives a report of relevant activities and metrics at least semiannually.

Our cybersecurity program includes:

- Annual cybersecurity education for all company computer users on relevant policies and standards, best practices at work and at home, and how to identify and respond to key threats
- Protective software installed and configured on company systems and mobile devices, updated and patched on a regular basis, to provide the highest level of protection against malicious threats
- An established program based on the ATT&CK framework for dealing with ransomware and other cybersecurity incidents
- Regular technical risk assessments of our network, applications, and manufacturing facilities, using a combination of trusted suppliers and a dedicated, objective team
- Penetration, discovery, and vulnerability assessments conducted daily
- Mobile threat protection mechanisms and policies
- Business continuity plans that are well documented and tested regularly; disaster recovery plans that are also well documented and tested at least annually
- Coverage for non-damage business interruption or liability for data breaches as a part of the Company's combined insurance programs



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SASB INDEX

Information is for calendar year 2020.

#	Description	Disclosure
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Sector: resource transformation | Industry: chemicals

GREENHOUSE GAS EMISSIONS

110a.1	Gross global Scope 1 emissions, percentage covered under a regulatory program	15.4 million metric tons of CO ₂ e
110a.2	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	GRI 305, CO ₂ Reduction Program, page 54

AIR QUALITY

120a.1	Air emissions of the following pollutants: (1) NOx (excluding N ₂ O), (2) SOx, (3) volatile organic compounds (VOCs), and (4) hazardous air pollutants (HAPs)	NOx	7,378 metric tons
		SOx	1,021 metric tons
		VOCs	7,154 metric tons
		CO	5,722 metric tons
		PM	1,005 metric tons

#	Description	Disclosure
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ENERGY MANAGEMENT

130a.1	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable, (4) total self-generated energy	1. 382 million GJ
		2. 98.9%
		3. 1.1%
		4. 273 million GJ

WATER MANAGEMENT

140a.1	(1) Total water withdrawn, (2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	1. 259.3 million m ³
		2. 82.0 million m ³ , of which 75.1 million m ³ was evaporative losses; approximately 10% of our sites are in extremely high water stressed areas, representing less than 1% of our water consumption in 2020.
140a.3	Description of water management risks and discussion of strategies and practices to mitigate those risks	GRI 303, pages 53-54



#	Description	Disclosure
HAZARDOUS WASTE MANAGEMENT		
150a.1	Amount of hazardous waste (1) generated, (2) percentage recycled	1. 1,227 thousand metric tons 2. 1%
COMMUNITY RELATIONS		
210a.1	Discussion of engagement processes to manage risks and opportunities associated with community interests	GRI 102-43, Community Advisory Panels, pages 44-45
WORKFORCE HEALTH AND SAFETY		
320a.1	(1) Total recordable incident rate (TRIR) and (2) fatality rate for (a) direct employees and (b) contract employees	1. 0.20 2. a) 0 b) 0
Rates are calculated on the basis of 200,000 hours worked. High consequence injuries are LyondellBasell's Level 3 injuries (hospitalization required) and do not include fatalities. Recordable Injury counts and Recordable Injury rate include all injuries and fatalities		
320a.2	Description of efforts to assess, monitor, and reduce exposure of employees and contract workers to long-term (chronic) health risks	GRI 403, pages 60-62
SAFETY & ENVIRONMENTAL STEWARDSHIP OF CHEMICALS		
410b.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	1) Less than 1% 2) 100%
410b.2	Discussion of strategy to (1) manage chemicals of concern and (2) develop alternatives with reduced human and/or environmental impact	GRI 416, page 70

#	Description	Disclosure
GENETICALLY MODIFIED ORGANISMS		
410c.1	Percentage of products by revenue that contain genetically modified organisms (GMOs)	LyondellBasell produces no products containing genetically modified organisms
MANAGEMENT OF THE LEGAL & REGULATORY ENVIRONMENT		
530a.1	Discussion of corporate positions related to government regulations and/or policy proposals that address environmental and social factors affecting the industry	Discussion of our key advocacy positions can be found in GRI 415, page 69
OPERATIONAL SAFETY, EMERGENCY PREPAREDNESS & RESPONSE		
540a.1	(1) Process Safety Incidents Count (PSIC), (2) Process Safety Total Incident Rate (PSTIR), and (3) Process Safety Incident Severity Rate (PSISR)	1) 10 2) 0.03 3) 0.082
540a.2	Number of transport incidents	0 Level 2+ incidents
ACTIVITY METRIC		
000.A	Production by reportable segment	GRI 102-7, page 39



UNITED NATIONS GLOBAL COMPACT

#	Description	Disclosure
Communication of Progress—Active		
GENERAL DISCLOSURES		
1	Period covered by Communication of Progress	January 1– December 31, 2020
2	Statement of Continued Support by the Chief Executive Officer	CEO Letter, pages 3-4
HUMAN RIGHTS		
3	Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights; and Principle 2: make sure that they are not complicit in human rights abuses.	Page 67
LABOUR		
4	Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining; Principle 4: the elimination of all forms of forced and compulsory labour; Principle 5: the effective abolition of child labour; and Principle 6: the elimination of discrimination in respect of employment and occupation.	Pages 43-46 , 64-67

#	Description	Disclosure
ENVIRONMENT		
5	Principle 7: Businesses should support a precautionary approach to environmental challenges; Principle 8: undertake initiatives to promote greater environmental responsibility; and Principle 9: encourage the development and diffusion of environmentally friendly technologies.	Pages 40 , 52-57 Pages 40 , 52-57
ANTI-CORRUPTION		
6	Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.	Pages 50-51
MEASUREMENT OF OUTCOMES		
7	Highlights from Chief Executive Officer GRI Content Index SASB Index	CEO Letter, pages 3-4 GRI Content Index, pages 72-76 SASB Index, pages 77-78



Forward-looking statements

The statements in this report relating to matters that are not historical facts are forward-looking statements. These forward-looking statements are based upon assumptions of management of LyondellBasell which are believed to be reasonable at the time made and are subject to significant risks and uncertainties. When used in this presentation, the words “estimate,” “believe,” “continue,” “could,” “intend,” “may,” “plan,” “potential,” “predict,” “should,” “will,” “expect,” and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain such identifying words. Actual results could differ materially based on factors including, but not limited to, market conditions, the business cyclicality of the chemical, polymers and refining industries; the availability, cost and price volatility of raw materials and utilities, particularly the cost of oil, natural gas, and associated natural gas liquids; uncertainties and impacts related to the extent and duration of the pandemic; competitive product and pricing pressures; labor conditions; our ability to attract and retain key personnel; operating interruptions (including leaks, explosions, fires, weather-related incidents, mechanical failure, unscheduled downtime, supplier disruptions, labor shortages, strikes, work stoppages or other labor difficulties, transportation interruptions, spills and releases and other environmental risks); the supply/demand balances for our and our joint ventures’ products, and the related effects of industry production capacities and operating rates; our ability to manage costs; future financial and operating results; benefits and synergies of any proposed transactions; legal and environmental proceedings; tax rulings, consequences or proceedings; technological developments, and our ability to develop new products and process technologies; our ability to meet our sustainability goals, including the ability to operate safely, increase production of recycled and renewable-based polymers, and reduce our emissions intensity; potential governmental regulatory actions; political unrest and terrorist acts; risks and uncertainties posed by international operations, including foreign currency fluctuations; and our ability to comply with debt covenants and to amend, extend, repay, redeem, service, and reduce our debt. Additional factors that could cause results to differ materially from those described in the forward-looking statements can be found in the “Risk Factors” section of our Form 10-K for the year ended December 31, 2020, which can be found at www.LyondellBasell.com on the Investor Relations page and on the Securities and Exchange Commission’s website at www.sec.gov. There is no assurance that any of the actions, events or results of the forward-looking statements will occur, or if any of them do, what impact they will have on our results of operations or financial condition. Forward-looking statements speak only as of the date they were made and are based on the estimates and opinions of management of LyondellBasell at the time the statements are made. LyondellBasell does not assume any obligation to update forward-looking statements should circumstances or management’s estimates or opinions change, except as required by law.

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